

Property Rights, Public Goods, and Economic Development in England from 1600 to 1815: New Evidence from Acts of Parliament

Dan Bogart
dbogart@uci.edu

and

Gary Richardson
garyr@uci.edu

Department of Economics
3151 Social Science Plaza
University of California-Irvine
Irvine, CA 92697-5100 USA

This Draft: July 2006

Abstract

A new database containing all acts passed between 1600 and 1815 demonstrates that during the century preceding the Industrial Revolution, Parliament passed increasing numbers of acts altering property rights and encouraging the provision of public goods. The acts enabled individuals to sell, mortgage, lease, and improve land previously bound by legal legacies; granted rights to organizations, such as turnpikes and canal companies, which supplied infrastructure and public services; and replaced traditional agricultural rights with enclosed fields and individual property. The depth and detail of the database enables us to document these trends and discuss their effects on English economic development.

We thank Jean-Laurent Rosenthal, John Wallis, Tim Leunig, Richard Sylla, Mauricio Drelichman, and Avner Greif for helpful comments on earlier drafts. We also thank seminar participants at the University of British Columbia, New York University, and Washington Area Economic History Seminar and conference participants at meetings of the Economic History Society and the All-UC Group in Economic History. We thank Patricia Suzuki and Francesca Labordo for research assistance. We thank the archivists at the House of Lords Record Office for providing *Portcullis*.

Theories concerning government's role in British economic development fall into two broad classes. A traditional school contends that government played little (or no) significant role in the onset of industrialization, which was directed by individual entrepreneurs, propelled by market imperatives, and financed by private capital. The government kept taxes low and regulations porous. The absence of politically imposed constraints allowed manufacturing and commerce to flourish. A revisionist school emphasizes the role of the state. Britain's military ascendance opened the seas to shipping and created colonial markets. Government borrowing formed the foundation for modern financial markets. Adherence to the rule of law increased the security of property rights, lowered transaction costs, and encouraged creativity.

Debate continues between these contending schools of thought.¹ A central issue is the impact of Parliament. After the Glorious Revolution, the number of acts passed by Parliament rose rapidly, from 30 per year during the seventeenth century to 400 per year in the late eighteenth century. Scholars have argued that Parliament's actions had some influence on the economy. However, what those actions were, when they occurred, and how they affected the economy remain unclear.

In this essay, we begin to fill this lacuna in the literature by introducing a new database containing all the acts of Parliament from 1600 and 1815. We show that the increasing volume of legislation consisted primarily of three types of acts, which we refer to as *estate acts*, acts empowering *statutory authorities*, and *enclosure acts*. A common theme runs through all of these acts. They altered property rights and encouraged the provision of public goods.

Estate acts altered the rights of individuals and families. The system of landholding inhibited landholders from using and transferring property as they saw fit. Conditions of

¹ See Harris (2004) for a survey of the literature concerning government and economic growth.

inheritance, such as strict settlements, often tied landowners' hands. Restrictions required landholders to dedicate property to particular tasks and to devote the proceeds to certain beneficiaries, such as charities and the support of extended families. Estate acts eliminated restrictions on the uses to which property could be put, enabled land to be shifted to higher value uses, and authorized the improvement, sale, and leasing of land.

Acts establishing *statutory authorities* created new organizations that built, operated, and maintained infrastructure such as roads, bridges, docks, and canals. Statutory authorities also provided public services, such as policing, poor relief, and the enforcement of small debts. Statutory authorities received new rights, including the authority to charge user-fees, levy taxes, issue debt, issue shares, and purchase land. Some of these rights were previously held by local governments. Most of the rights were novel. The new rights altered traditional arrangements, encouraging investment in infrastructure and the provision of public services.

Enclosure acts altered rights in agricultural villages. Some villages had open-fields, in which residents cultivated certain crops on certain sections at particular times of the year. Individuals also shared rights to pasture animals, glean grain, and other activities. Decisions about what to plant, when to harvest, and how to manage the village were made collectively. Enclosure acts ended this system. Individuals received rights to particular pieces of property, which they cultivated individually, and relinquished rights to shared assets.

Our efforts to analyze the importance of legislation builds on the work of previous scholars, principally Julian Hoppit (1996), who counts all acts passed by Parliament between 1660 and 1800 in ten categories: personal, government, finance, law and order, religion, armed services, social issues, economy, communications, and miscellaneous. We extend his research chronologically, by analyzing all acts passed from the beginning of Stuart regime in the early

seventeenth century through the peak of legislative activity in the early nineteenth century; methodologically, by encoding the actions authorized by each act (such as authorizing the sale of property or the collection of user-fees to finance infrastructure construction) and other details as a vector of variables amenable to quantitative analysis; and topically, by focusing on acts that altered rights to property and facilitated the provision of public goods.

Our analysis has implications for the literature on English economic and institutional history, particularly pertaining to the Glorious Revolution. A vigorous debate exists about the impact of political changes at the end of the seventeenth century. Some scholars argue that Parliamentary ascendance limited the power of government and increased the security of property rights (North and Weingast, 1989). Other scholars argue that Parliamentary ascendance led to an expansion of government and an increase in taxation (O'Brien, 1988). Our database demonstrates that Parliament's behavior changed after the Glorious Revolution. Parliament passed an increasing volume of legislation that reformed rights to property, loosened constraints on landowners, and encouraged improvements to infrastructure and the provision of public services.

The remainder of this essay corroborates these observations and discusses their significance. Section 1 describes the sources of evidence, our methods for compiling it into a database suitable for quantitative analysis, and issues important for judging empirical work based upon this new and unique source. Section 2 examines aggregate trends in legislation. Section 3 discusses estate, statutory authority, and enclosure acts in detail. Section 4 examines correlations between the timing of Parliamentary legislation, political events, and economic developments in seventeenth and eighteenth century England.

Section 5 discusses the implications of the evidence. Estate and enclosure acts facilitated the reallocation of resources to higher-value uses. Statutory authorities authorized new infrastructure and facilitated the provision of public services. Parliament's increasing intervention in these areas probably played a role in the process of development preceding the Industrial Revolution.

1. Data Sources and Methods

The House of Lords is the principal repository for historical information on acts of Parliament. The House of Lords' maintains a catalogue, *Portcullis*, which indicates the title, calendar year, regal year, and parliamentary session for all acts passed by Parliament since the early sixteenth century.² For acts passed before 1798, *Portcullis* indicates whether the act was public or private; for acts passed after 1798, *Portcullis* indicates whether the act was public or local/personal.³

The titles contained within *Portcullis* were first published in two 19th century compilations of Parliamentary legislation, entitled the *Statutes of the Realm* (Great Britain, 1963) and the *Statutes at Large* (Great Britain, 1807). The titles were created by clerks of Parliament, soon after the passage of the original legislation, and written on the exterior of the roll of parchment containing the full text of the act. The typical title summarized the act, usually in a

² <http://www.portcullis.parliament.uk>

³ The pre-1798 distinction between public and private acts referred to the type of documentation required in legal cases. Parties at law had to present to the court authorized copies of a private act in order to have the provisions of the act applied in the case. Public acts were considered to be part of the public record. Plaintiffs did not need submit public acts as evidence. The post-1798 distinction between public acts and personal or local acts pertains to the scope of the legislation. A public act creates a law of general application throughout the jurisdiction in which it is proposed. A personal or local act affects only a single person, group, or locale, which is named within the act.

concise paragraph containing enough information for the clerks to identify the act amidst thousands of similar pieces of parchment, without opening the rolls to read the full acts.⁴

We convert the title of every act into a vector of variables. The initial stage separates acts from the pre-1798 period according to their judicial characteristics (i.e. public or private) and acts from the post-1798 period according to their scope of application (i.e. public or locale/personal). The second stage separates the acts into four groups: estate acts, enclosure acts, statutory authority acts, and all other acts. The third stage further separates these groups of acts into sub-categories with similar structures and purposes. We identify eight sub-categories of estate acts and twelve subcategories of statutory authority acts.

Identifying acts in these classes is straightforward. Parliament standardized procedures for writing acts in the categories on which we focus. Clerks possessed templates from which they wrote the initial acts and standard procedures for converting final versions into summaries written on the exteriors of rolls. For example, the title for all acts that settled the property of an estate onto an individual began, “An act for settling the estate ...”.⁵ The title for all acts that authorized the sale of property from an estate began “An act for the sale of ...”, “An act for effecting the sale of ...”, or “An act for selling ...”.⁶ The title of all enclosure acts begins with

⁴ The authors ascertained the procedures for generating and recording the titles while visiting the House of Lords Record Office. A random sample of several score acts spread over two centuries was drawn to determine the accuracy of the clerical procedures. In all cases, the title written on the outside of the original enrolled act appeared accurately in the appropriate published volume and in the *Portcullis* database, and the titles appeared to be a concise recapitulation of the contents of the act.

⁵ See for example, Parliamentary archive reference number HL/PO/PB/1/1707/6&7An26.

⁶ See for example HL/PO/PB/1/1710/9&10An47, HL/PO/PB/1/1809/49G3n399, and HL/PO/PB/1/1809/49G3n208. Note that in acts of all types, minor variations in the use of articles exists.

phrases such as ‘an act for enclosing the common fields’ lying in a certain county, parish, and village.⁷

After separating acts into subcategories, algorithms are used to extract additional information. The initial stages of the algorithms determine the actions authorized by the acts and the persons and places acted upon. Later stages of the algorithms parse into separate variables the names and ranks of the individuals involved, identify relationships between these individuals (such as kinship), determine the location of property mentioned in the act, and ascertain the types of property involved in the transaction. The consistency of form and function within subcategories makes it relatively straightforward to extract the relevant information.

Applying these algorithms is a labor-intensive and time-consuming process.⁸ We have applied the initial stages to all acts, enabling us to create time-series based on categories of the entire population of acts passed by Parliament between 1600 and 1815. We have applied the later stages only to a random sample of estate, enclosure, and statutory authority acts. The samples for estate and statutory authorities exclude small numbers of unique or miscellaneous acts. Our sampling procedure ensures that for each act, the probability of entering the sample is 20%. The randomness and density of the sample ensure that patterns observed in it reflect patterns for the

⁷ In these acts, as in all English writing of the time, the spelling of enclosure varies, often beginning with the letter i. The acts often also begin with statements about allotting and dividing, such as “An act for dividing, allotting, and inclosing ...”, which can be found at HL/PO/PB/1/1779/19G3n209.

⁸ The following details give a sense of the time and effort involved. The principal investigators for this project corroborate when creating these algorithms. One takes the lead creating an algorithm for a subcategory. They test the algorithm by encoding dozens of acts to determine if it accurately extracts the desired information. Then, the other investigator examines the algorithm to ensure that it works as intended. Then, the investigators write detailed descriptions of the algorithm and teach student research assistants in their application. The investigators and assistants work together, applying the algorithms, clarifying the written instructions, devising new procedures to handle unexpected cases, and double-checking each others work.

entire population. As our research progresses, the sample size will expand. Eventually, we plan to encode and computerize all acts.⁹

Examples should clarify our procedures. Consider an act that falls within our random sample. We begin with two pieces of information.

- 1) A reference number from the House of Lords Record Office:
“HL/PO/PB/1/1741/15G2n48.”
- 2) A descriptive clerical summary: “An Act to empower Henry Earl of Carlisle to make Leases of Coal Mines and Coal Works, lying within his settled Estates in the County of Northumberland, for any Term not exceeding ninety nine Years.”

In addition to indicating where the documents can be found in Parliament’s archives, the reference number reveals that the document was a *private act*, originally written by the clerks in the House of Lords, passed by Parliament during the fifteenth year of the reign of George II (1741). Our encoding procedures use this information to determine the era of the act (pre-1798), the judicial status of the act (private), the general type of the act (estate), and the specific subcategory of the act (empower). We then apply an algorithm specifically designed to decipher clerical descriptions of empowering acts. The algorithm determines who was empowered (Henry Earl of Carlisle), his social position (Earl), the action that he was empowered to take (make leases for any term not exceeding ninety-nine years), the property over which this new power extended (coal mines and coal works lying within his settled estates), and the location of that property (Northumberland). We enter all of this information into a series of cells on a row of a spreadsheet. Each row of the spreadsheet pertains to a single act of parliament. The columns of the spreadsheet contain the same type of information for every act.

⁹ We also hope to digitize the original acts, located in the House of Lords Record Office, and the Journals of the House of Commons.

Now, consider an act that did not fall within our 20% random sample. We begin with the same two pieces of information, the reference number HL/PO/PB/1/1769/9G3n88, and the title.

An Act for vesting in Trustees, certain Timber Trees, and other Trees, standing and being upon the Estates of Sir Thomas Broughton, in the Counties of Chester and Stafford; and to enable them to sell, cut down, sell and dispose of the same; and to lay out a competent Part of the Money, arising by the Sale thereof, in rebuilding the ancient Mansion House of the Family, called Doddington Hall, in the County of Chester, and the necessary Offices to be enjoyed therewith; and for other Purposes.

Our procedures capture much of this information. Our database indicates that this was a private act, passed in 1769 (the 9th year in the reign of George III), that vested some legal authority over a settled estate in the hands of someone person (or persons).

Our algorithms extract similar information for statutory authorities. In addition, we distinguish between acts that created new infrastructure and acts that reauthorized or amended previous acts. In 1794, for example, Parliament passed

An Act for making and maintaining a Navigable Canal from and out of the Canal Navigation from Manchester to or near Ashton under Lyne and Oldham in the County Palatine of Lancaster, at the intended Aqueduct Bridge in Dukinfield in the County of Chester, at or near to Chapel Milton in the County of Derby; and a Communication by Rail Ways or Stone Roads from thence to Load's Knowl, within Peak Forest in the said County of Derby; and a Branch from and out of the said intended Canal to Whaley Bridge in the said County of Chester.¹⁰

In 1800, Parliament passed

An Act for altering and amending an Act passed in the thirty fourth Year of the Reign of His present Majesty, for making and maintaining the Peak Forest Canal; and for granting to the Company of Proprietors of the said Canal further and other Powers.¹¹

The first Act authorized the construction of a navigable canal. The second Act amended the previous act, providing “further and other powers” to the proprietors.

¹⁰ HL/PO/PU/1/1794/34G3n27

¹¹ HL/PO/PB/1/1800/39&40G3n114.

While completely encoding all legislation passed by Parliament will take a considerable period of time, our initial encoding of all acts and our detailed encoding of 20% of all estate and statutory acts reveals trends of interest to historians and social scientists. We illuminate these patterns by reporting the annual number of acts that changed rights to property and/or authorized the provision of new infrastructure and public services. These time series could, of course, conceal as much as they reveal, particularly if the scope, scale, and nature of the legislation changed over time.

For this reason, we visited the House of Lords Record Office and examined samples of original acts from the beginning (1610s), middle (1700s, 1740s, and 1780s), and end (1800s) of our sample period. Our examination revealed that the estate, enclosure, and statutory authority acts passed by Parliament during this period possessed salutary statistical properties. The acts were standardized in form and content. The acts affected specified rights for specific pieces of property. The act described the property in detail. The effect on the property was always localized in time and space. The properties' type, description, and distribution seemed stable over time. These properties ensure that counting the number of acts passed annually reveals broad trends in the amount of property being affected by the acts; the types of rights being created, altered, or annulled by the acts; and the effort that Parliament put into passing the acts.¹²

Our study focuses on the years between 1600 and 1815 for several reasons.¹³ The seventeenth century encompasses a series of political transformations – the reign of Stuart

¹² The characteristics of the acts ensure that other interesting statistical time series that one might derive from the evidence, such as the acreage of property affected each year, are algebraic transformations of the annual number of acts passed. In this paper, we report that basic series. In future work, we plan to report other times series of interest and the trends, such as average acreage per act, that allow the transformation of one series into another.

¹³ Our coverage of the time period is complete with one exception. Our database does not include legislation passed during the interregnum following the regicide of Charles I in 1649 and lasting until the restoration of Charles II in 1660. We have begun collecting and encoding legislation passed those eleven years, which (cont.)

monarchs and their policy of centralizing power in the hands of the King, the Civil War, the Interregnum, the return of the Stuarts, and the Glorious Revolution of 1688-89 – which, according to many scholars, set the stage for the economic transformations of the eighteenth century. The eighteenth century experienced tremendous growth in the number of acts passed by Parliament. The last decades of our period experienced the peak in the annual number of acts. The Great Reform Act of 1832 dramatically changed the structure and functioning of Parliament. Thereafter, the quantity of legislation declined for several decades and then fluctuated around a level roughly 15% below the peak. Finally, our period covers two centuries during which England's economy underwent a series of transformations – increasing international trade, rising agricultural productivity, growing urban population, expanding manufacturing sector – that preceded the Industrial Revolution. The long-run goal of our project is to illuminate the links between legislation and these economic, social, and political transformations.

2. Growing Volume of Legislation

Scholars have long recognized that the eighteenth century witnessed a rapid rise in the volume of legislation. Our database confirms that in the late seventeenth century, major changes in the legislative process occurred. Figure 1 plots a five-year moving average of the number of acts passed per year between 1500 and 1899. From 1500 to 1688, an average 14 acts passed per year. From 1689 to 1719, an average of 66 acts passed each year. Between 1750 and 1780, an average of 169 acts passed each year. In the early 1800s, the average approached 400 acts per annum. After 1815, the number of acts fluctuated around an average of 318 per annum. What types of acts drove this growth in legislation?

encompass the Commonwealth and the Protectorate of Oliver Cromwell. Our preliminary examination of this evidence indicates that it is consistent with the arguments advanced in this essay.

Table 1 answers this question. Between 1600 and 1815, one-quarter of all acts were statutory authorities. One-sixth were estate acts. One-sixth were enclosure acts. More than one-half of all acts fell into these three categories.

Figure 2 shows trends in statutory authority, estate, and enclosure acts over this period. From 1600 to 1688, estate acts occurred in small numbers. They comprised 26% of all legislation. During the three decades following 1688, the number of estate acts rose as did their share, 43%, of all legislation. After 1720, the number of estate acts declined, as did their share of all legislation, but Parliament continued to pass significant numbers of estate acts for the next two centuries.

Between 1600 and 1688, statutory authority acts were rare. On average, Parliament passed less than one each year. During the three decades following 1688, statutory authority acts became more numerous. Parliament passed an average of over 5 per year (162 during this period). The number and share grew gradually until 1750, when both rose dramatically. Between 1750 and 1815, they accounted for 27% of all legislation.

Before 1720, Parliament passed only a handful of enclosure acts. The number of Parliamentary enclosures grew slowly between 1720 and 1750, but they remained a relatively small proportion of all acts. From 1750 to 1815, the number and share of enclosure acts grew more than all other types of legislation. Enclosure acts were particularly common in the decades of the 1760s, 1770s, 1790s, and 1800s.

We can compare changes in these three categories to changes in all other types of legislation. From 1600 to 1688, most of what Parliament did was pass 'other' types of legislation. After 1688, the share of other legislation declined, but remained over 30% of all acts throughout the eighteenth century. These other acts dealt with a wide array of issues, such as

government finance, regulation, foreign trade, and colonies. Also included in this other category are large numbers of private acts affecting individuals, such as naturalizations, divorces, and name changes.

3. Acts Affecting Property Rights and Public Goods

This section delves into the details of estate, statutory authority, and enclosures acts. These categories encompassed over half of all legislation passed between 1688 and 1815. These types of acts also possess a common theme. All affected individuals' and organizations' rights. Some created new rights. Others altered or annulled old rights. Some created new organizations, such as a turnpike trust. Others disbanded existing organizations, in many cases, ancient entities, such as village councils and courts.

3.1 Estate Acts

Estate acts affected individual and family estates. Estate acts arose from an English system of inheritance that solidified after the Civil War of the 1640s and prevailed for several centuries: the strict settlement. During this period, most of the great landowners held most of their land under settlement. Lesser gentry and yeoman families also employed the legal device, even on single family farms. While estimates vary, at the peak, at least one-quarter and as much as three-fourths of land in England was strictly settled (English and Saville, 1983, pp. 11-12, 30. See also Habakkuk 1994).

A settlement was the generic name for a property transaction and for the documents created in its consummation. This settlement process was an amalgamation of common law, conveyancing devices, a small amount of statute law, and a large amount of legal tradition, “tested in the courts over the years and subject to periodic refinement by legal decision or statute

(English and Saville, 1983, p. 11).”¹⁴ Three features of settlements generated a need for Parliamentary involvement in personal and family estates.

First, without an act of government, no part of a settlement could be changed until a person named in the entail as tenant in tail came of age; only then, joining his father or other life tenant, could the entail be ended by the legal process of common recovery, and only then could the settlement be rewritten. This fact meant that a settlement could be changed only infrequently, at intervals of decades or longer, as a family waited for an heir to come of age (i.e. reach 21) before his father passed away, and the father and son had to reach an agreement on restructuring the estate. With life expectancies in the low forties, families usually waited generations for this confluence of events.

Second, settlements restricted the uses to which land could be put. The reason for these restrictions was protecting the rights of future heirs. The holder of a settled estate (who was just a life tenant) could not grant leases lasting beyond his life and could not grant leases from which he benefited at the expense of his successors (such as leases in which tenants paid lump sums up front in return for lower rents). If he did, he committed fraud, and the leases would be void. The holder of a settled estate could not sell, exchange, or mortgage the property. If he completed such transactions, he could be held liable for damages to the estate, and the transaction could be voided, because he had no power to transfer title. Similarly, the holder of an estate could not alter the property, even if he considered the alterations to be an improvement. The removal of trees, hedges, and buildings, the opening of new mines, quarries, and peat bogs, and the conversion of arable lands into pasture (or vice versa) could be considered waste. All those who benefited from

¹⁴ Technically, the strict settlement arose through the conjunction of three legal elements: the fee tail (or entail) assured by the statute *De Donis Conditionalibus* (i.e. concerning conditional gifts) of 1285, which protected (cont.)

such actions could be liable for damages, if upon inheriting an estate, the successor claimed to have been harmed by the acts. Such actions could only be undertaken if a settlement contained specific clauses authorizing such actions. Settlements written in the seventeenth and early eighteenth centuries seldom provided such powers. As the eighteenth century progressed, settlements became increasingly sophisticated, and tended to provide broader powers to estate holders, such as powers of lease, sale, exchange, mortgage, and appointment.

Three, conducting transactions and enforcing contracts on settled land could be costly, uncertain, and insecure. Settlements were long, complex documents, traditionally unpunctuated, and full of repetition.¹⁵ Interpreting settlements required experience, skill, detailed knowledge of the document, and a large library of property laws, precedents, and legal texts estimated at 674 volumes in 1826 (English and Saville, 1983, p. 18). Settlements were not part of the public record. Copies of the deeds were usually held by the settlers, trustees, and lawyers. Settlements had to be consulted before taking out mortgages, drawing up leases, or completing sales, because if the settlement did not specifically authorize a transaction, the transaction could be voided. Ambiguities in settlements often deterred individuals from acting on estates; for fear that the transactions would be disputed by successors.

As the number of strict settlements rose during the second half of the seventeenth century, an increasing number of petitioners approached Parliament. Almost any difficulty arising in the management of a settled estate could be remedied by a private act, and landowners both great and small applied for them. During the last decade of the seventeenth century, Parliament standardized procedures for processing these bills. Estate bills were introduced in the

grants made to a man and the heirs of his body; the life interest which could be created under the Statute of Uses (1535); and the seventeenth-century device of trustees to preserve the contingent remainders.

House of Lords and refereed by two judges. Those deemed beneficial to the realm and to the parties involved passed through both Houses, were publicly read three times, sent to a select committee, and then sent for royal assent. The procedure was rapid. Even when opposed, a bill could pass in a matter of weeks. The process was quicker, cheaper, and more certain than the only alternative, a suit in Chancery Court (English and Saville, 1983, p. 50).

The procedures for processing estate bills employed templates for standard types of transactions. Our research identifies the eight most common forms. Table 2 lists the names that we give to these forms, the number passed by Parliament during the centuries that we study, and their relative frequency among estate acts.

The typical *vesting act* contained five elements. It granted (i) some property, right, or benefit, which had been a portion of (ii) someone's settled estate, (iii) to someone else, (iv) for some reason, and in some circumstances (v) in exchange for some property or asset. In about half of all cases, the person vested was a trustee. For example, an act from 1702 vested "certain lands and tenements of Montague Earl of Abingdon, in trustees, to be sold" and the proceeds employed in the purchase "of other lands of equal value" to be employed "to the same uses, as the lands to be sold are limited."¹⁶

The typical *enabling act* contained three elements. Parliament enabled (i) someone, (ii) to do something, (iii) for some reason. An example from 1725 enabled "Charles Lowndes Gentleman and the persons in remainder after him to make contracts for getting brick earth in, and grant building leases of the house and ground called Spring Garden, and other the ground

¹⁵ The fact that until the Conveyancing Act of 1881, solicitors were paid for conveyances by the word (1s for every 72 words in 1862), did not encourage conciseness (England and Seville, 1983, p. 18).

¹⁶ HL/PO/PB/1/1702/13&14W3&1As1n33

called Great Spittlefield and Little Spittlefield.”¹⁷ An act in 1788 enabled Charles Earl Camden to grant “building leases of the prebendal lands at Kentish Town, in the County of Middlesex.”¹⁸

The typical *act authorizing sale* contained four elements. Parliament authorized the sale (i) of something (usually land or a portion of an estate), (ii) by someone, (iii) for some reason, (iv) if certain conditions were met. For example, an act in 1725 permitted the “sale of several estates of Henry Grey Esquire, in the County of Southampton, and for settling other estates of equal value in the counties of Berk[shire] and Wilts[hire] to the same uses.”¹⁹ An act in 1773 authorized the sale of “certain charity estates” and the application of the proceeds to “the building of a town hall and shambles in the town of Newark upon Trent and in the purchasing of lands and hereditaments for enlarging the Church.”²⁰

The remaining types of estate acts also had specific forms and functions. A *confirming act* legalized a transaction that had already taken place. *Acts for settling* resembled acts for vesting, although the acts for settling pertained almost exclusively to property which entered into a strict settlement. An *empowering act* authorized the holders of settled estates to engage in a wide variety of transactions including sales and leasing of land, the improvement of property, and the marketing of natural resources. An *act authorizing an exchange of property* authorized property within a settled estate to be exchanged for some other property, deemed equally able to fulfill the functions of the settlement. A *discharging act* discharged something (usually property or an estate), from a restriction, and often substituted something equivalent in its place.

In general, estate acts allowed the holders of settled estates – either a life tenant or trustees – to take some action that was restricted by the settlement. Estate acts authorized a wide

¹⁷ HL/PO/PB/1/1725/12G1n35

¹⁸ HL/PO/PB/1/1788/28G3n132

¹⁹ HL/PO/PB/1/1725/12G1n66

variety of transactions including sales and long-term leasing of land, mortgaging of property, settling jointures upon spouses, cutting of old-growth timber, and sales of ores and minerals.

Our detail-coded 20% random sample enables us to estimate the number of estate acts that facilitated property sales. The number exceeds the number of ‘acts authorizing sales,’ because all types of acts could (and often did) authorize sales. We construct our estimate by determining the percentage of acts in the sample that authorized sales each year, and then, multiplying by the number of estate acts passed in that year. Between 1600 and 1688, the estimated number of sales is 102. Between 1689 and 1815, the estimate is 1,335, roughly 50% of all estate acts. Figure 3 plots a five-year moving average of our estimate. The figure shows that before 1688, few acts facilitated property sales. After 1689, the average number of annual acts rose to 10, although it fluctuated significantly from decade to decade, and peaked between 1690 and 1710.

Our detail-coded 20% random sample also enables us to estimate the number of acts that authorized the leasing of land. Holders of settled estates could lease land for short periods of time, but in general, leases died with the life of the settled land holder. Authorization of leases for terms longer than life required specific permission in the deed of settlement or an act of Parliament. Between 1600 and 1688, the estimated number of leases is 3. Between 1689 and 1815, the estimate is 392, roughly 15% of all estate acts. Figure 4 plots a ten-year moving average of our estimate. The figure shows that after 1688, the average number of acts authorizing leases rose rapidly, and while it fluctuated from year to year, the average remained roughly constant throughout the eighteenth century.

²⁰ HL/PO/PB/1/1773/13G3n179. A “shambles” is a slaughter-house or meat market.

Overall, estate acts had salutary economic effects. Estate acts encouraged investment and enhanced allocative efficiency. Estate acts enabled landowners to undertake projects and exploit resources previously prohibited by the property rights regime. Estate acts loosened constraints on landowners, lowered transaction costs, and facilitated the reallocation of physical and financial assets to new and lucrative uses. The lowering of such barriers has long been considered a principal force propelling European economics progress (North, 1981).

The benefits of estate acts extended beyond the persons and property involved. Estate acts established precedents. Knowledge of what Parliament would decide when confronted with a case helped to resolve disputes within families, to safeguard the interests of investors, and to prevent the holding-up of projects by those seeking an inordinate share of the profits. The development of institutions solving such problems has long been considered to be one of the principal institutional innovations underlying modern capitalist economies (Williamson, 1981).

3.2 Statutory Authority Acts

Statutory authority acts addressed the provision of infrastructure and public services. Table 3 separates statutory authority acts into subcategories, and groups the subcategories by the issues addressed. One group of acts – road, canal, port, river navigation, bridge, and railway acts – facilitated the construction, improvement, and maintenance of transportation infrastructure. A second group of acts addressed the needs of Britain’s growing cities and towns. Urban improvement acts addressed the need for street paving, water supply, marketplaces, and public squares as well as local police forces (i.e. street watch) and garbage collection (i.e. removal of nuisances and annoyances). Poor relief acts provided for the assistance to the poor and construction of workhouses. Court of small request acts provided for the establishment of courts that dealt with credit contracts valued at less than 40 shillings. Government building acts created

(or improved) jails (i.e gaols), debtors' prisons, courthouses, and county administrative offices (shire halls). A third group of acts addressed a wide array of issues. Drainage acts provided infrastructure, such as embankments, channels, and dams, needed to drain wetlands. Church acts funded the reconstruction and maintenance of churches and cemeteries.

Statutory authority acts created organizations to undertake these tasks (Webb and Webb, 1963). In most cases, these organizations were private, non-profit entities, although in some cases, they were for-profit companies, corporations, or local governments. Road, bridge, river, poor relief, drainage, port, court of small request, and church acts usually created a body of trustees composed of landowners or merchants. These individuals did not have an ownership stake in the organization, and generally served without direct compensation. Canal and railway acts were different because they created joint stock companies, or corporations. In either case, landowners and merchants played a key role in the management and promotion of statutory authorities.

Statutory authority acts granted a number of privileges to the body of trustees or board of directors overseeing these organizations. One of the most important was the right to levy user-fees or other types of taxes. Road acts (also known as turnpike acts) gave trustees the right to levy tolls on road-users and claim statute labor from inhabitants along the road. The tolls marked a significant departure from the existing system, in which parishes paid for road improvements with local labor and property taxes, and in which individuals possessed the right of free passage, enshrined in most town charters and confirmed in the Magna Carta. Canal, river, port, bridge, and railway acts also introduced fees, and in some cases, replaced property taxes levied by municipalities and counties. Urban, drainage, poor relief, and church acts authorized the

collection of taxes from groups of individuals and business, either in specific places or spanning multiple jurisdictions.

Trustees or commissioners also received the right to issue bonds or shares. In road, bridge, river, and port acts, the bonds could be secured by the tolls. If interest payments were not met, the bondholders had the right to seize the toll revenues. Canal and railway acts authorized both bonds and shares. All of these securities could be traded in secondary markets. Church acts authorized the issuance of annuities, some similar to tontines.

Statutory authority acts defined procedures for purchasing land. Typically trustees or directors were authorized to negotiate with landowners. If the parties could not agree on a price, the trustees or directors could appeal to a body of commissions named in the act who had the authority to compel the landowners to sell. These procedures provided the legal foundation for modern laws concerning eminent domain.

Statutory authority acts also placed limits on the powers of trustees and directors. For example, transportation infrastructure acts defined maximum schedules of tolls. The schedules distinguished different types of traffic and goods, which paid different rates. Similar schedules regulated the issuance of debt, the quantity of equity, and terms of interest.

Statutory authority acts could be revised by subsequent acts. Canal acts were often amended in order to add branch lines or to increase the authorized capital. Road acts were often renewed, since they typically expired after 21 years. Acts also often expanded the authority of trustees, by allowing them to manage roads over a broader area, or altered the schedule of tolls. In general, follow-up acts clarified and amended the responsibilities of the organization.

Statutory authority acts thus performed either of two functions. Table 4 uses our 20% random sample to estimate the number of acts of each type within each category. The bottom line

indicates that 58% of all statutory authority acts authorized the construction of new infrastructure, improvement and repair of existing infrastructure, the provision of new services, or the improvement of existing services. For example, 60% of all canal acts called for the construction of a navigable waterway where one did not exist before. 37% of all port acts authorized repairs and improvements to harbors, most of which had existed in some form since the Middle Ages. 27% of all urban acts authorized the creation of a street watch, a local policing force combining the characteristics of a modern neighborhood watch and private security firm. 83% acts concerning courts of small request established venues for hearing suits among private citizens, which served as an alternative venue for the recovery of small debts.

Table 4 shows that 42% of all statutory authority acts renewed or amended previous acts without authorizing the construction of new infrastructure or improvement of existing infrastructure. Some of these acts simply extended the term of a previous act. A turnpike act, for example, had to be renewed every 21 years. Turnpike renewals, on occasion, merely reauthorized the existing turnpike trust to continue operating with its current schedule of tolls. However, some of these acts played a role in regulating the operation of statutory authorities. For example, an act might amend a canal company's charter, authorizing it to issue additional capital, in hopes of speeding construction of the waterway. An act might renew a turnpike but require the trust to reduce the tolls that it charged, encouraging the expansion of traffic. Alternatively, the inflation of the early nineteenth century lowered the real value of tolls fixed in nominal terms. This led to the passage of numerous amendments in the early 1800s which raised turnpike tolls.

Our 20% random sample reveals trends over time in the number of acts authorizing new infrastructure and public services. Figure 5 plots a ten-year moving average of this time series

between 1600 and 1815. Few acts authorized infrastructure before 1690. Between 1690 and 1750, the number of acts grew gradually. After 1750, the growth accelerated sharply. Rapid growth continued until 1815, with some variation around the trend.

This surge in statutory authorities coincided with two economy-wide trends: mass-migration to urban areas and the expansion of commerce. Statutory authorities established the infrastructural and institution prerequisites for these processes. Statutory authorities provided fresh water, garbage removal, aid to the indigent, forums for dispute resolution, and local police forces to urban areas experiencing unprecedented expansion. Statutory authorities propelled the transport revolution underlying the expansion of domestic and international trade. Canal companies enabled coal to reach expanding manufacturing centers, like Manchester, Liverpool, Birmingham, and Leeds. Turnpike trusts reduced freight charges and passenger travel times by widening, resurfacing, and maintaining major thoroughfares (Bogart, 2005). Harbor authorities increased the number and size of ships which could arrive in port, facilitating the expansion of international trade.

Statutory authorities also played a key role in capital formation during the early stages of the Industrial Revolution. Statutory authority acts formed the foundation for investment in a diverse set of industries. In 1810, the value of capital raised by statutory authorities for canals, rivers, turnpikes, water works, docks, and gas lighting equaled 41 million pounds, or nearly 6.5% of the total capital stock, or nearly three times the combined value of England's three largest corporations, the East India Company, the Bank of England, and the South Sea Company (Harris 2000, p. 195).

3.3 Enclosure Acts

Enclosure acts changed rights to property, typically open fields in agricultural villages. At the beginning of the eighteenth century, approximately one-quarter of the arable land in England resided in these open fields, which had several common characteristics. Villagers cultivated open fields collectively. Villagers possessed rights to grow crops in portions of fields at certain times of certain years in conjunction with their compatriots. At other times, the fields lay fallow and served as a common, undivided pasture for the animals of the village. The portions of the fields over which individuals held rights to grow grain, often acre-sized strips, were intermingled within a field and spread amongst fields. Villagers possessed strips in all of these fields (typically three for a three-course rotation or four for a four-course rotation). Villages also often shared additional areas, either pastures or waste, on which they grazed animals, gathered firewood, and used for other purposes, such as hunting game. Individuals residing in the village shared rights to all of these communal assets. They managed these collective assets, including the open arable fields, through village institutions, such as customary laws and manorial courts.

Enclosure acts reorganized rights to property in these open field villages, replaced collective ownership of common resources by individual ownership of particular plots of land, and replaced collective management through village institutions by individual management of personal estates. To obtain an enclosure act, a sufficient group (typically over four-fifths) of individuals possessing rights to land in an open field village drafted a petition giving notice of their intentions to the rest of the village. The petition formed the basis for a bill of enclosure,

which they submitted to Parliament. The procedure thereafter resembled the procedure for processing an estate act.²¹

An enclosure act appointed a commission, usually consisting of three to twelve members, depending on the amount of land involved. The commission implemented the terms of the act. The commission employed surveyors to draw a map of the village with its open fields and strips, tofts and crofts, waste and pasture, and other physical features. The surveyors recorded the holders of rights to all of these assets. At a series of public meetings, landholders advanced claims as to what they should receive under the new arrangements. The commissioners decided on the validity of these claims. After they made their decisions, the surveyors created a map of the new village, displaying the new features, such as fields, roads, fences, and irrigation channels, and the owners of each.

Our preliminary examination of enclosure acts indicates that commissioners were authorized to undertake a combination of three typical tasks: allotting, dividing, and enclosing. Our 20% random sample shows that these actions were authorized in 24%, 67%, and 95% of enclosure acts respectively. The authority to divide appears to be the power to draw the boundaries of fields on the new village map. The authority to allot appears to be the power to determine which of the villagers receives which of the new parcels. The authority to enclose appears to be the authority to ensure that villagers contributed to the construction of the infrastructure, such as fencing, paths, roads, and water channels, required by the reorganization of the village.²²

²¹ In 1801, the first General Enclosure Act simplified the administration of enclosure bills by providing guidelines for those drafting enclosure bills and parameters for permissible outcomes.

²² In the previous paragraph, we have been careful to include the caveat *appears* because the terminology changes over time. The procedures for processing enclosure acts evolved rapidly during the second half of the eighteenth century. (cont.)

The effects of enclosures have been studied by many scholars. Some consider enclosure to be a key catalyst for increasing agricultural productivity. Enclosures enabled farmers to introduce new crops, to improve livestock, to react flexibly to market opportunities, and to reduce overgrazing of the commons (see Mark Overton, 1998, for an overview). Other scholars, such as Robert Allen (1992) and Clark (1998), find the effects of enclosure limited. After enclosure, new crops, like turnips and clover, were often introduced, but these innovations had little measurable impact on agricultural productivity. Land rents increased, but only to a limited extent, particularly after considering the costs of enclosure.

Our examination of the evidence finds that as previous scholars argued, enclosure acts permanently reorganized rights to property in agricultural villages. Enclosure acts, however, had additional functions which have received less attention. Some enclosure acts authorized the irrigation of arable land. Other acts authorized the embanking and drainage of wastes and fens. Many enclosures acts brought new land into cultivation. Others transferred crop-land to new uses. An example is the transfer of arable and pasture land to urban and industrial uses, particularly within and on the outskirts of rapidly growing towns and cities.

4. Links with Political Changes and Economic Growth

In this section, we examine the links between legislation and major political changes, as well as the connections between legislation and economic growth. As we saw earlier the great surge in acts began in the 1690s and early 1700s. This was an important period in English political history because it followed the Restoration of 1660 and the Glorious Revolution of 1688-89. In the early 1600s the Stuart monarchs, King James I and King Charles I, had major

The General Enclosure Act of 1801 standardized terminology, but variation reoccurs quickly, which may be one reason Parliament passed a second General Enclosure Act in 1836 and a third in 1845.

disputes with Parliament over taxation, religion, and foreign policy. As part of their strategy to weaken their opponents, James I and Charles I infrequently called Parliament into session. This marked the era of so-called 'personal-rule.'

The Stuarts were defeated by parliamentary forces during the Civil War. In the process King Charles I lost his head, and England briefly had a republican form of government. The experiment did not last, and in 1660 the old constitution was 'restored' along with King Charles II. Political instability reemerged during the 1670s and 1680s. The accession of James II in 1685 was especially destabilizing because many believed that he would make England a Catholic/Absolutist country, much like France and Spain. His reign came to an end with the Glorious Revolution of 1688, in which William of Orange invaded England. James II was forced to flee, and Parliament agreed that William & Mary would become the new king and queen. As part of the revolutionary settlement, William agreed to the Declaration of Rights, which assured that Parliament would have the right to convene each year, and that the king would have to consult Parliament on legislative matters.

The reign of King William and Queen Mary lasted from 1689 to 1714. In many ways, this was a transition period between the constitutional struggles of the Stuart era (1603-1688), and the relative stability of the early Hanoverian era (1714-1760).²³ Initially William tried to reestablish the power of the monarchy, but ultimately its influence waned. By Queen Mary's death in 1714 Parliament had established its sovereignty and was successful in limiting the crown's power.

The long-run effects of the Restoration and the Glorious Revolution have been much discussed by historians and social scientists, but there has been little examination of its effect on

²³ See Hoppit (2000) for an analysis of this transitional period in British political history.

changes in property rights and public good provision via legislation.²⁴ Figure 7 illustrates the relationship between these two political changes and all acts passed between 1603 and 1720. It also shows the time-series for estate and statutory authority acts only. There were few acts of any kind between 1601 and 1640. Shortly after the Restoration in 1660, there was an increase in all acts of Parliament, including estate and statutory authority acts. The expansion did not last, however, as all acts dropped significantly during the 1670s and 1680s. There was a sharp increase in all acts after the Glorious Revolution of 1688-89, particularly estate and statutory authority acts. These results show there was a major change in legislation affecting property rights and the provision of public goods after the Glorious Revolution.

The growth in acts after the Glorious Revolution was the result of two factors: Parliament met for more days, and Parliament passed more acts per day. Table 5 shows average annual days in session and the number of acts passed per day for each monarch between 1603 and 1800. During the reign of William & Mary, the average number days in session was 121, at least three times large as during the reigns of James I, Charles I, Charles, and James II. The main reason the average annual number of days in session increased after 1688 was that Parliament met annually. Prior to the Glorious Revolution, the Crown decided when to call Parliament into session and when the session ended. The Stuarts called Parliament infrequently and for short periods. This made it difficult to pass acts of Parliament.

The number of acts passed per day was 0.55 under William & Mary, which was greater than under Charles I and Charles II, but similar to James I and James II. These figures suggest that the Glorious Revolution contributed to higher legislative efficiency as well as longer sessions. Greater efficiency could be due to several factors, including the emergence of political

²⁴ See North and Weingast (1989) and O'Brien (1994) for a discussion of the Glorious Revolution and British (cont.)

parties, the preponderance of the landed interest, less interference by the Crown, and changes in popular views about government. In future work, we plan to investigate these various factors. What it is immediately clear is that the Parliaments of the 1690s, 1700s, and 1710s were more effective in passing legislation than their predecessors in the early to mid-seventeenth century

Is there any evidence that the rise in legislative activity affected economic development in this period? A clear correlation exists between the passage of acts affecting property rights and public goods and many measures of economic progress. Figure 9 plots one of these correlations. It shows a ten-year moving average of the number of acts authorizing sales, leases, new infrastructure, and new public services on the right-hand axis and a ten-year moving average of the growth rate of the Crafts-Harley index of industrial production (1992) on the left-hand axis. The former series relates to Parliament's influence on investment in resources and infrastructure. The latter series relates to returns reaped from technology, capital accumulation, and all other investments. The two series appear correlated. Both accelerate over time. The growth in acts seems to lead the growth in industrial production by approximately 10 years. The correlation is consistent with our view that by reducing transaction costs, removing constraints on factor markets, increasing investment in infrastructure, and encouraging the provision of public services, estate, statutory authority, and enclosure acts contributed to economic growth.

5. Conclusion

The expansion of Parliamentary legislation after 1689 consisted largely of estate, statutory authority, and enclosures acts. These acts possessed a common theme. All affected individuals' and organizations' rights. Some created new organizations, such as transportation authorities; others disbanded existing organizations, such as open field villages. The

economic growth.

preponderance of these acts loosened constraints on the use of resources, expanded the range of contracts that could be written, facilitated investment in infrastructure, or expanded the provision of public services.

Antecedents existed to this legislation. Before 1600, Parliament passed laws related estates, enclosures, infrastructure, and public services. But, these acts were rare. After 1689, passing legislation on these topics became one of the principal tasks of Parliament and consumed as much of members' and clerks' time and energy as all other types of legislation combined. In sum, the novelty of this property rights revolution was not the idea of addressing the issue, but the scope, scale, and quantity of legislation that Parliament passed on this matter.

This finding suggests a new interpretation of governments' role in English economic development. Parliament changed after the political turmoil of the seventeenth century. It became a forum for changing property rights in ways which encouraged economic growth.

What general lessons can be drawn from this study? Ronald Coase argues that in the presence of transaction costs, attaining economic efficiency requires the proper definition and allocation of property rights. "The Problem of Social Cost" argues that in the nineteenth century, English common and statutory law recognized these principles and allocated property rights to encourage efficiency (Coase, 1960). "The Lighthouse in Economics" argues that Parliament's creation of statutory authorities and the introduction of user-fees could be an effective way of providing public goods, like infrastructure (Coase, 1974). Our research suggests that Parliament began to operate in the way that Coase described in the early eighteenth century, following the Glorious Revolution, when Parliamentary gained control of government and the political Enlightenment reached England.

Table 1: Principal Categories of Acts, 1600-1815

	Number of Acts	Percentage of Total
Statutory Authority	4,856	23.4
Estate	3,335	16.1
Enclosure	3,682	17.8
Other	8,839	42.7

Source: Database of Acts of Parliament.

Table 2: Subcategories of Estate Acts, 1600-1815

	Number of Acts	Percentage of Estate Acts
Vest	989	30.2
Enable	808	24.7
Sale	391	11.9
Confirm	220	6.7
Empower	129	3.9
Settle	109	3.3
Exchange	101	3.1
Discharge	53	1.7
Other	475	14.5

Source: Database of Acts of Parliament.

Table 3: Subcategories of Statutory Authority Acts, 1600-1815

	Subcategories	Number of Act	Percentage of Stat. Auth. Acts
Transportation	Road	2,692	55.5
	Canal	255	5.3
	Port	248	5.1
	River Navigation	188	3.9
	Bridge	168	3.5
	Railway	24	0.5
	Subtotal Transportation	3,575	73.8
Cities and Towns	Urban Improvements	553	11.4
	Poor Relief	153	3.2
	Courts of Small Request	83	1.7
	Government Buildings	57	1.2
	Total Towns and Cities	846	17.5
Other	Drainage	123	2.5
	Churches	198	4.1
	Miscellaneous	114	2.3
	Subtotal Other	435	8.9
Total		4,856	100

Source: Database of Acts of Parliament.

Note: Percentages may not sum due to rounding.

Table 4: Statutory Authority Acts Authorizing New or Improved Infrastructure and Service, 1600-1815

	Subcategory	Action of Act	Number of Acts	Percentage of Subcategory
1	Canal	Construct canal	153	60
2	Road	Create or improve roadways	1,373	51
2.1		Construct new road	242	9
2.2		Repair and resurface road	1,184	44
2.3		Widen road	592	22
2.4		Turn or Alter road	81	3
3	Bridge	Construct or improve bridges	97	58
4	Rivers	Improve navigability of waterways	117	62
5	Port	Construct or improve ports	124	50
5.1		Build or repair harbor	92	37
5.2		Build or repair pier	52	21
5.3		Build or repair docks	37	15
6	Urban	Create or improve urban infrastructure or services	426	77
6.1		Cleanse, water, light, or pave streets	337	61
6.2		Street watch	149	27
6.3		Remove nuisances and annoyances	160	29
6.4		Supply fresh water	50	9
6.5		Move or construct marketplace	39	7
7	Poor Relief	Improve organization and infrastructure of poor relief	89	58
7.1		Build Workhouse	41	27
7.2		Better Relief of Poor	64	42
8	Government Buildings	Construct or improve government infrastructure	43	75
8.1		Build or Repair Gaol or Debtors Prison	38	66
8.2		Build or Repair Shire Hall or Court House	19	33
9	Courts	Create court of small requests	69	83
10	Drainage	Drain wetlands and protect against inundation.	84	68
10.1		Draining land	37	65
10.2		Embanking land	9	16
Overall percentage of acts creating or improving infrastructure or public services.				58

Source: Database of Acts of Parliament, 20% random sample.

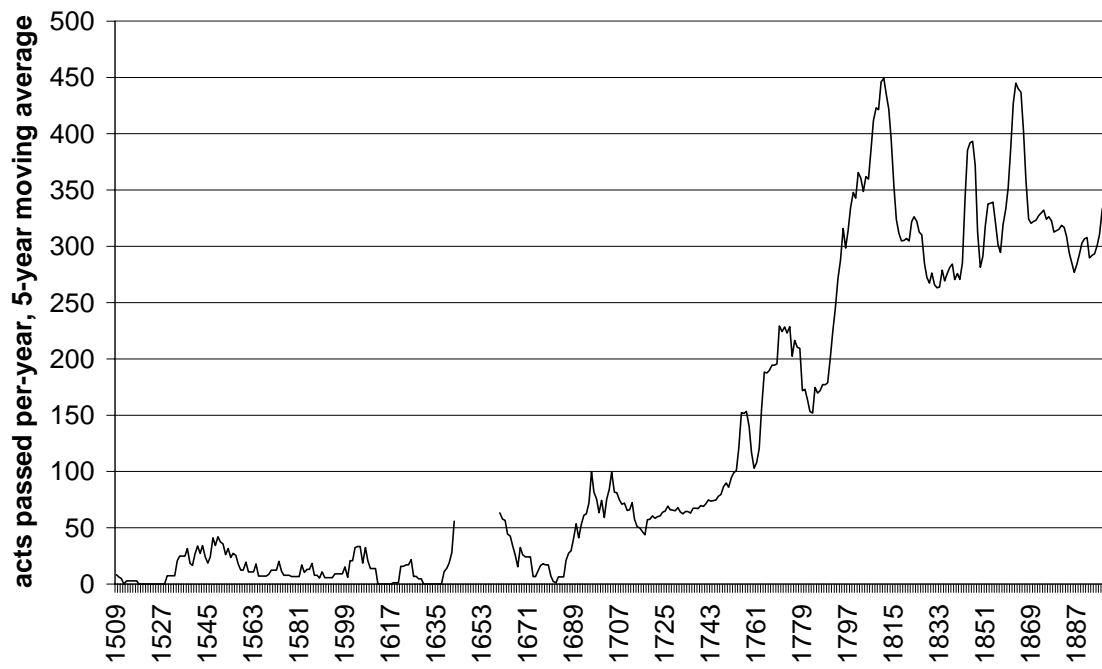
Table 5: Session Length and Legislative Efficiency across Monarchs, 1603-1714

Monarch	Dates	Average Annual Days in Session	Acts Passed Per Day in Session	Acts Passed Per Year
James I	1603-1624	28	0.51	14
Charles I	1624-1641	42	0.12	5
Charles II	1660-1685	43	0.35	15
James II	1685-1688	13	0.59	8
William & Mary	1689-1714	122	0.55	67
George I and II ^(a)	1714-1760	106	0.73	77
George III ^(b)	1760-1800	107	1.95	209

Sources: Database of Acts of Parliament, Journals of the House of Commons, and Hoppit (1997).

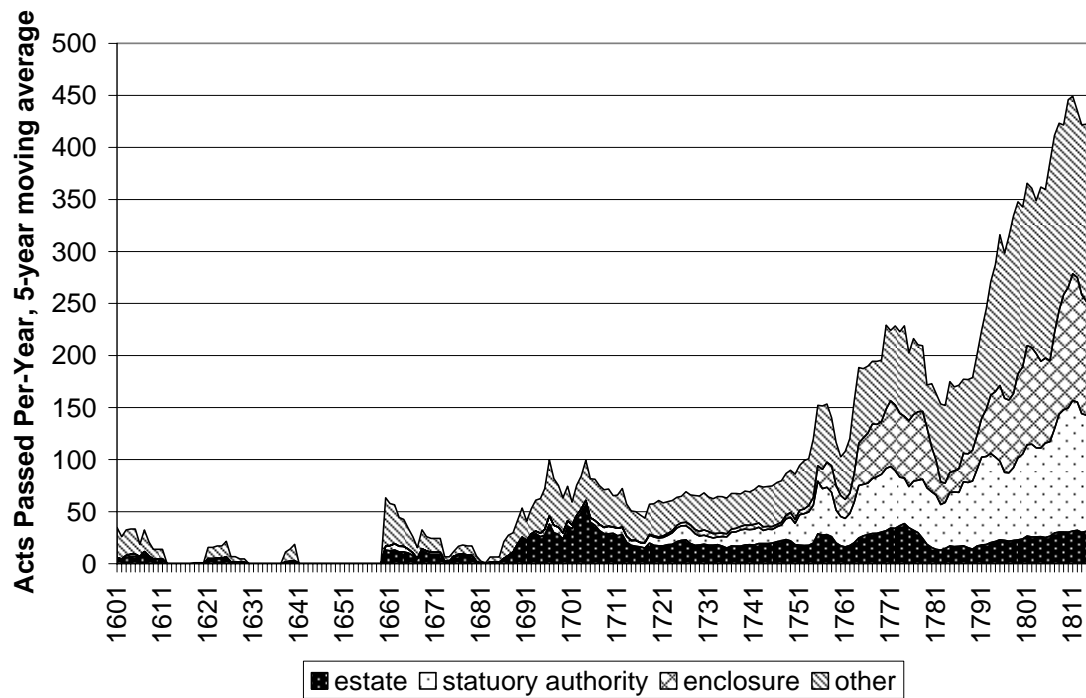
Notes: (a) Our source reports these figures for the combined reigns of George I and George II. (b) George III's reign lasted until 1820. Our sources contain data only up to the year 1800.

Figure 1: Annual Acts Passed by Parliament, 1509-1900



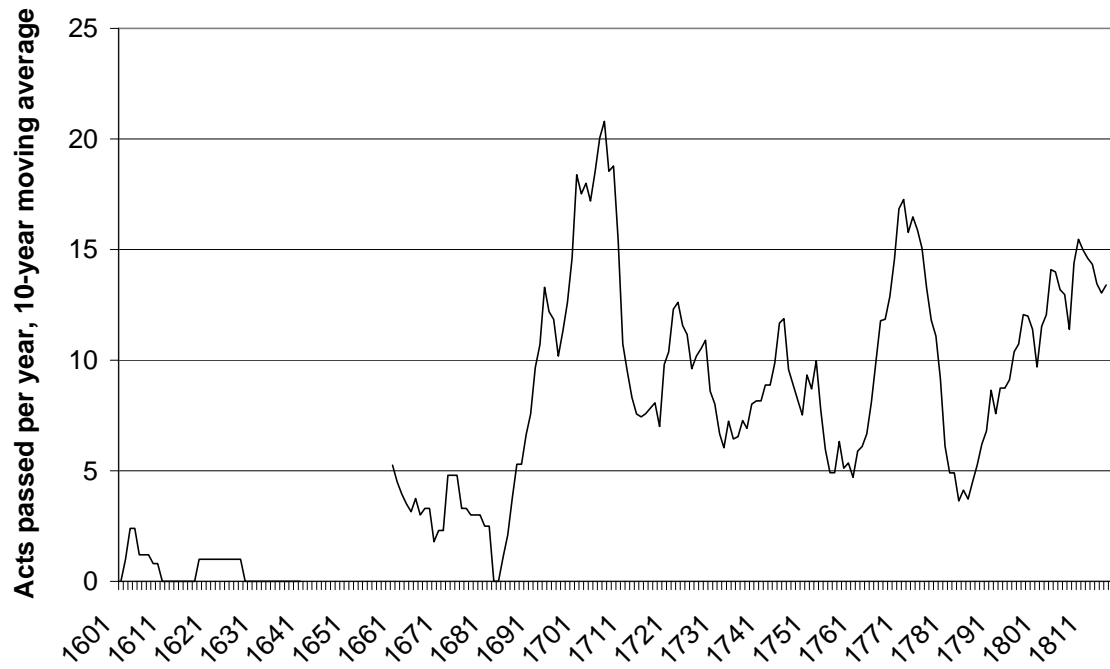
sources: see text.

Figure 2: Four Categories of Legislation, 1601-1815



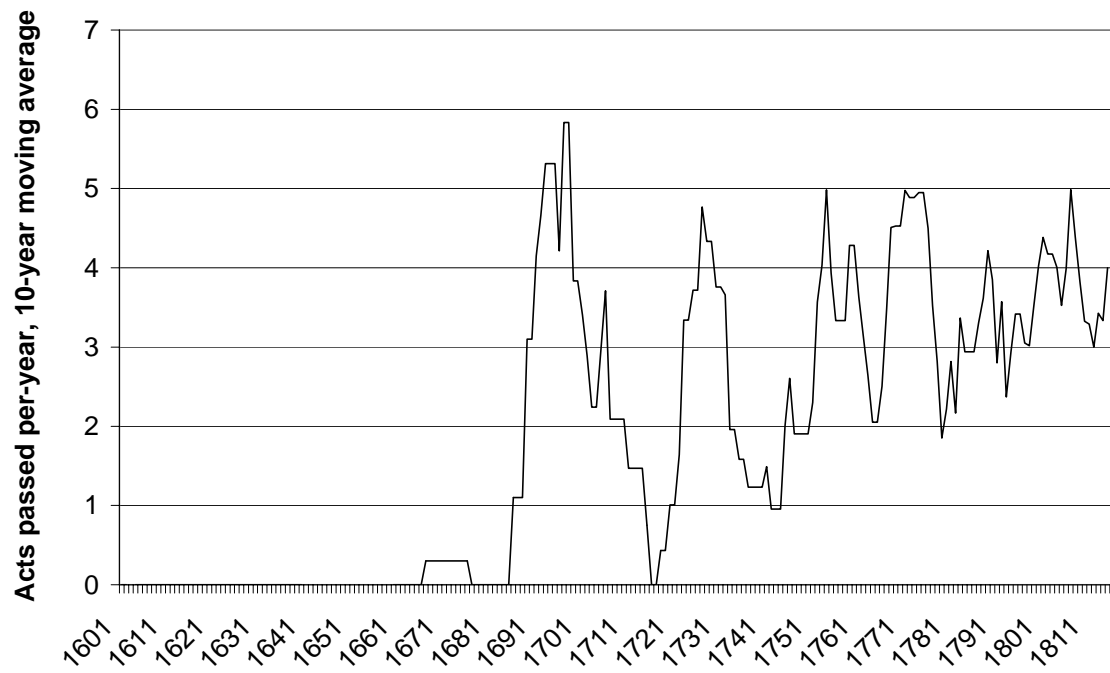
sources: see text.

Figure 3: Estimated Number of acts Authorizing the Sale of Property



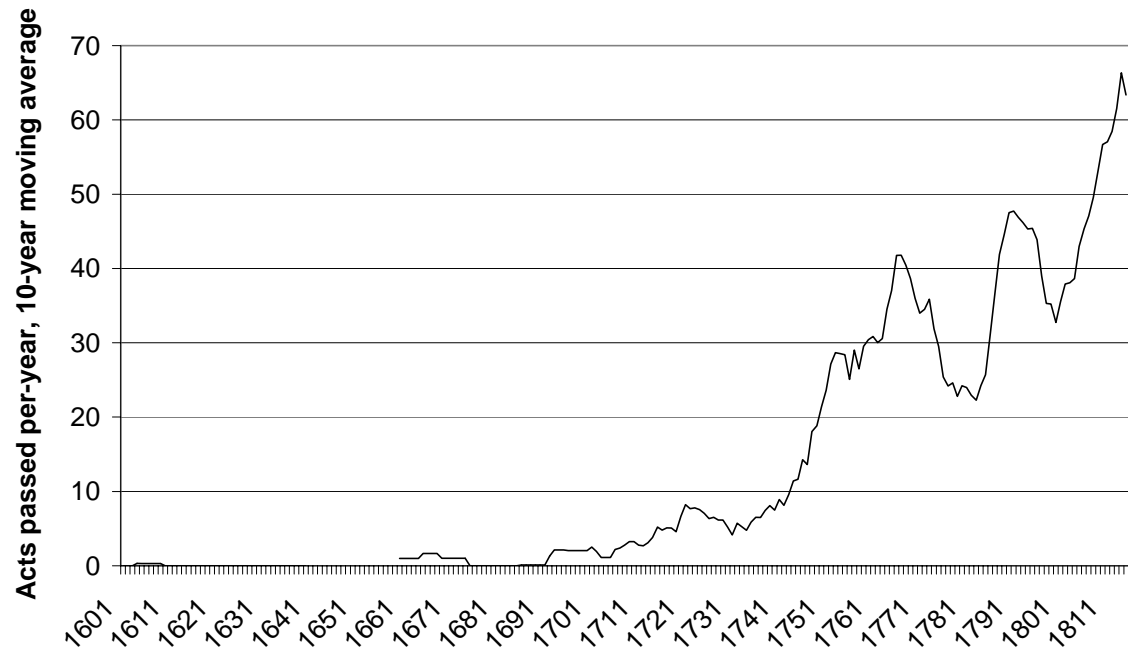
sources: 20% random sample of estate acts.

Figure 4: Estimated Number of Acts authorising Leases of Property



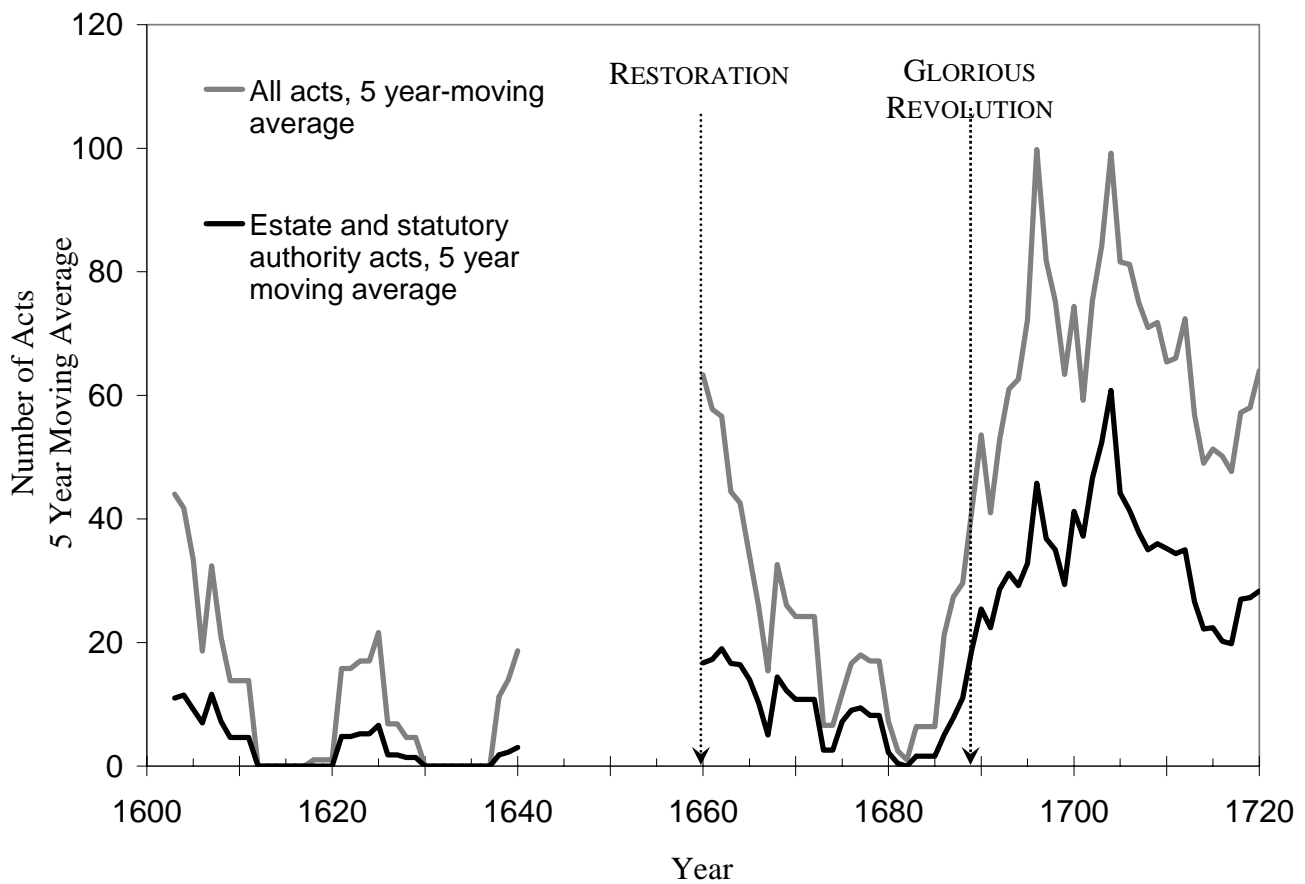
sources: 20% random sample of estate acts.

Figure 5: estimated number of statutory authority acts authorizing new infrastructure or public services



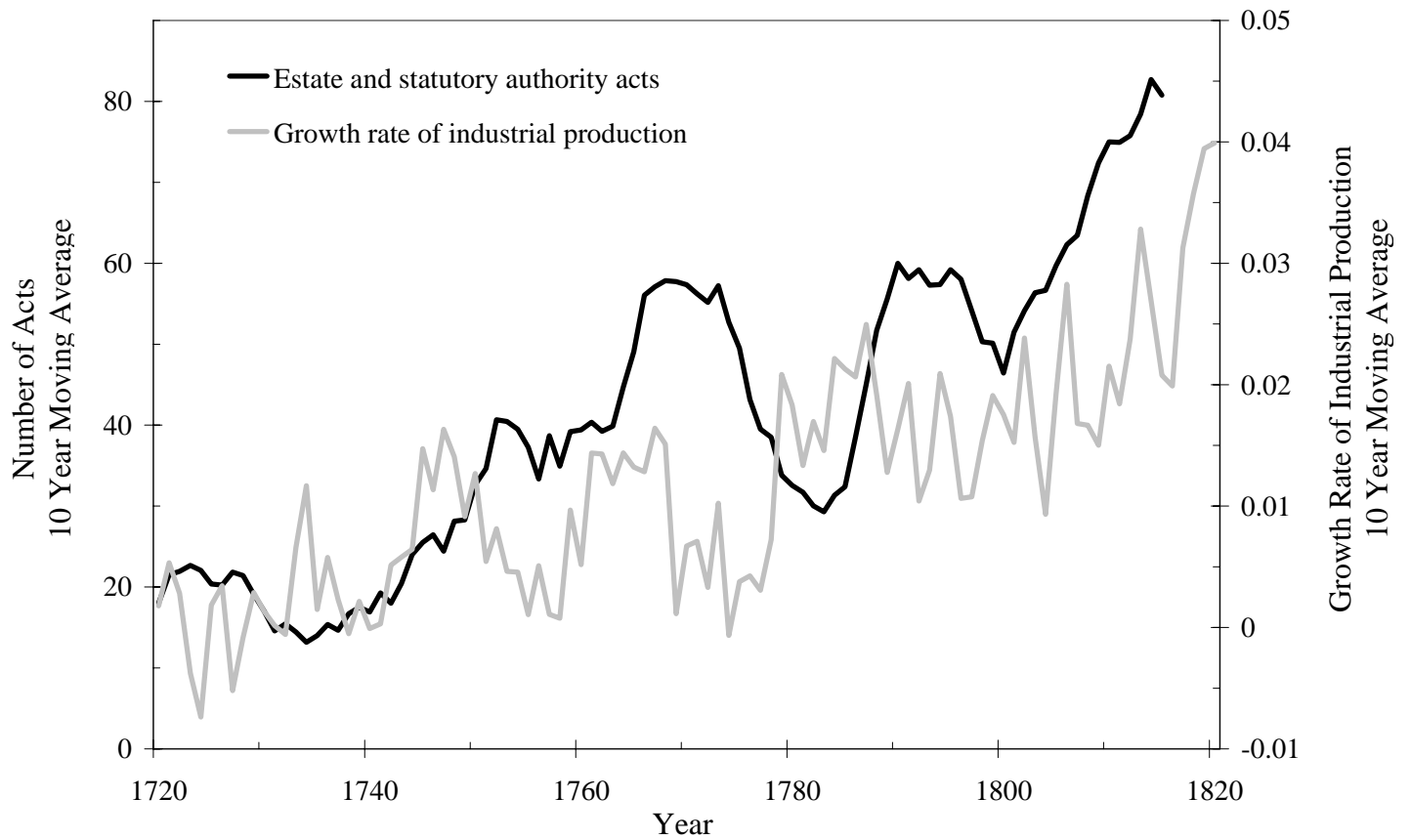
Sources: 20% random sample of statutory authority acts

Figure 6
Acts of Parliament and Political Events, 1600 to 1720



Sources: see text.

Figure 7
Acts of Parliament and Economic Growth, 1720 to 1820



Sources: See text.

References

- Allen, Robert. *Enclosure and the Yeoman*. New York, 1992.
- Bogart, Dan. "Did Turnpike Trusts Increase Transport Investment in Eighteenth Century England," *Journal of Economic History*, 65 (June 2005), pp. 439-468.
- "Turnpike Trusts and the Transport Revolution in Eighteenth Century England," *Explorations in Economic History*, 42 (October 2005), pp. 479-508.
- Clark, Gregory. "Common Sense: Common Property Rights, Efficiency, and Institutional Change." *Journal of Economic History*, 58 (March 1998), pp. 73-102.
- "The Enclosure of English Common Lands, 1475-1839," *Journal of Economic History*, 61 (December 2001), pp. 1009-1036.
- Coase, Ronald. "The Problem of Social Cost," *Journal of Law and Economics*, 3 (October 1960): pp. 1-44.
- "The Lighthouse in Economics," *Journal of Law and Economics*, 17 (October 1974), pp. 357-76.
- Crafts, Nicholas, and C. Knick Harley. "Output Growth and the British Industrial Revolution: A Restatement of the Crafts-Harley View," *The Economic History Review*, 45 (1992), pp. 703-730.
- English B, and Saville, J. *Strict Settlement: a Guide for Historians*. Hull, 1983.
- Great Britain. *Statutes of the Realm, 1225 to 1713*. London: Dawsons of Pall Mall, 1963.
- *Statutes at Large, 1223 to 1806*. London: Mark Baskett, Robert Baskett, Henry Woodfall, and William Strahan, 1800.
- Habakkuk, John. *Marriage, Debt, and the Estates System*. Oxford, 1994.
- Harris, Ron. "Government and the Economy, 1688-1850." In *The Cambridge Economic History of Modern Britain, Volume 1: Industrialization, 1700-1860* edited by Roderick Floud and Paul Johnson. Cambridge: Cambridge University Press, 2004.
- *Industrializing English Law*. Cambridge: Cambridge University Press, 2000.
- Hoppit, Julian. "Patterns of Parliamentary Legislation, 1660-1800." *The Historical Journal*, 39 (March 1996), pp. 109-131.
- *Failed Legislation, 1660—1800*. London: Hambledon Press, 1997.
- *A Land of Liberty: England, 1689-1727*. Oxford: Oxford University Press, 2000.
- Larkin, James F. and Hughes, Paul. *Stuart Royal Proclamations*. Oxford, 1973.

North, Douglass C. *Structure and Change in Economic History*. London: W. W. Norton and Company, 1981.

----- and Barry R. Weingast. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England." *Journal of Economic History*, 49 (December 1989), pp. 803-832.

O'Brien, Patrick. "Central Government and the Economy, 1688-1815." In Floud and McCloskey, *The Cambridge Economic History of Britain since 1700*, I, 2nd Edition. Cambridge: Cambridge University Press, 1994.

Overton, Mark. *Agricultural Revolution in England*. Cambridge. 1998.

Richardson, Gary. "The Prudent Village: Risk Pooling Institutions in Medieval English Agriculture," *Journal of Economic History*, Volume 65, Number 2, (June 2005), pp. 386-413.

Webb, Sidney, and Beatrice Webb. *Statutory Authorities for Special Purposes, with a summary of the development of local government Structure*. Hambden, 1963.

Williamson, Oliver. *The Economics Institutions of Capitalism: Firms, Markets, and Relational Contracting*. New York: Macmillan Free Press, 1985.