

Competition and Commitment: the Supply and Enforcement of Rights to Improve Roads and Rivers in England, 1600-1750

By Dan Bogart¹
Department of Economics, UC Irvine
dbogart@uci.edu

Summary

Prominent theories link political changes in seventeenth century England with greater security of property rights and less regulation. This paper informs these theories by studying the supply and enforcement of monopoly rights to improve roads and rivers between 1600 and 1750. The evidence shows that the King, Commons, and Lords all supplied improvement rights before the Glorious Revolution of 1688. Afterwards the Commons gained a monopoly over the initiation of rights and became increasingly effective. Lastly the evidence shows that Parliament and the King voided or diminished improvement rights, but such instances were less frequent and less arbitrary after 1688.

Keywords: Property rights, Commitment, Competition, Infrastructure Investment, Pre-Industrial England

JEL codes: K23, N43, and O43.

I. Introduction

¹ I would like to thank Jean-Laurent Rosenthal, Lee Alston, Tim Leunig, Hans-Joachim Voth, Gary Cox, Jared Rubin, Patrick O'Brien, and Gary Richardson for helpful comments on earlier drafts. I also thank participants at the Conference on Law and Economic development in Utrecht, the Stanford Economic History Workshop, the American Law and Economics Meetings 2007, and participants at the Caltech conference on early modern European development. I want to especially thank Livia Deatcu, Robert Oandasan, Sarah Chiu, Kirstin Delaney, and Yihua Han for their valuable research assistance.

The role of political institutions in fostering economic growth before the Industrial Revolution remains a key topic in English economic history. There are two broad theories which link the political transformations of the seventeenth century with property rights and regulation. In the first, Douglass North and Barry Weingast (1989) argue that property rights became more secure following the Glorious Revolution of 1688 because Parliament was able to restrain the King's ability to expropriate. Parliamentary supremacy, in combination with the common law, created a credible commitment to protect property rights. In the second, Robert Ekelund and Robert Tollison (1981, 1997) emphasize the King's attempts to supply economic regulations—particularly monopoly rights—and how Parliament contested the King's policy because it wanted to supply its own regulations. Ekelund and Tollison argue that free markets emerged in the second half of the seventeenth century because the King's powers were diminished. They also argue that rent-seekers had to devote more resources to obtain and enforce protective regulations in Parliament because there were multiple and unevenly distributed decision-makers. The result was a dissipation of the rents and ultimately less demand for regulation (1997, p. 44).

These theories have been widely cited in the economics literature, but their empirical basis remains thin and highly contested.² Most studies have focused on interest rates or the share prices of the 'monied companies,' like the Bank of England.³ As yet, this literature has paid little attention to the supply and enforcement of monopoly rights to improve transport infrastructure like roads and rivers. Incorporating road and river improvements adds to this literature in several ways. First, it allows for an analysis of how the King and Parliament supplied monopoly rights. Second, it represents an ideal case to study the enforcement of property rights because there were

² In their overview of institutions and development, Acemoglu, Johnson, and Robinson (2005) frequently refer to the North and Weingast thesis that property rights became more secure. In a well known book, Parente and Prescott (2000) cite the Ekelund and Tollison thesis as an example of how lowering barriers to entry contributes to growth.

³ See Clark (1996), Wells and Wills (2000), Quinn (2000), Stasavage (2003), Sussman and Yafeh (2006)

large sunk investments in roads and rivers which could be expropriated by both political and economic actors. Third, road and river improvements greatly affected the economy by influencing transport costs and ultimately land values.

Much like their European counterparts, the English King and Parliament did not undertake road and river improvements by levying taxes. In the 1500s they vested fiscal responsibility in local governments. In the 1600s and 1700s, the King and Parliament granted monopoly rights to undertake particular projects. Individuals or local communities could approach the King requesting a patent or they could approach Parliament requesting an act. In the former, the King would grant monopoly rights to levy tolls, usually subject to a maximum schedule, and in return, patentees would pay the king an annual fee or a percentage of the profits. In the latter, the House of Commons or the House of Lords would deliberate on a bill which had to be authorized by both Houses and the King before it became an act. Such acts were similar to patents in that they granted monopoly rights to navigation companies or turnpike trusts. Sometimes acts also forbid trustees from collecting profits and required that rights be renewed at a future date.

Much of the literature studying the evolution of river navigations and turnpike trusts focuses on the demand-side, but there is relatively little work on the influence of political changes.⁴ This paper examines the supply and enforcement of rights to improve roads and rivers to inform broader theories about political change and economic development in England. The conclusions are drawn from data on the number of patents and parliamentary bills to improve roads or rivers in every year between 1600 and 1750, information on the Members of Parliament who worked on road and river bills, and information on the repeal of any rights authorized by acts or decrees.

⁴ See Willan (1964), Albert (1972), Pawson (1977) for analysis of how economic growth and lower interest rates encouraged individuals or groups to request formal rights.

The evidence shows that the King, the Commons, and the Lords all tried to supply rights to improve rivers before the Civil War of the 1640s, but direct competition was fairly limited because the King issued most patents when he refused to call Parliament into session. The elimination of the King and the Lords gave the Commons a monopoly over the supply of rights during the Interregnum of the 1650s, but it had limited success in passing acts. The Commons' dominance ended following the Restoration of 1661 and their authority to supply river improvement rights was almost eliminated by a broad reform bill. In the 1660s the Commons were able to reestablish their authority but they still faced competition from the Lords who were initiating their own bills. Both Houses had limited success in passing acts despite a large number of proposals. The Glorious Revolution of 1688 marked a significant turning point because it gave the Commons a permanent monopoly over the initiation of improvement rights. At first the Commons had little success in passing acts, but eventually it became more effective in turning proposals into acts. Its effectiveness grew after the 1710s when a large number of MPs from both the Whig and Tory parties worked on road and river bills.

Political changes also affected enforcement. The evidence shows that several river undertakers had their rights voided or encroached upon after the Civil War and the Restoration despite having made investments in their river. This suggests that both Parliament and the King had little incentive to enforce the rights issued by the other following these major shifts in power. After the Glorious Revolution, Parliament still voided or diminished improvement rights, but it was less frequent in terms of the percentage of improvement authorities that were created. Changes in rights were also less arbitrary after 1688. In some cases, the Commons and Lords voided the rights of trustees and undertakers when they failed to undertake improvements or

when they defrauded their creditors. Sometimes they also reduced the maximum tolls when trustees had repaid their debts.

Overall the findings support the North and Weingast thesis that property rights became more secure after the Glorious Revolution, but it also shows that enforcement was not unconditional. Parliament struck a balance between protecting undertakers' rights to earn a return on their investment and the interests of users who paid fees to access roads and rivers. The findings also show that the King and Parliament did indeed compete to supply monopoly rights in the seventeenth century, as suggested by Ekelund and Tollison, but there is little evidence that the shift to Parliamentary decision-making after 1690 raised the costs of supplying monopoly rights. Instead the evidence suggests that the costs of supplying monopoly rights decreased.

The economic implication of expanding monopoly rights to improve roads and rivers was quite different, however, from the mercantile policies emphasized by Tollison and Ekelund. River navigation companies diverted rivers, made them deeper, and cleared obstructions, while turnpike trusts widened and resurfaced roads. The users also benefited through lower transportation costs and increased land rents.⁵ Road and river improvement acts were a second-best solution to a problem of under-investment by local and central authorities who had little inclination to improve the transport network. They were not designed solely for redistribution.

The findings also have implications for other studies analyzing Parliamentary regulation of the economy. The success rates for road and river bills in Parliament are similar to those identified by Julian Hoppit (1996, 1997) for all legislation between 1660 and 1800. The data on road and river bills also shows that success rates were as low in the early 1600s as they were in the early 1660s. The findings also relate to the work of O'Brien, Griffiths, and Hunt (1991) who argue that legislation affecting cotton textiles evolved in an accidental or contingent nature, and

⁵ See Willan (1964), Albert (1972), Pawson (1977), Gerhold (1996), Bogart (2005a, 2005b, 2008).

was not imposed or formulated by ministers of the crown. Road and river improvement acts were similar in that there were no pronouncements by ministers in favor or against them. However, the preamble of most acts was very clear that the official intention was to enhance the communications and trade of the entire realm. Lastly, the findings relate to the work of Mokyr and Nye (2008), who emphasize the role of the enlightenment in diminishing the appeal of rent-seeking legislation. When Parliament considered bills that were clearly designed to redistribute income, petitioners would often oppose them on the grounds they would be injurious to the whole economy. As time went on such bills increasingly failed, which suggests that ideas emphasizing economic advancement began to have some influence in Parliament.

The paper is organized as follows. The second section reviews the data sources. The third section shows trends in bills, acts, and patents. The next six sections document the supply and enforcement of road and river improvement rights across different periods. The last concludes.

II. Data

The Parliamentary Archives maintains a website, *Portcullis*, which contains the title of every act of Parliament starting in 1500.⁶ The *Portcullis* database is used to identify all acts that dealt with individual roads and rivers between 1600 and 1749. The texts of some river and road acts are available in *the Statutes of the Realm* (Great Britain, 1963). For other acts, it was necessary to consult private collections, such as the Public Acts series at the William Clark Library in Los Angeles, or the Parliamentary Archives in London. I use the full text of the acts to code regulatory provisions for all river and road authorities created between 1600 and 1749. For example, I identify the individuals with the right to improve roads and rivers, the length of their term, and the maximum tolls that could be charged. I can also identify acts that altered the rights

⁶ See <http://www.portcullis.parliament.uk/DserveA/> for more details.

vested in earlier acts. Of particular importance are acts that voided the rights granted to individuals or groups and acts that diminished rights, such as the maximum tolls that could be charged.

The indices of the *Journals of the House of Commons* and the *Journals of the House of Lords* are used to identify all bills introduced in the Commons and Lords dealing with specific roads and rivers between 1600 and 1749. I entered the details of every road or river bill into a spreadsheet, including petitions, orders, committee reports, votes, and amendments. The petitions are particularly useful because they identify the aims of the bill. Some bills attempted to obtain rights to improve the navigation of a river or to better maintain and improve a road. Others proposed to amend the rights of an existing authority. Based on their description, I separate all bills that proposed to improve a road or river from bills that amended existing rights.⁷

The *Journals of the House of Commons* also identify the names of MPs who presented bills, belonged to committees, issued reports, and carried passed bills to the Lords. For each bill, I examined only the MPs who presented a bill, reported from a committee, or carried the bill to the Lords. I selected these members because road and river bills often consisted of over 50 MPs, many of whom played little role in its passage. By contrast, the MPs who presented, reported, or carried bills clearly worked on the bill and therefore had greater influence.

The MPs from each bill are matched with biographical information in *the House of Commons series* (see Sedgwick 1970; Henning 1983, Cruickshanks, Handley, and Hayton 2002). The biographical information usually indicates whether a Member belonged to a political party or faction, such as the Court or Opposition party from 1661 to 1672, the Whigs and the Tories from

⁷ For rivers I identify whether the bill was for an improvement using the petitions and committee reports. For roads I only included bills that proposed a new turnpike trust.

1690 to 1749, and the Opposition Whigs after 1724. Some MPs were also identified as independents, which meant they did not consistently vote with any party or faction.

Lastly, I use secondary sources for information on river patents. Willan (1964) and Summers (1973) identify eight patents granted to river promoters. Their discussion indicates that river patents provided a similar set of rights as river acts.⁸ Unfortunately, I do not have information on the number of proposals for patents that were rejected.

III. Trends in bills and Patents, 1604-1749

Before analyzing the supply and enforcement of rights, it is useful to examine the trends in road and river improvement bills, road and river improvement acts, and river patents in relation to major political changes. There were several road and river improvement bills in the early 1600s, followed by a significant drop-off in bills in the 1640s during the Civil War (see figure 1). Road and river bills increased in the 1660s following the Restoration of 1661, but the momentum did not last as bills declined in the late 1670s and 1680s. Bills to improve roads and rivers increased once again after the Glorious Revolution of 1688, and were particularly numerous in the late 1690s. Bills remained higher in the 1700s, but there were significant yearly fluctuations.

Road and river improvement acts were less numerous than bills because many bills failed (see figure 2). Acts were especially low in the 1600s when compared to the large number of bills. River patents were more common than acts in the 1620s and 1630s, but they were absent after the Civil War. After 1700 road and river acts increased but with significant yearly fluctuations. The fluctuations in acts coincided with those of bills because the success rates for bills increased.

⁸ The main difference is that patents could be revised by the King or his agents in the Privy Council.

IV. Supply and Enforcement: 1603-1641

Between 1600 and 1640 the King, the House of Lords, and the House of Commons all tried to supply rights to improve roads and rivers. Table 1 provides a summary of patents issued by the King, bills initiated in the Lords, bills initiated in the Commons, and the percentage of bills that that were successful in becoming acts in each House. Parliamentary bills in the Commons and Lords were most common in the 1600s and 1620s. Patents were most common in the 1610s and 1630s. In terms of rights authorized, King Charles I was the most successful because he issued 7 of the 8 patents. The Lords had some success in that 2 of the bills introduced in the Lords became acts, one in 1606 and the other in 1623. None of the bills introduced in the Commons became acts. The following paragraphs provide more details on the supply and enforcement of rights during this formative period.

The pre-existing legal framework made parishes responsible for maintaining roads within their jurisdiction. Parishes had the authority to claim 'statute-labor' and materials from citizens, but they could not levy property taxes or tolls. Most rivers in 1600 were under the authority of a Commission of Sewers. Commissioners had rights to compel landowners to cleanse the river, and if necessary, to levy a property tax to pay for maintenance expenses, but they had no authority to tax inhabitants other than those who were adjacent to the river, and they could not purchase land or divert the path of the river (Willan, 1964).

The limitations placed on parishes and commissions made them ineffective for road and river improvement. Their powers to tax, issue debt, and purchase land needed to be extended or new organizations needed to be created. The Commons was the first of the three political actors to consider the extension of rights to improve rivers after 1600. A bill to improve the river Lea was introduced in 1604 and another bill was introduced for the river Avon in 1605. Neither bill

became an act. The Lords followed in 1606 by introducing a bill to improve the river Thames. This bill passed through the Lords and Commons and was agreed to by the King.

The 1606 Thames River act vested substantial authority in the Lord Chancellor, who was the speaker for the House of Lords, a close advisor to the King, and the head of the Chancery Court. The Lord Chancellor was to appoint 18 commissioners to oversee the improvement of the river between Oxford and London. One commissioner was to come from Oxford University, one from the city of Oxford, and four from each of the counties of Oxfordshire, Berkshire, Wiltshire, and Gloucestershire. The commissioners had the right to improve the river, including the authority to force property-owners to sell their land and assess taxes in their respective districts.

In the late 1600s, the Commons began considering proposals to improve roads. In 1606 a bill was introduced to improve roads in two parishes in Cheshire (Nonsuch and Talworth), but it failed to become an act. In 1607 there was a bill to improve the roads in the counties of Sussex, Surrey, and Kent, and another in 1609 to improve roads in Biggleswade, but both failed. The Biggleswade bill proposed to give the Lord Chancellor powers to appoint commissioners to collect tolls, making it similar to the River Thames Act of 1606 (Emission, 1934).

Parliamentary involvement in roads and rivers halted in the 1610s because King James I did not call Parliament into session. The King stepped into the void in 1617 by granting a patent to Jason Gason for the improvement of the Great Ouse from St. Neots to St. Ives. Gason had a monopoly right to all carriage along this part of the river and in return he was to pay the King an annual fee of £2 (Summers 1973). In 1619 a similar patent was awarded to the Mayor and Alderman of the city of Bath for the improvement of the river Avon from Bath to Bristol (Willan 1964, p. 25). Interestingly, there was a bill introduced in the Commons for the improvement of

the Avon between Bath and Bristol around the same time, but it failed to pass. This was one of two cases where Parliament and the King tried to supply improvement rights for the same river.⁹

When the Lords and Commons were called into session in the 1620s, they once again considered several bills to improve rivers. Four were introduced in the Commons and three in the Lords. The only bill to pass changed the rights to improve the river Thames. It vested sole authority in the commissioners from Oxford, and thus voided the authority of commissioners in Berkshire, Wiltshire, and Gloucestershire who had received these powers in the 1606 act. The reasons for this change are not clear, but it does provide an early example of how Parliament was willing to void rights granted in previous acts.

Parliamentary involvement came to a second halt in the late 1620s and 1630s. This marked the beginning of the period of ‘personal rule,’ in which King Charles I refused to call Parliament into session and tried to expand the Crown’s authority (Smith 1997). In Parliament’s absence, Charles issued several patents to improve rivers. Arnold Spencer was awarded a patent in 1627, in which he could collect tolls for 80 years on all rivers that he was able to improve by 1638 (Willan, 1964 p. 26). In return, Spencer had to pay the King a fee of 5 pounds per annum for every river he improved. Other patents also required the payment of fees. The 1634 patent awarded to Thomas Skipworth required that he pay a tenth of the profits from improving the River Soar to the King (Willan, 1964 p. 26). The 1635 patent awarded to Henry Lambe for the river Soar required that he pay 6.7 pounds to the King every year.¹⁰

⁹ The other case involved the Great Ouse near Bedford. See Summers (1973, p. 49).

¹⁰ Some patent holders made significant investments in their rivers. Arnold Spencer, for example, build six sluices on the Great Ouse between St. Ives and St. Neots (Summers 1973, p. 48). William Sandys supposedly invested several thousand pounds in improving the river Avon near Warwickshire. Others patent holders were less successful, however. Thomas Skipworth improved six miles of the river Soar before stopping “for want of money (Willan 1964).”

After 1638 no more new patents were granted to improve rivers. King Charles I called Parliament into session in 1640 after a lapse of 11 years. In this highly charged session the Lords introduced a bill to improve the river Arundel and the Commons introduced a bill to improve the river Wye. On the eve of the Civil War, both Houses were trying to reassert their authority to supply rights to improve rivers.

There are several general points regarding the period between 1600 and 1640. First, the Lords and Commons made several attempts to supply rights to improve rivers and roads between 1600 and 1640, but they had little success. There were 14 road and river improvement bills which failed in either House. All except 1 dealt with a different project. Among the rivers where a bill failed, it would take an average of 42 years between the first date when a bill was introduced for the river and the date when formal rights were obtained through a patent or an act. Thus there is some evidence that Parliamentary decision-making was not very effective in this early period.

The second general point is that the King benefited from issuing patents. In the case of the river Soar, the King collected 10% of the profits. In other cases, the level of extraction was lower but still significant. The 1617 Great Ouse patent was sold for £740 in 1626 (Summer 1973, p. 48). Using a net present value calculation with an interest rate of 6%, this price would imply an annual profit of £42. In turn, this would imply that the £2 fee collected by the King was equivalent to around 5% of the annual profits from the river.

Third, the rights of patent holders were not always enforced by the Privy Council in the 1630s, especially when they were challenged by users or local landowners. In one case, the Inhabitants in St. Neots, Huntingdon, Godmanchester, and St. Ives complained to the Privy Council that the tolls charged on the Great Ouse were too high. The President of the Privy

Council, the Earl of Manchester, then ordered that the maximum toll be reduced from 3 pence per ton to 2.5 pence per ton.¹¹ In another case, the patentee for the river Lark, Henry Lambe, faced resistance from local mill-owners who claimed they were being adversely affected by the project. In 1636, Charles appointed a commission to investigate. The commission recommended that no tolls be levied on the river between the town of Mildenhall and the river Ouse, which represented over half of the route originally granted to Lambe. In 1638, the King agreed with the commissioners and decreed that the river be toll free in this area.¹²

V. Supply and Enforcement: The Civil War and the Interregnum

During the Civil War of the 1640s no road or river bills were introduced in Parliament and the King did not issue any patents. The attention of the King and Parliament were clearly directed elsewhere, but even if they had time to consider road and river improvements it is unlikely that any group would have desired to obtain rights because of the uncertainty. There is one case where it can be documented that a patentee lost their rights because of the conflict. In 1641, William Sandys, the patentee for the river Avon, was expelled from Parliament because he was a monopolist. Sandys' rights in the river Avon later passed to William Say, who was one of his creditors as well as an opponent of the King and an active member of the Commons.¹³ Sandys was not the only patentee to lose their rights in the 1650s. Arnold Spencer also lost his patent for the Great Ouse because of "difficulties and straits" (Summers 1970, p. 53).

Parliament's victory and the execution of the King in 1648 gave the House of Commons unprecedented control over the political system. In this environment, the Commons passed its first river improvement act in 1651. It gave the Mayor of Guildford, along with James Pitson,

¹¹ See Summers (1973) pp. 48-49 for a discussion of this particular case.

¹² See Willan (1964) pp.27-28 for a discussion of this particular case.

¹³ See A. W. Skempton, *Biographical Dictionary of Civil Engineers in Great Britain and Ireland*, p. 592.

John Howe, John Waltham, and Richard Scotcher rights to make the river Wey navigable. The undertakers had a monopoly on carriage and could charge no more than 4 pence for a load of goods, and no more than 12 pence per passenger.¹⁴ The river Wey act was quite successful as the undertakers invested 15,000 pounds. One of the undertakers later claimed that the profits were “quietly and peaceably enjoyed by the makers.”¹⁵

Despite the success of the river Wey act, little else was accomplished in the 1650s. In 1651, there was one bill to improve a highway around London, but it did not become an act. In 1656, another act was passed to improve the river Ouse near York, but it is not clear that it was implemented. In 1658 and 1659, there were 2 bills for improving the river Nene and the river Thames, but both failed to become acts.

The relatively small number of road and river bills and the failure of the Commons to pass a higher percentage is a notable feature of the interregnum period. It is possible that costly decision-making procedures in the Commons led to the dissipation of rents and thus fewer proposals and acts. Another possibility is that the increasing tensions between Oliver Cromwell and the Commons created uncertainty. In 1653, Cromwell dissolved the Parliament that had sat since 1649 on the grounds they “would never answer those ends which God, his people, and the Whole nation expected from them.” Cromwell then wrote a new constitution stating that government was by “a single person and a Parliament.”¹⁶ There is also evidence that some individuals sought to obtain a patent from Cromwell for improving the river Salwerpe in 1655.¹⁷

¹⁴ A text of the act is available in *Acts and Ordinances of the Interregnum, 1642-1660* (1911), pp. 514-17.

¹⁵ Details are in a petition in the Parliamentary Archives, HO/PO/JO/10/1/307.

¹⁶ Quoted in Seel and Smith (2001), pp. 62-67.

¹⁷ Jim Shead (2007) states that Andrew Yarranton and Captian offered to seek letters patent from the Lord Protector to make the river navigable. [Yarranton] made an agreement with Droitwich corporation which allotted land to him for 21 years as payment for this. No further action was taken on this proposal.

Thus it was not obvious that acts passed by the Commons would be enforced in the future. As it turns out, such fears were justified.

VI. Enforcement in the Aftermath of the Restoration

The Restoration of 1661 restored the traditional powers of the King and the Lords. It also led to the repudiation of rights for several river improvement authorities. The Restoration settlement nullified all acts passed by the Commons since 1648—including the 1651 act to improve the river Wey and the 1656 act to improve the Ouse. One of the undertakers for the river Wey, James Pitson, tried to get an act reinstating their rights in 1663, but the bill failed in Parliament.¹⁸ In 1664, King Charles II named a new conservator for the river Wey, John Radycliffe, who was to have rights for 30 years. It appears that Charles II ignored the interests of the earlier undertakers in part because they used materials from his father's confiscated estate.¹⁹ In 1664, Radycliffe attempted to get an act of Parliament to strengthen his new claim, but it also failed. The authority to improve the River Wey was not resolved until a 1670 act named Sir Adam Browne, Sir Edward Ehurland, Sir Joseph Sholdon, Knight Henry Hilliard, Arthur Ouslowe, and George Woodruff as the undertakers with sole rights to the profits. No compensation was offered to the original undertaker, Pitson, or the new conservator in the 1660s, Radycliffe.

There was another case where the rights of a river undertaker were voided. William Say was the creditor who obtained William Sandys patent for the river Avon in the 1650s. Say made some improvements to the river, particularly between Evesham and Tewkesbury. After the Restoration, Say was deemed a traitor and was forced to flee England. His property was confiscated and his rights in the river Avon passed to James Duke of York, the brother of King

¹⁸ Details on the petition are available in the Parliamentary Archives, HL/PO/JO/10/1/317.

¹⁹ The details of this case are reported in a petition in the Parliamentary archives, HL/PO/JO/10/1/319.

Charles II. James later sold his rights to another promoter who obtained formal rights in the river by an act of 1662.²⁰

The repudiations following the Restoration illustrate the political economy of seventeenth century England. As long as the King and Parliament were engaged in a struggle there was always a possibility that one would gain control of the political system and then use their power to repudiate the rights issued by the other. When Charles II returned to the throne, he had little incentive to enforce the rights authorized by the Commons in the 1650s because he did not collect any fees from the promoters. Moreover, he may have wanted to punish the supporters of the Commons. A similar situation occurred when the Commons took control of the political system in the early 1650s. The Commons had little incentive to protect the rights of patentees because they paid fees to the king and they were part of his patronage network.

VII. Failed Reform and the first wave of Parliamentary Activity: 1661-1688

Once the initial phase of the Restoration had passed, the King, the Commons, and the Lords had to decide how to supply new rights. There were a number of decisive events in 1661 and 1662 which helped reestablish much of the old framework. The following paragraphs describe the sequence of events in these two years. In June of 1661, the Lords passed a bill to improve the Rivers Stower and Salwerpe in Worcester and Stafford. The bill made it through two readings in the Commons before stalling. In February of 1662, the Lords passed a bill that called for a broad reform to the system for allocating rights. It allowed any municipal corporation, hundred, or county to improve a river in its area without authorization from Parliament.²¹

²⁰ See A. W. Skempton, *Biographical Dictionary of Civil Engineers in Great Britain and Ireland*, p. 592. Evidence that James sold his rights comes from "Andrew Yarranton." Wikipedia. The re-establishment of formal rights can be found in the final provision of the 1662 act to improve the Stower and Salwerpe.

²¹ A draft of the bill is in the Parliamentary Archives, HL/PO/JO/10/1/311.

Furthermore, if these groups did not improve the river, then any private person could proclaim the right to improve the river subject to the approval of the Lord Chancellor. These private persons would then have a monopoly over the carriage of goods along sections of the river they improved.

In February of 1662, at the same time the Lords were considering the preceding bill, the Commons introduced two bills for improving specific rivers. One proposed to make the Bristowe (Brixton) Causey and the rivers from Salisbury to Christ Church and Yarmouth to York navigable. It was a significant proposal because it involving three waterways of great importance, but it failed after the second reading.

In April of 1662 the Commons received the bill from the Lords calling for a broad reform of the procedures for obtaining rights. The Commons quickly rejected it. Unfortunately there are no records of any debate on this bill in the Commons. However it is clear why the Commons rejected it. It would have allowed any community or individual to improve a river without their authorization.

In May of 1662 the Commons passed a bill for the improvement of the Stower and Salwerpe rivers, which was initiated in the Lords. In the same month, the Lords passed a bill for the improvement of the river Wye, which was initiated in the Commons. These two acts marked the first of several road and river bills initiated in the Lords and Commons in the 1660s and 1670s. Table 2 shows the number of river and road bills introduced in each House and the percentage of bills that became acts from 1661 to 1668. More river bills were introduced in the Commons, but this was partly because many failed and were later reintroduced. 12 of the 24 bills in the Commons addressed a river where an earlier bill had failed. None of the 7 bills introduced in the Lords dealt with the same river.

There are three general points regarding the supply of rights between 1661 and 1688. First, there is some evidence of competition between the Lords and Commons. Porrit (1963, p. 548) describes the case of a bill passed in 1661 by the Lords which authorized the levying of property taxes to pay for street improvements in Westminster. The Commons rejected the Lords bill and then proceeded to pass a similar bill which they then sent to the Lords. It contained a provision stating that it was an inherent privilege of the Commons to initiate bills relating to local taxation. The Lords objected to this assertion and rejected the bill.

There is further evidence of competition between the Houses after 1661. In 1664 a bill was introduced in the Commons for “establishing and settling the Navigation of the River Wey” and in the same year another bill was introduced in the Lords for ‘establishing the navigation of the river Wey.’²² Neither of these bills succeeded. In 1662, 1663, and 1664 there were three unsuccessful bills introduced in the Commons to improve the Bristowe Causey and the Great Ouse near Bedford. In 1665 two bills were introduced in the Lords for the same rivers and this time they were passed and became acts.

These examples indicate that promoters could try to play one House off against the other by introducing bills in both Houses. However, it should be noted that the extent of direct competition was limited. 13 out of the 16 rivers for which bills were introduced in the Commons were never introduced in the Lords and 6 out of the 9 rivers for which bills were introduced in the Lords were never introduced in the Commons.

The second general point about this period is that the success rate of bills was fairly low. Table 3 shows that only 24% of the river bills and 29% of the road bills initiated in the Commons succeeded in becoming acts. The success rate for river bills in the Lords was higher at

²² See the entry in the Journals of the House of Commons, 21.4.1664. Information on the Lords bill is available in a petition to the Lords, HL/PO/JO/10/1/319.

57%. The high failure rates had the consequence of delaying or limiting the number of road and river projects that were implemented. Among the rivers where bills failed, it took an average of 22 years between the date when the bill was first proposed and the date when formal rights were obtained through an act. Only one road improvement bill became an act in this period. It authorized the use of tolls to improve the London highways in Hertfordshire, Cambridgeshire, and Huntingdonshire. The bills that failed dealt with the 'Standon road', 'Watlingstreet road', 'the London to Chester Road', and 'Bedford roads'. None of them were improved by acts until after the 1700s.

The third general point is that the King was not absent in the supply of rights after 1661. King Charles II had a personal association with several of the river undertakers. For example an act in 1662 gave Sir William Sandys, Windsor Sandys, and Henry Sandys rights to make the rivers Wye and Lugg navigable. Recall that William Sandys received a patent from King Charles I in the 1630s. He was also prominent royalist who helped raise funding for the Restoration of Charles II.²³ In another example, an act in 1664 gave Henry Hastings, Baron of Loughborough, rights to make the Bristowe Causey navigable. Henry Hastings was a supporter of Charles I during the Civil War and he escaped to the Netherlands before the King's execution. After the Restoration, he returned to England and was appointed by the King as lord lieutenant of Leicestershire.²⁴

The King's influence can also be seen in the political affiliation of the MPs who spoke or reported on river bills. In this period, a 'Court' party emerged which supported the interests of the Crown. Between 1661 and 1667, 69% of the MPs who worked on river bills were from the Court party. This percentage is high considering that 61% of all MPs in the Commons are

²³ Skempton, *Biographical Dictionary of Civil Engineers in Great Britain and Ireland*, p. 592.

²⁴ Martyn Bennett, 'Hastings, Henry, Baron Loughborough (1610–1667)', *Oxford Dictionary of National Biography*, Oxford University Press, Sept 2004; online edn, Jan 2008.

estimated to have belonged to the Court Party from 1661 to 1667 (see Henning, 1983). The pattern is similar from 1668 to 1673 when 62% of river MPs were from the Court party, while only 49% of MPs in the Commons belonged to the Court party.

Tensions between the King and Parliament also contributed to the decrease in road and river bills in the 1670s and 1680s.²⁵ After 1670 Charles II stopped calling Parliament into session on a regular basis. In 1683, Charles II also reinstated John Mallet's patent for the river Tone, suggesting that he might try to revive the system of river patents.²⁶ When James II came to the throne, relations did not improve. Parliament was prorogued in 1685 and James II did not call Parliament for the next three years. In such an environment there must have been significant uncertainty about whether the Commons would continue to supply rights and whether acts would be enforced.

VIII. Supply and Enforcement in the Aftermath of the Glorious Revolution

The Glorious Revolution of 1688 marked a significant turning point in the political history of Britain. This section and the following two argue that the Glorious Revolution also marked a significant turning point in the supply and enforcement of rights to improve roads and rivers. In 1689 the leadership in the Commons sought to restrict King William's ability to void laws and to bolster Parliament's ability to pass laws (see Holmes 1993). Both of these objectives had spillover effects on the supply of rights to improve roads and rivers. For example, Article 2 of the English Bill of Rights established that the King could not dispense with laws or the execution of laws. This implied that the King could not repudiate rights granted in river and road acts.

²⁵ Between 1671 and 1688 there were 6 bills to improve roads and rivers compared with 31 between 1661 and 1670.

²⁶ Information on the original patent comes from Willan (1964) p. 26. Its reinstatement is also confirmed in the preamble to 'An Act for making and keeping the River Tone navigable from Bridgwater to Taunton in the County of Somerset, Statutes of the Realm: volume 7: 1695-1701.

Article 4 states that Parliament had to consent to all taxation. This implied that the King could not issue patents authorizing the use of tolls to improve roads or rivers. Article 13 states that Parliament should meet frequently. This implied that the King could not limit Parliament's ability to pass road and river acts by refusing to call them into session or by proroguing sessions. These objectives were largely fulfilled. No road or river laws were voided by the King after 1689, no new river patents were issued, and Parliament was free to pass any road or river bills in its annual sessions.

Aside from cementing Parliament's control, the Glorious Revolution also cemented the Commons right to initiate road and river bills. In 1690 there was one river improvement bill initiated in the Lords.²⁷ The bill did not pass and it marked the last attempt by the Lords to initiate a river improvement bill. Thereafter the Lords could only amend or veto road and river bills passed by the Commons. Competition between the Commons and the Lords over the initiation of improvement rights effectively ended.

By the early 1690s the Commons had become quite powerful. MPs might have been tempted to introduce bills voiding the rights granted by the previous regime and offer them to new promoters. The Commons also had to deal with cases where promoters had been negligent or ineffective in improving roads or rivers. Would these rights be maintained, to the detriment of users and other constituents?

These issues were addressed in several bills introduced in the Commons in the 1690s. In both cases the Commons passed a bill voiding the rights of undertakers who received their authority from acts between 1661 and 1688. In one the Lords vetoed the bill and the other the Lords consented. The following paragraphs provide details on these two important cases.

²⁷ A draft of the act is available in the Parliamentary archives, HL/PO/JO/10/1/452/646.

The first involved an act in 1662 which gave the Earl of Bristol and two others the right to improve the river Salwerpe. The Earl of Bristol's rights were sold to Sir Thomas Baldwyn who proceeded to invest more than 6000 pounds in the river Salwerpe. In 1693, a new bill was introduced in the Commons that would give the Earl of Shrewsbury and Lord Coventry sole rights to improve the river. The MP who presented the bill in the Commons was Sir John Packington, a high ranking Tory who was known for his attempts to purge Whigs from the Army.²⁸ Sir Thomas Baldwyn's son submitted a petition to the Commons opposing the bill on the grounds that his father and the Earl of Plymouth had invested in the river and that the proposed bill "tends to make void the said Act, and to take away all the works and materials done in pursuance thereof."²⁹ Despite Baldwyn's petition, the Commons passed the bill on March 9, 1693.

In mid-March, the Lords began deliberations on the river Salwerpe bill. Sir Thomas Baldwyn submitted a petition to the Lords asking that they "not make void the former act or meddle with his rights." To bolster his argument, Baldwyn also suggested there were broader implications from voiding his rights by stating that "it is of dangerous consequence to take away any persons right, purchased under an act of Parliament, without their consent."³⁰ The Lords ultimately dropped the Salwerpe bill and the rights of the Baldwyn family were protected.

In the second case, the Lords went along with the Commons and voided the rights of undertakers. However, this case was different because it appears that the undertakers were negligent. In 1662, the Sandys family received the right to collect tolls and improve the Wye and Lugg rivers. In 1690 a bill for 'better making the Rivers of Wye and Lugg, navigable' was introduced in the Commons. The bill failed and it is not known who supported it. In 1692,

²⁸ Information on Packington comes from Cruickshanks, Handley, and Hayton (2002).

²⁹ Journals of the House Commons [JHC], 10.2.1693.

³⁰ Details on the petition are available in the Parliamentary archives, HL/PO/JO/10/1/455/733.

another bill was introduced for the Wye and Lugg. It was voted down 118 to 107 after the second reading. The tellers for the 'yeahs' were Lord Coningsby and Sir Rowland Gwynne. Coningsby was a Court Whig and was close to King William. Gwynne was a Whig that leaned to the Court. The tellers for the 'neahs' were Sir John Guise and John Arnold. Both Guise and Arnold were Whigs, who were known to have quarreled with some of the King's supporters.³¹

In 1695 another bill for the betterment of the Wye and Lugg rivers was introduced. The bill was presented by Coningsby and Paul Foley, who was also a Whig. This time the bill passed through the Commons and the Lords. The act officially voided the rights of the Sandys family and granted authority to the Bishop of Hereford and several other dignitaries from the area. The opening passage of the act states the reasons:

Sir William Sandys, Windsor Sandys, and Henry Sandys never did any thing towards the making of the said River of Lugg navigable. And what they did towards the said Work upon the said River of Wye was performed so slightly that most of the Locks and Passages by them made did in a very few years fall utterly to decay and ruin.... Therefore to the end that the Benefits and Advantages intended to the Inhabitants of the County of Hereford by the said Act may not be totally frustrated by the neglect or failure of the said former Undertakers...the said Rivers of Wye and Lugg be and from henceforth be accounted deemed and taken to be free and Common Rivers and Streams to and for all His Majesties Subjects freely to make use of.³²

These two cases were significant because they illustrate the differences between the Restoration and the Glorious Revolution. After the Restoration, the King used his power to repudiate the rights of river undertakers who obtained their authority from the Commons in the 1650s. The King then tried to transfer these rights to other promoters. The River Salwerpe bill in 1693 was similar in that it proposed to void the rights of the Baldwyn family and transfer them to the Earl of Shrewsbury and Lord Coventry. The fact that the Commons passed the bill shows that it was willing to void undertaker's rights and transfer them as well. This attempt was not

³¹ Information on these MPs comes from Cruickshanks, Handley, and Hayton (2002).

³² See 'William III, 1695-6: An Act for making navigable the Rivers of Wye and Lugg in the County of Hereford. [Chapter XIV. Rot.Parl. 7&8 Gul. III.p.3.n.2]', Statutes of the Realm: volume 7: 1695-1701 (1820), pp. 78-84.

successful, however, because the Lords rejected the bill. Thus, in this case, checks and balances within Parliament contributed to the security of property rights.

The passage of the river Wye bill suggests that the Lords and Commons would not protect the rights of undertakers who were negligent in improving their road or river. A petition by the inhabitants of Weobly indicates the level of dissatisfaction by the users of the river Wye and Lugg in the early 1690s.

That, by reason of several Weirs, Mills, and Dams, upon the Rivers Wye and Lugg, the Commerce of the said Petitioners is lost, for want of the Navigation of the said Rivers; and many Commodities, with which that Part of the Country abounds, are so inconsiderable, the Land-carriage being so excessive dear, that they are scarcely worth propagating.³³

IX. Enforcement: 1690-1749

After 1690 there was a substantial increase in bills and acts to improve roads and rivers. Although many authorities were created, their rights were not set in stone. Turnpike trusts were given the right to levy tolls for a specific period of time, usually 21 years. Once their term expired, trustees or other groups had to submit a petition requesting a renewal of their rights; otherwise their authority would end. At the time of renewal, Parliament could alter the rights of trustees, especially the maximum schedule of tolls. In the case of rivers, the authority to levy tolls was usually indefinite, but Parliament could pass an act at any time voiding or diminishing their authority.

This sub-section examines all acts that established or altered the rights of river undertakers between 1689-1749 and all acts that established or altered the rights of turnpike trustees established between 1689-1719. The analysis reveals that 5% of the river undertakers created between 1690 and 1749 had their rights voided or diminished by acts and 20% of turnpike

³³ JHC 6.1.1696

trustees had their rights voided or diminished by acts (see tables 3 and 4).³⁴ These frequencies are lower than in the years preceding 1690. A similar analysis shows that from 1600 to 1688, 33% of river improvement authorities had their rights voided by an act or a decree from either the Privy Council or the King (see table 5).

Although the percentage of undertakers and trustees who had their rights voided or diminished after 1690 was lower than in the earlier period, there were a number of cases where rights were not maintained. Most involved reductions in the maximum tolls authorized by an earlier act. Such actions diminished the rights of trustees, but they were not necessarily arbitrary. Acts which created turnpike trusts included a provision that once the road was improved and debts were repaid the tolls would cease. When these conditions were met, Parliament sometimes responded by reducing the maximum tolls. For instance, in 1740 the trustees for the Stokenchurch to Oxford road submitted a petition requesting that the term of their previous act be extended for another 21 years to maintain the road. The MP from the committee reported that the debts issued by the trust had been paid off.³⁵ An act was passed extending their term, but it reduced the maximum toll on coaches.

In 1743 the merchants and traders in Chester petitioned the Commons to reduce the maximum tolls charged by the Company of Proprietors for the River Dee. The company then submitted its own petition:

The city of Chester, being of opinion, that the tonnage rates, granted to the said Undertakers by the first-mentioned Act, are too high, and a discouragement to the trade of the said city. The [company], at their request, have consented that the same may, by authority of Parliament, be repealed; and that, in lieu thereof, other and less tonnage or keelage rates may be granted to the [company].³⁶

³⁴ Details on these acts are provided in the appendix.

³⁵ JHC., 11.2.1739

³⁶ JHC, 31.1.1743.

This case is particularly interesting because the company consented to a change in rights that would reduce its profits. It is not clear why the company would do so, but perhaps it was part of a larger negotiation with the city of Chester which ensured lower tolls on goods shipped into the city.

The most extreme action Parliament could take was to void the rights of undertakers or trustees. After 1695, there were no acts that voided the rights of river undertakers, but there were two cases where road trustees had their rights voided by an act.³⁷ In the first, the trustees of the Fornhill to Stony Stratford road lost their rights because they were negligent. They borrowed more than 7000 pounds in 1707 and 1708 to pay for improvements. Their creditors claim to have been misinformed regarding the expected revenues from the tolls.³⁸ A new act was passed in 1709 which included a provision that the creditors could take receivership of the tolls if the trustees did not repay their debts by 1711. Apparently, the trustees were unable to borrow and the creditors took over the tolls.³⁹ In 1716, Parliament tried to clarify the situation by passing an act that vested authority in the trustees from the 1709 act and another group appointed by the Justices of the Peace for Buckinghamshire. In 1736, the trustees submitted a petition for an extension of their rights, but it failed to pass and in 1739 their authority officially lapsed.⁴⁰ In 1740, a new act was passed naming a replacement body of trustees. In the petition for the new bill, the inhabitants of Buckinghamshire described the road as being ‘ruined.’⁴¹ This sentiment was affirmed by the MP reporting from the committee.

³⁷ In 1726 an act was passed naming additional trustees to put the 1695 Wye and Lugg act into execution, but it did not eliminate any surviving trustees.

³⁸JHC, 15.02.1709.

³⁹ JHC, 21.3.1737.

⁴⁰ JHC, 16.3.1736.

⁴¹ JHC, 6.12.1739.

In the second case, the trustees for the Shepards Shord to Horsley road had their rights voided arbitrarily. Six years before their original act was set to expire, the trustees submitted a standard petition stating that their debts could not be repaid and the road could not be repaired unless the term was extended. After the second reading the committee reviewing the bill was instructed by the House that “they have power to provide in the bill that the trusts, by the former act shall cease and determine, and that proper powers, for the effectual amending the highways, directed to be repaired by the former act, be vested in *other trustees* [italics added].” Shortly thereafter an act was passed naming a new body of trustees for the Shepards Shord to Horsley road. It was unusual for the House to intervene in a road or river bill committee and in this case it is likely that some powerful actor wanted a new body of trustees to take over. The fact that such interventions did not happen more often is testimony that the Commons rarely threatened the rights of road trustees.

Cases where the Commons rejected petitions to diminish rights are also interesting because they show why it chose to protect the rights of most undertakers and trustees. One example involves the river Itchen. In 1714, property owners near the river submitted a petition to the Commons requesting that provisions in an earlier act be modified because “it hath not been of effect to answer the ends for which it was made; but becomes a grievance to the petitioners.”⁴² It is not clear what was proposed, but George Huxley, one of the undertakers of the River Itchin, felt strongly enough to petition against the bill stating that “should it pass, it would not only defeat the petitioners of their right, but utterly destroy the said navigation.”⁴³

Inhabitants in the towns of Andover, Stockbridge, Whitchurch, and Winchester subsequently submitted petitions asking that no amendment act should be passed because the river Itchen was

⁴² JHC, 12.3.1714.

⁴³ JHC, 14.5.1714.

“of great advantage to [their] city and country, by the cheap and safe carriage of all goods and merchandizes.”⁴⁴ The Commons subsequently dropped the bill and chose to maintain the rights of the undertakers. It was significant that neighboring towns, like Andover, Stockbridge, Whitchurch, and Winchester petitioned against the bill because it provided a signal to the Commons that the undertakers had made investments and were continuing to maintain the river.

Overall the evidence suggests that Parliament sometimes voided or diminished the rights of road and river undertakers after 1690, but such cases were less frequent and less arbitrary than in the period before. The maximum tolls were usually reduced when the debts had been repaid or when the undertakers or trustees consented. Their authority was voided usually in cases where they were negligent.

X. Political Parties, MPs, and the Evolution of Supply: 1690-1749

The Lords and Commons were not particularly successful in passing road and river bills in the 1600s, 1620s, 1660s, and 1670s. This changed after the Commons solidified its control over the initiation of improvement bills. The success rate for road improvement bills increased from 40% in the 1690s to 84% in the 1710s and the success rate for river improvement bills increased from 30% in the 1690s to 55% in the 1710s (see table 6).⁴⁵ It was also the case that when road and river improvement bills failed they were reintroduced and passed relatively quickly. Among the rivers where bills failed from 1690 to 1719, it took an average of 10 years from the date when the first bill was introduced to the date when formal rights were obtained through an act. This is significantly lower than the average of 22 years for failed river improvement bills from 1661 to 1688 and the average of 42 years from 1600 to 1640.

⁴⁴ JHC, 31.5.1714, 3.6.1714, 1.6.1714, and 3.6.1714

⁴⁵ These figures are consistent with what Hoppit (1997) has shown for all legislation from 1690 to 1719.

The growing number of road and river bills and the increasing success rate in Parliament is inconsistent with the hypothesis that Parliamentary control necessarily raised the cost of supplying regulations. One possible explanation is that party leaders in the Commons reduced rent dissipation by monopolizing the supply of road and river bills. The Whig and Tory political parties were engaged in a fervent struggle for control of the Commons between 1690 and 1714. The Tories represented a significant portion of the landowning interest and favored the interests of the Church of England. The Whigs represented a combination of landowners, financial and mercantile interests, and generally favored more religious toleration and an aggressive foreign policy. After 1714 the Whigs emerged as the dominant party maintaining a majority until the late 1760s. During this latter era, the Commons were controlled by the Whig Oligarchs, the most notable being Robert Walpole—Britain’s first Prime Minister.

To investigate the role of parties, I identified the political affiliation of all MPs who presented or reported on river bills from 1690 to 1749. I did the same for all MPs that presented or reported on road bills before 1720 and a 20% sample of all road mps after 1720. I then compared the percentage of road and river MPs that were from the majority party with the percentage of MPs in the Commons who were from the majority party. Figure 3 shows that between 1690 and 1714 67% of the MPs that spoke or reported on river bills were from the majority party, while in Parliament as whole 54% of MPs were from the majority. The disproportional affiliation of river MPs was especially high from 1708 to 1714, when over 90% were from the majority party. The pattern changes after 1714 and especially after 1721. It was no longer the case that river MPs were disproportionately from the majority party. In fact river MPs were more likely to be Tories or members of the Whig Opposition party.

Figure 4 shows that the patterns are quite similar for MPs that presented or reported on road bills. From 1695 to 1714, 70% of the MPs who spoke or reported on road bills were from the majority party while 54% of MPs in the Commons were from the majority party. After 1721 the pattern is reversed. Road MPs were disproportionately from the Tory or Whig Opposition party.

To further examine the role of MPs, I calculated the proportion of MPs who spoke or reported on more than 1 river bill within the previous two years (henceforth I refer to them as repeat MPs). The data indicate that 8% of the river MPs between 1695 and 1749 repeated within the previous two years and 20% of road MPs repeated within the previous two years. In other words, most MPs spoke or reported on only 1 bill within a two-year span.

Figure 5 shows the trends in the proportion of road MPs in each session that repeated within two years. There was some increase in the proportion of repeat MPs after 1734 but the proportion was still relatively minor. An unreported regression also indicates that the probability that a road or river MP repeated was not significantly different if they were from the majority party or not.

Overall this evidence suggests that party leaders or individual MPs did not monopolize the supply of improvement rights after 1690. In the era of party strife, most MPs were from the majority party, but the majority party changed so frequently that no group exerted permanent control. After the rise of the Whig Oligarchy, Whig MPs were less likely to work on road and river bills, even though they controlled other sources of patronage.

XI. Conclusion

This paper informs several theories regarding political change and economic development in England by studying the supply and enforcement of monopoly rights to improve roads and rivers

from 1600 to 1750. Detailed evidence shows that the King and Parliament voided or diminished rights to improve rivers, but it was less frequent after the Glorious Revolution. The type of interventions also differed. Previously river undertakers lost their rights because of major political changes like the Civil War and the Restoration. Afterwards Parliament usually voided rights if undertakers and trustees failed to improve their road or river, and they reduced tolls when they were no longer necessary to pay for initial investments. These results are consistent with the North and Weingast thesis that property rights became more secure, but they also show that enforcement was not absolute and could be relaxed in a pragmatic fashion.

The evidence also shows that the King, the Commons, and the Lords all tried to supply rights to improve roads and rivers at various times before 1688, but afterwards the Commons achieved a monopoly over the initiation of bills. Neither the Commons nor the Lords were very successful in passing acts before 1690, which is consistent with the Ekelund and Tollison hypothesis that parliamentary decision making raised the cost of supply regulations. However, the Commons became increasingly effective in passing road and river bills after 1690 despite the large number of Whig and Tory MPs who worked on these bills.

The increasing effectiveness of Parliament in passing improvement bills remains a puzzle. Hoppit and Innes argue that learning and procedural changes, like standing orders, contributed to the increasing success rate of petitions for bills in the early eighteenth century (1997, p. 7). The evidence of the rising success rate for road and river bills in the early 1700s is consistent with this argument. The evidence from road and river petitions also suggests that political or ideological considerations may have played a role in the enforcement of rights. Recall that in defending his rights, Sir Thomas Baldwyn argued that “it is of dangerous consequence to take

away any persons right, purchased under an act of Parliament, without their consent.”⁴⁶ Also when Parliament voided the rights of the Sandys family its stated purpose was “to the end that the Benefits and Advantages intended to the Inhabitants of the County of Hereford by the said Act may not be totally frustrated by the neglect or failure of the said former Undertakers.”⁴⁷ These examples suggest that the citizenry made Parliament aware of its views, and that Parliament was careful to explain why it chose to eliminate certain rights.

More generally the evidence gives some indication that political changes in seventeenth century England fostered the process of economic growth by promoting infrastructure investment. Granting monopoly rights to improve roads and rivers was not the ideal way to finance transport investment. However, given that Parliament was very reluctant to finance local public goods prior to the nineteenth century, this policy represented a second-best solution to address infrastructure needs. By lowering the costs of supplying improvement acts and reducing the uncertainty associated with their enforcement, Parliament encouraged promoters to obtain formal investment rights. The result was that England had one of the most extensive transport networks in the world by 1750.

⁴⁶ Details on the petition are available in the Parliamentary archives, HL/PO/JO/10/1/455/733.

⁴⁷ See 'William III, 1695-6: An Act for making navigable the Rivers of Wye and Lugg in the County of Hereford. [Chapter XIV. Rot.Parl. 7&8 Gul. III.p.3.n.2]', Statutes of the Realm: volume 7: 1695-1701 (1820), pp. 78-84.

Appendix.

The following two tables describe all acts that amended the rights of river undertakers created from 1689 to 1749 and road undertakers created from 1689 to 1719. Instances where rights were voided or diminished are bolded.

Reference List

- Acemoglu, Daron, Simon Johnson and James A. Robinson. 2005. "Institutions as a Fundamental Cause of Long-Run Growth." Pp. 385-472 in *Handbook of Economic Growth*, edited by Philippe Aghion and Steven N. Durlauf. New York: Elsevier.
- Albert, William. 1972. *The Turnpike Road System in England, 1663-1840*. Cambridge: Cambridge University Press.
- Bennet, Martyn, 'Hastings, Henry, Baron Loughborough (1610–1667)', *Oxford Dictionary of National Biography*, Oxford University Press, Sept 2004; online edn, Jan 2008. [http://www.oxforddnb.com/view/article/12576, accessed 29 April 2008].
- Bogart, Dan. 2005a. "Did Turnpike Trusts Increase Transportation Investment in Eighteenth Century England?" *Journal of Economic History* 65: 439-468.
- Bogart, Dan. 2005b. "Turnpike Trusts and the Transportation Revolution in Eighteenth Century England", *Explorations in Economic History*, 42: 479-508.
- Bogart, Dan. 2008. "Turnpike Trusts and Property Income: New Evidence on the effects of Transport Improvements and Legislation in Eighteenth Century England," forthcoming *The Economic History Review*.
- Clark, Gregory. 1996. "The Political Foundations of Modern Economic Growth: England, 1540-1800." *Journal of Interdisciplinary History* 26: 563-588.
- Cruikshanks, Eveline, Stuart Handley, and D.W. Hayton. 2002. *The House of Commons 1690 1715*. Cambridge: Cambridge University Press.
- Emmison, F. G. 1934. "The Earliest Turnpike Bill." *Bulletin of the Institute of Historical Research* 12.
- Ekelund, Robert B. and Robert D. Tollison. 1981. *Mercantilism as a Rent-Seeking Society: Economic Regulation in Historical Perspective*. College Station: Texas A&M.
- Ekelund, Robert B. and Robert D. Tollison. 1997. *Politicized Economies: Monarchy, Monopoly, and Mercantilism*. College Station: Texas A&M.
- Gerhold, Dorian. 1996. "Productivity Change in Road Transport before and after Turnpiking, 1690-1840", *Economic History Review* 49: 491-515.
- Great Britain. 1963. *Statutes of the Realm*. London : Dawsons of Pall Mall.
- Great Britain. 1911. *Acts and ordinances of the interregnum, 1642-1660*. London: Wyman.
- Great Britain. Parliament. House of Commons. 1803. *Journals of the House of Commons*

- London.
- Great Britain. Parliament. House of Lords. 1891. *Journals of the House of Lords*. London: Griffiths.
- Henning, Basil Duke. 1983. *The House of Commons 1660-1690*. London: History of Parliament Trust.
- Holmes, Geoffrey. 1993. *The Making of a Great Power: Late Stuart and Early Georgian Britain. 1660-1722*. London: Longman.
- Hoppit, Julian. 1996. "Patterns of Parliamentary Legislation." *Historical Journal*. 39:109-131.
- Hoppit, Julian. 1997. *Failed Legislation, 1660-1800*. London: Hambledon.
- Hoppit, Julian and Joanna Innes. 1997. 'Introduction.' In Hoppit, Julian *Failed Legislation, 1660-1800*. London: Hambledon.
- Langford, Paul. 1991. *Public Life and the Propertied Englishman*. Oxford: Clarendon.
- Mokyr, Joel and John Nye. 2007. "Distributional Coalitions, the Industrial Revolution, and the Origins of Economic Growth in Britain." *Southern Economic Journal* 74: 50-70.
- North, Douglass. C. and Barry Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England." *The Journal of Economic History* 49: 803-832.
- O'Brien, Patrick, Trevor Griffiths, and Philip Hunt. 1991. "Political Components of the industrial revolution: Parliament and the English Cotton textile industry, 1660-1774." *Economic History Review* 44: 395-423.
- Parente, Stephen and Edward C. Prescott. 2000. *Barriers to Riches*. Cambridge: M.I.T. Press.
- Pawson, Eric. 1977. *Transport and Economy: The Turnpike Roads of Eighteenth Century Britain*. New York: Academic Press.
- Porrit, Edward. 1963. *The Unreformed House of Commons*. Augustus Kelley.
- Quinn, Stephen. 2001. "The Glorious Revolution's Effect on English Private Finance: A Microhistory, 1680-1705," *Journal of Economic History* 61: 593-615.
- Seel Graham and David Smith. 2001. *Crown and Parliaments: 1558-1689*. Cambridge: Cambridge University Press.
- Skempton, A. W. 2002. *Biographical Dictionary of Civil Engineers in Great Britain and Ireland*. London: Thomas Telford.

- Smith, Alan G. R. 1997. *The Emergence of a Nation State: the Commonwealth of England 1529-1660*. London: Longman.
- Summers, Dorothy. 1973. *The Great Ouse: The History of a River Navigation*. London: David & Charles.
- Shead, Jim. 2007. "Waterways Chronology." <http://www.jimshead.com/waterways/Chronology1.html#1503>." (updated August, 2007).
- Stasavage, David. 2003. *Public Debt and the Birth of the Democratic State: France and Great Britain, 1688-1789*. Cambridge: Cambridge University Press.
- Sussman, Nathan and Yafeh, Yishay, 2006. "Institutional Reforms, Financial Development and Sovereign Debt: Britain 1690-1790," *The Journal of Economic History*, 66: 906-935.
- Wikipedia. 2007. "Andrew Yarranton." http://en.wikipedia.org/wiki/Andrew_Yarranton. (updated on August 31, 2007).
- Wells, J. and Wills D. 2000. "Revolution, Restoration, and debt repudiation: The Jacobite Threat to England's Institutions and Economic Growth." *Journal of Economic History* 60: 418-441.
- Willan, Thomas S. 1964. *River Navigation in England, 1600-1750*. London: Frank Cass & Co.

Table 1: River and Road Improvements initiated through the King, the Commons, and the Lords, 1600-1640

Period	(1) Patents authorized by king	(2) Bills introduced in the Commons	(3) Bills introduced in the Lords	(4) Success Rate, Bills introduced in Commons (%)	(5) Success Rate, Bills introduced in Lords (%)
1600-09	0	2	1	0	100
1610-19	2	0	0	0	
1620-29	1	4	3	0	33
1630-39	5	0	0	0	0
1640	0	1	1	0	0
Total	8	7	5	0	20
			Rivers		
1600-09	0	3	0	0	
1610-19	0	0	0	0	
1620-29	0	1	0	0	
1630-39	0	0	0	0	
1640	0	0	0	0	
Total	0	4	0	0	
			Roads		
1600-09	0	3	0	0	
1610-19	0	0	0	0	
1620-29	0	1	0	0	
1630-39	0	0	0	0	
1640	0	0	0	0	
Total	0	4	0	0	

Sources: see text.

Table 2: River and Road Improvements initiated in the Commons and the Lords, 1661-1688

Period	(1) Bills introduced in House of Commons	(2) Bills introduced in House of Lords	(3) Success Rate Bills introduced in Commons (%)	(4) Success Rate Bills introduced in Lords (%)
Rivers				
1660-64	11	2	18	50
1665-69	3	4	33	75
1670-74	5	1	40	0
1675-79	4	0	25	
1680-85	1	0	0	
Total	24	7	24	57
Roads				
1660-64	6	0	17	
1665-69	1	0	100	
1670-74				
1675-79				
1680-85				
Total	7	0	29	

Sources: see text

Table 3: Acts that Voided or Diminished Rights of River Undertakers established by acts between 1689 and 1749

River Provision in Act	Year
Channel, Colchester to Wivenhoe Maximum Tolls reduced by new act	1718
Channel, Colchester to Wivenhoe Maximum Tolls reduced by act	1739
Dee Maximum Tolls reduced by act	1743
# of Authorities established between 1689 and 1749	37
% of Authorities established between 1689 and 1749 whose rights were voided or diminished by act	5%

sources: see text.

Table 4: Acts that Voided or Diminished Rights of Road Undertakers created between 1689 and 1719

Road Provision in Act	Year
Northfleet to Rochester Trustees forced to pay a subsidy to surveyors on nearby road	1725
Cherrill to Studley Bridge Maximum Tolls Reduced by act	1726
Hockliffe to Woborne Maximum Tolls Reduced by act	1728
Shepards Shord to Horsley Trustees eliminated by act	1729
Stokenchurch to Oxford Maximum Tolls reduced by act	1740
Fornhill to Stony Stratford Road Trustees eliminated by act	1740
Cherrill to Studley Bridge Maximum Tolls reduced by act	1744
# of Road Authorities created between 1689 and 1719	30
% of Authorities created between 1689 and 1719 whose rights were voided or diminished by acts	20%

sources: see text.

Table 5: Acts or Decrees that Voided or Diminished the Rights of River Undertakers established between 1600 and 1688

River Act or Decree	Year
Thames Some Undertakers voided by new act	1623
Great Ouse (St. Neots to St. Ives) Maximum tolls reduced by decree from Privy Council	1626
Lark Route cut in half by decree from King	1638
Avon (Warwickshire) Patentees rights voided by Commons	1641
Assignees rights voided because of Treason	1661
Ouse (Yorkshire) Undertakers rights voided by Restoration Settlement	1661
Wey Undertakers rights voided by Restoration Settlement	1661
Great Ouse (Bedford to St. Neots) Undertakers rights voided by act	1665
# of Authorities created before 1688	21
% of Authorities created before 1688 whose rights were voided or diminished by act or decree	33%

sources: see text.

Table 6: Road and River Improvement Bills initiated in the Commons, 1690-1749

Period	(1) Road Improvement Bills	(2) % that became Acts	(3) River Improvement Bills	(4) % that became Acts
1690-1699	8	40%	26	30%
1700-1709	16	56%	16	25%
1710-1719	25	84%	20	55%
1720-1729	44	86%	13	77%
1730-1739	21	82%	22	36%
1740-1749	46	74%	7	29%

Source: see text.

Table 7: Acts that altered the rights of River Undertakers created between 1689 and 1749

River	Year	Details on Amendment
Tone, Bridgewater to Taunton	1707	Amendment initiated by undertakers of original act, J.P.'s from Somerset, and neighboring towns requesting an additional toll to pay for a new lock. The petition was opposed by inhabitants in several places, who argued that the additional toll was burdensome and unnecessary. A grand jury of Somset petitioned in favor of the undertakers and the act passed. It gave additional tolls.
Channel from Colchester to Wivenhoe	1718	Extension initiated by a petition from Mayor, Aldermen, Assistants, and Common-Council of Colchester, who served as undertakers for the earlier act. They stated that they had an outstanding debt of 12,000 pounds and could not repay the debt without an extension of their authority. An act was passed extending their rights for another 21 years. The tolls were reduced on all commodities.
Kennet, Reading to Newbury	1720	Amendment initiated by the undertakers named in the original act. The original act required that works be completed within a specified time. They requested additional time to complete the works because of "extraordinary floods, and unforeseen Accidents." Act grants an extension. All other rights are unchanged.
Nene, Northampton to Peterborough	1724	Amendment initiated by a petition from commissioners from original act requesting to eliminate a clause in the original act which required the commissioners to negotiate with contractors to make the entire river navigable, and not in parcels. The petition was opposed by the inhabitants of Peterborough on the grounds that the clause was designed to aid the city and "keep their trade from neighboring places." The Act was passed eliminated the clause. All other rights were unchanged.
Wye and Lugg	1726	Amendment initiated by a petition from inhabitants of Hereford stating the improvements still need to be made to the river. The committee reports that there are not enough surviving trustees to put the previous act into execution. A new act was passed naming more trustees, but it does not appear to have eliminated any trustees. It also gives property owners the right to appeal the commissioner's decision to a jury.
Wear, near Sunderland	1726	Amendment initiated by commissioners who served as undertakers for the original act. They requested the right borrow money upon the credit of the act, rather than their personal security. They wanted to borrow 6000 pounds for improvements. The Act enabled commissioners to borrow on credit of act. All other rights were unchanged.
Kennet, Reading to Newbury	1729	Amendment initiated by a petition of the undertakers named in the original act. The undertakers state that they cannot sue and recover debts without the consent of all undertakers. Some undertakers are requesting an amendment of this clause. Undertakers also complained that the commissioners refused to call a jury and that they awarded

excessive damages to property-owners. Act was passed....

Ouze, near York	1731	Amendment initiated by petition of trustees of original act and inhabitants of York requesting that the tolls be increased and that the tolls on various goods be adjusted so according to their respective values. They claimed that the adjusted tolls would aid in the “perfecting of the work.” The act was passed increasing the tolls and making the schedule uniform by weight. All other rights are unchanged.
Dunn, Holmstile to Tinsley and Dunn, Holmstile to Barmby Dun	1732	Amendment initiated by petition of undertakers from original act dealing with Dunn from Holmstile to Tinsley and the undertakers for the Dun from Holmstile to Barmby Dun. They asked to merge and create a corporation. The shares were to be issued based on money invested to date. The act was passed creating the Company of Proprietors of the Navigation of the River Dun. All other rights are unchanged.
Dun, Bramby Dun to Fishlock Ferry	1739	Amendment initiated by petition of the Company of Proprietors of the Navigation of the River Dun requesting the right to improve a different section of the Dun river. The bill was opposed by inhabitants in several cities and the undertakers for the river Ouze who state that that the act will draw water from the Ouze. The act was passed giving the Company the right to undertake the project. It includes many toll exemptions.
Channel from Colchester to Wivenhoe	1739	Extension initiated by the commissioners of the act and the city leaders of Colchester. They request that their powers be extended for another 21 years so they can maintain a lock. The act was passed extending their rights for another 21 years. Toll on coal was reduced further to 3 pence.
Dee	1740	Amendment initiated by the undertakers for the river Dee requesting that they be incorporated. They hoped to raise more money to preserve their works. The act was passed creating the Company of Proprietors of the Undertaking for Recovering and Preserving the Navigation of the River Dee. All other rights are unchanged.
Dee	1743	Amendment initiated by mayor and citizens of Chester requesting that the tolls on the river be reduced to encourage trade. The Dee company also submitted a petition consenting to the reduction in tolls. The act was passed reducing the tolls on all types of vessels.
Wear, near Sunderland	1746	Amendment initiated by commissioners who served as undertakers for the original act. Their requested that their authority be extended for another term of years. They also requested an increase in the tolls to pay for an extension of the pier in Sunderland. The act was passed extending the term for another 21 years. The tolls were increased.

Sources: see text.

Table 8: Acts renewing or altering rights for all Road authorities created between 1689 and 1719

Road/original authority	Years	Details on Renewal Acts
Shenfield to Harwich/ J.P.'s, Essex	1707 1726 1747	First renewal initiated 5 years before original act was set to expire. J.P.'s state that more repairs are needed. Act is passed extending term for 15 years. No other rights are changed. Second renewal initiated 2 years before expiration. J.P.'s state that the road still needs repair. Town of Maldon submits petition to have their roads added. Act is passed extending the term for another 21 years and adding additional roads. It also transfers authority to a body of trustees. Third renewal initiated in the year second act expired. Trustees state that the road still needs repair and that more roads should be added to their authority. The act is passed extending the term for 21 years and adding the additional roads. The tolls are increased on coaches, but all other remain the same.
Wymondham to Attleborough/ J.P.'s, Norfolk	1708 1726 1747	First renewal initiated 4 years before original act was set to expire. J.P.'s stating that more repairs are needed and that more roads should be added to their authority. Act was passed extending authority from Wymondham to Hethersett. The tolls were not changed. Second renewal initiated 3 years before expiration. J.P.'s state that the roads still need repair. Act is passed extending authority for another 21 years. The tolls are not changed. Third renewal initiated in year of expiration. J.P.'s state that roads still need repair. They also want to improve several new roads. Act is passed extended the term for another 21 years and adding more roads. The tolls are unchanged.
Gloucester to Birdlip Hill/ J.P.'s, Gloucester	1722 1743	First renewal initiated 4 years before original act was set to expire. Mayor of Gloucester states that the road was ruinous. New act gives authority to body of trustees. Tolls on wagons are increased by 50%. All other tolls remained unchanged. Second Renewal initiated in year of expiration. Trustees state that they borrowed 1100 pounds to improve the road, and 300 remains to be paid. Act is passed extending the term for another 21 years. Tolls on wagons and coaches are reduced, but tolls on all livestock are increased.
Hockliffe to Woborne/ J.P.'s, Bedfordshire	1728 1743	First renewal initiated in year that the original act was set to expire. J.P.'s state that roads still need repair. Act is passed extending the term for 21 years and transferring authority to a body of trustees. Tolls on wagons and coaches are reduced. Second renewal is initiated 6 years before expiration. Act is passed extending term for another 21 years. Tolls are unchanged.
Fornhill to Stony Stratford/ 33 trustees	1709 1716 1740	First amendment initiated by creditors of the trust two years after original act is passed. Creditors state that they borrowed 6400 pounds, but cannot be paid unless the term is extended and the tolls

are increased. Act is passed extending the term of the original act to 30 years. It also requires that trustees borrow new funds and repay creditors by March 25, 1711, otherwise the creditors could take receivership of the tolls. Trustees were unable to borrow and creditors took over temporarily, before commissioners appointed a new body of trustees. Second amendment act is also initiated by creditors. They complained that the tolls were still too low. Act is passed extending the term for 23 years. Authority is vested in the trustees for the first act and those who took over after receivership. The tolls are cattle are increased. Act also includes a provision that new bonds pay no more than 5% interest. The rights vested in third act expired in 1739. A new act was initiated by inhabitants of Buckinghamshire and Bedfordshire stating that the road was still out of repair. **It named a new body of trustees.**

Stratford to Dunchurch/ 76 trustees	1725 1737 1740	First renewal initiated 4 years before original act was set to expire. Trustees state that roads will not be repaired and bonds cannot be paid if act is not extended. Act is passed extending the term for another 21 years. It also increases the tolls on livestock. Second renewal was initiated 9 years before expiration of the previous act. They state that the road cannot be repaired unless the term is extended and the tolls are increased. Act is passed extending the term for another 21 years, but the tolls are not changed. Third act is initiated by trustees who state that they need the authority to move the toll gates in order to increase revenues. The act is passed allowed trustees to move the gates.
Bath Roads/ J.P.'s, three counties	1721 1739	First renewal act initiated 8 years before original act was set to expire. J.P.'s state that the road cannot be repaired unless term is extended. The revenues only cover the interest payments. Act is passed extending the term and adding roads, but tolls are not increased. Second renewal is initiated by J.P.'s 3 years before preceding act is set to expire. They requested an additional term to repair the road. The act is passed extending the term for another 21 years. Toll are unchanged.
Cherrill to Studley Bridge/ J.P.'s, Wiltshire	1726 1744	First renewal act initiated 2 years before original act was set to expire. J.P.'s state that term needs to be extended to repay the 5000 pounds in debts. Act is passed extending term for another 21 years. The tolls on cattle are reduced , all others remain unchanged. Second renewal is initiated 3 year before previous act expired. J.P.'s state that the term needs to be extended to pay off a debt of 700 pounds. The act is passed extended the term for another 21 years. The tolls are reduced on coaches.
Sevenoaks to Tunbridge Well/ Trust	1725 1741	First renewal act initiated 6 months before the original act was set to expire. Petition from JP's and local inhabitants states that the repairs have been done but cannot be sufficiently amended without further sums to be laid out. Petitioners also state the need to extend the road from Wood'sgzate to Kipping's Cross. The act is passed extending the road. The tolls are not changed. Second renewal is initiated 6

years before it is set to expire. Trustees state that repairs cannot be completed unless the term and powers are extended. The 1741 act is passed extending the term. The maximum tolls on most traffic are increased.

Stoke Goldington to Northampton	1723 1742	First renewal is initiated seven years before its term was set to expire. Petition state that the road remains ruinous although sums have been spent. Petitions also state connecting road is ruinous. 1723 act extends term for 15 years after expiration of previous act, extends the road under trustees authority. The tolls are not changed. Second renewal is initiated 1 year before previous two acts are set to expire. Petition from trustees states that moneys have been applied to the road, but the debt cannot be repaid and the road maintained without an extension and enlargement of their powers. Act is passed extending the term for 21 years. The tolls are not changed, but a maximum debt of 1000 pounds is imposed
Dunstable to Hockliffe/ Trust	1713 1732	First amendment acts was initiated by a House committee appointed to inquire into the Management and Application of all Sums of Money. Committee states that trust is in deficit because of the expense of repairing the road. The act is passed which increases penalties on parishioners who do not provide statute labor. Additional trustees are added but none of the previous trustees are eliminated. The tolls are unchanged. Second renewal act was initiated 1 year before second act was set to expire. Petitioners state that great sums have been spent on the road and that the term needs to be extended to pay debts and provide maintenance. The act is passed extending the term. The tolls are not changed.
Petersfield to Portsmouth/ Trust	1726 1742	First amendment act was initiated one year before original act is set to expire. In a petition, JP's and locals state that road was expensive to repair and the term needs to be extended to continue improvements. An act is passed. Tolls are unchanged. Second renewal is initiated 5 years before second act is set to expire. Local petitioners state that term needs to be extended to maintain road. Act is passed extending the term. The tolls are unchanged.
Royston to Wandsford Bridge/ Trust	1727 1734 1741	Lord Tyrconnel introduces a bill to extend the earlier act four years before it is set to expire. Petition by edward nightingale esquire asks that act includes a provision requiring that his bonds be repaid. The provision is rejected. Act is passed setting up three separate divisions along the road. The tolls are not changed for each division, but inhabitants from Godmanchester are exempted from paying tolls on wagons carrying fuel, grain, or straw. Second renewal act initiated by trustees from Northern division. They state the need to enlarge their powers to improve their road. Act increases tolls on coaches and wagons. Third renewal act is initiated seven years before the 1727 acts were set to expire. Trustees petition that the term needs to be extended for the debt to be repaid and for the road to be improved. Act is passed extending the term. The tolls are unchanged.

Ipswich to Claydon and Pye road/ Trust	1733	Renewal is submitted in the year the original act is set to expire. Local petitioners state that the act needs to be extended otherwise the road will become dangerous. Act is passed. Tolls are not changed.
Highgate to Barnet/ Trust	1721 1736	First renewal act is initiated four years before it the original is set to expire. Trustees petition that the term needs to be extended and that connecting roads need improvement. Act is passed extending the term and enlarging authority to connecting roads. The tolls are not changed. Second renewal act is initiated two years before the original act is set to expire. Trustees petition that term and powers of earlier act need to be extended to pay debts and keep road in repair. Act is passed extending term and increasing tolls on wagons and coaches. Road from Highgate to Hampstead is also added to trustees authority.
Kilburn Bridge to Sparrow Herne/ Trust	1722 1749	First renewal is initiated nine years before initial act is set to expire. Trustees petition that trust is in debt and that their term and powers need to be extended. Inhabitants of Bushey state that earlier act has put them at great expense and inconvenience. Amendment act extends the term and affirms that wagons with brick or hay must pay toll. Turnpike Gate is also removed from sparrows herne and placed at Bushey. The second renewal act is initiated by trustees who state that the acts powers and term need to be extended to pay for debts and maintain road. The act is passed extending the term. Tolls are not changed.
Northfleet to Rochester/ Justice	1725 1730 1738	First renewal is initiated one year before original act is set to expire. JP's petition that road cannot be further improved unless term is extended. JP's from eastern portion of Kent also petition that tolls should be used to pay for road from Chatham and Boughton under the Bleane. Act is passed extending the term. It also requires JP's to pay a subsidy to surveyors on road from Chatham and Boughton under the Bleane. The tolls are unchanged. In 1730 an act is passed creating separate trust for road from Chatham and Boughton under the Bleane. Acts that after June of 1736 subsidy paid to surveyors from Chatham and Boughton under the Bleane is no longer required. Second renewal act is initiated two years before second act is set to expire. Local petitioners request that the term of the act be extended. The act extends the term. The tolls are not changed.
St. Leonard Shoreditch to Enfield/ Trust	1714 1721 1729 1744	First renewal is initiated 1 year after original act was passed. Trustees petition for longer term and provisions to prevent evasion of tolls and force inhabitants to perform statute labor. Act extends original term by 11 years and adds new trustees. Provision requires inhabitants of Hackney to pay 100 pounds per year in lieu of statute labor. The tolls are not changed. Second amendment act is initiated by order to bring in bill for amendment. Amendment act includes a provision that wagons carrying brick or hay must pay toll. Third amendment act is initiated eight years before rights in second amendment are set to expire. Trustees petition states that they need term extended to pay off debt. Inhabitants in St. Leonard and St.

John Hackney petition against the bill. Another petition is introduced to extend the authority of the trustees to the road from Enfield to Edmundton. Act is passed extending the term and adding new road. The tolls are not changed. The fourth amendment act is initiated by trustees who state that the tolls and term need to be extended. They also state that the parish of Hackney has been delinquent in paying its 100 pounds per annum. Tolls on coaches are increased. The act requires the inhabitants of Hackney to pay the delinquent funds to the trustees and their property will be confiscated and sold.

Reading to Puntfield/ Trust	1728 1747	First renewal act initiated one year before original act is set to expire. Trustees state that the term needs to be extended to keep the road in repair. Act is passed extending the term. The tolls are not changed. Second renewal act is initiated four years before second act was set to expire. Trustees state that roads cannot be repaired if the act expired. Act is passed extending the term. The tolls are unchanged.
Shepards Shord to Horsley/ Justice	1729	First act is initiated six years before it was set to expire. Trustees petition that debts cannot repaid and road cannot be repaired if the term is not extended. After the second reading the committee reviewing the bill is instructed by someone in the House that “they have power to provide in the bill that the trusts, by the former act shall cease and determine, and that proper powers, for the effectual amending the highways, directed to be repaired by the former act, be vested in other trustees.” Act is passed naming a new body of trustees. The tolls are not changed.
Tittensor to Butlane/	1735	Renewal act is initiated in the year the first act was set to expire. Trustees say that the debts cannot be repaid unless the term is extended. Inhabitants of Manchester oppose the extension of the term. The acts was passed extending the term. The tolls were not change.
Worcester to Droitwich/ Trust	1726 1749	First renewal act was initiated 11 years before first act was set to expire. The act was passed extending the term and roads to the authority of the trust. The tolls were not changed. The second act was initiated in the year the second act was set to expire. Some trustees state that the debt cannot be repaid and the road kept in repair unless the term and powers are extended. Another group of trustees petition that it is not necessary to extend the term and that the debts can be repaid before the term expires. They ask that the bill not pass. The act is passed extending the term and the roads under the authority of trustees. The tolls were not changed.
St. Albans to South Mimms/ Trust	1735	First renewal act is initiated one year before original act was set to expire. Trustees petition that the tolls need to be increased and the term needs to be extended to repay the debts. The act is passed extending the term but the tolls are not changed.
Tyburn to Uxbridge/	1726 1742	First renewal is initiated in year the original act was set to expire. Trustees petition that the term needs to be extended to pay debts and

Trust		keep road in repair. Act is passed extending the term. Tolls on coaches and wagons are increased. Second renewal act is initiated seven years before the first renewal acts was set to expire. The trustees state the need to add more trustees and to extend the term and powers of the previous act. The bill fails in parliament in 1741. A similar petition is introduced the next year. An act is passed extending the term and increasing the tolls on wagons and coaches.
Highgate to Hampstead/ Trust	1722 1734	First amendment act is initiated 5 years after the original act was passed. It adds trustees and includes a provision that tolls must be paid on wagons with bricks or hay. Second renewal act is initiated four years before the previous act was set to expire. Trustees state that the term needs to be extended to pay the debt. Inhabitants in several villages petition against the bill stating that the tolls will be used to repair local roads, not the main highway. The act was passed extending the term. The tolls were not changed.
Kensington to Cranford Bridge/ Trust	1724 1738	The first amendment act is initiated four years before the original act expires. Trustees state that the term needs to be extended to pay off the debts. The act is passed extending the term. The tolls were not changed. The second renewal act is initiated seven years before the first renewal act was set to expire. The trustees petition that the term needs to be extended to pay off debts. The act is passed extending the term. The tolls on wagons are increased.
Maidenhead Bridge/ Trust	1728 1736	First renewal act was initiated eleven years before the original act was set to expire. An act is passed extending the term. The tolls are not changed. The second renewal act is initiated 1 year before the previous acts were set to expire. Act is passed extending the term and expanding the roads under the authority of the trust. The tolls are not changed.
Reading to Basingstoke/ Trust	1736	First renewal act is initiated three years before the original act was set to expire. JP's and locals petition that the term needs to be extended to pay debts and keep the road in repair. An act is passed extending the term. The tolls were not changed.
Beaconsfield to Stokenchurch/ Trust	1736	First renewal acts was initiated five years before the original act was set to expire. Trustees state the term needs to be extended to pay debts. An act is passed extending the term. The tolls were not changed.
Stokenchurch to Oxford/ Trust	1740	First renewal act was initiated in the year the original act was set to expire. Trustees petition that the term needs to be extended to keep the road in repair. MP reported from the committee that the debts had been paid off. Act is passed extending the term. The tolls on coaches are reduced.

Sources: see text

Figure 1: Road and River Improvement Bills in Parliament, 1604-1749

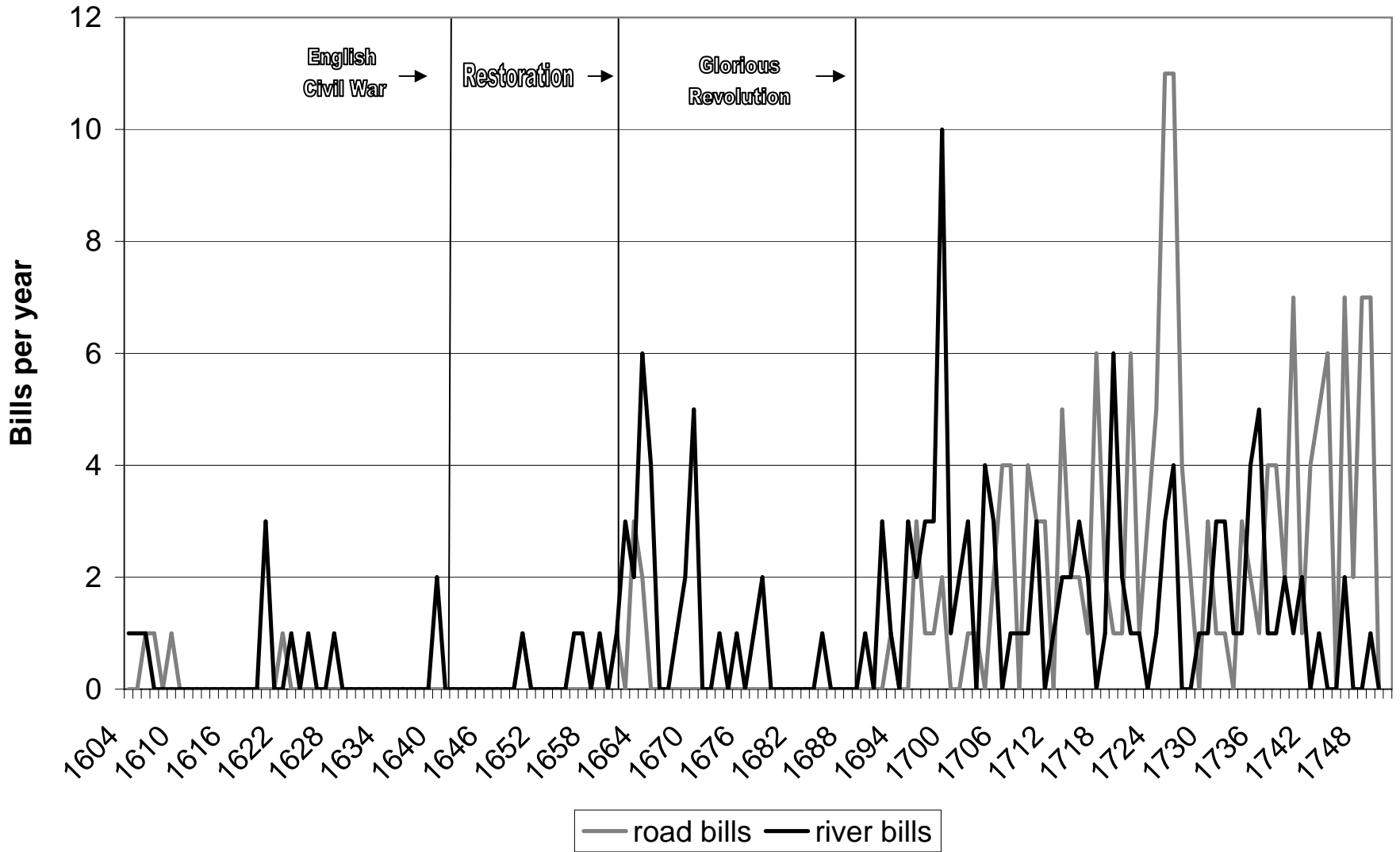


Figure 2: River Patents, river improvement acts, and road improvement acts, 1604-1749

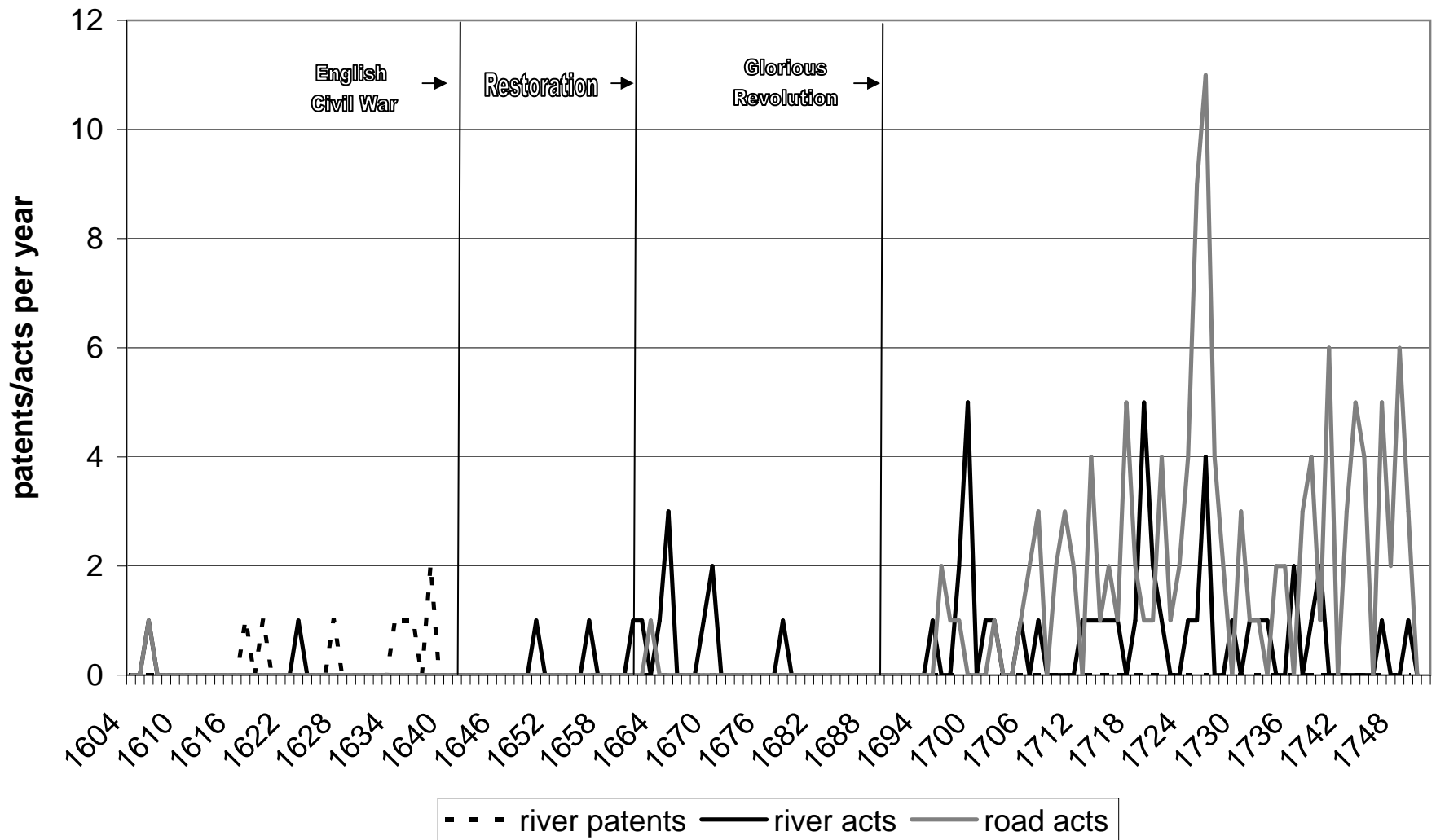


Figure 3: Proportion of MPs in Majority party and the Proportion of River MPs in majority party, 1690-1749

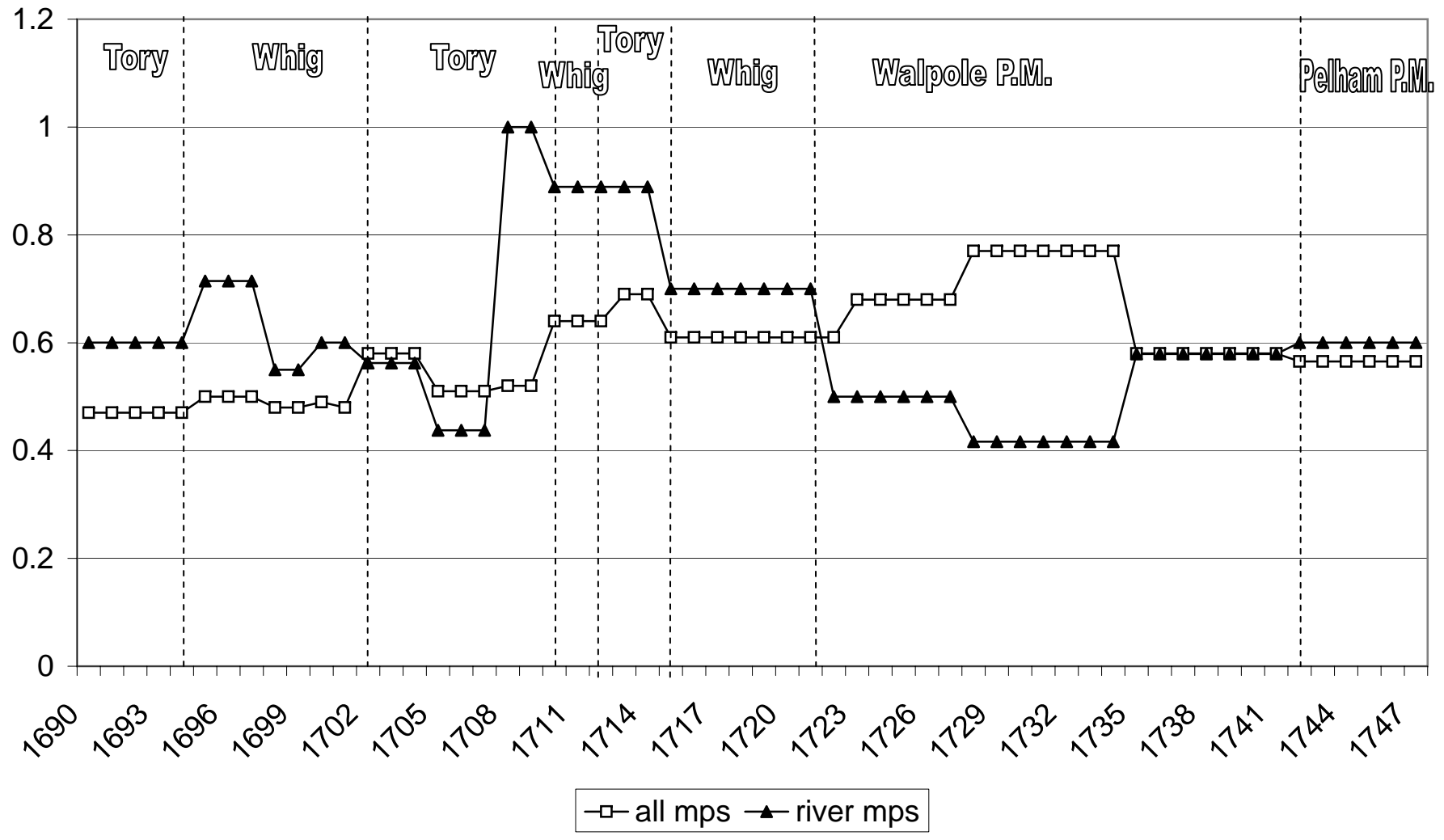


Figure 4: Proportion of MPs in Majority party and the Proportion of Road MPs in majority party, 1690-1749

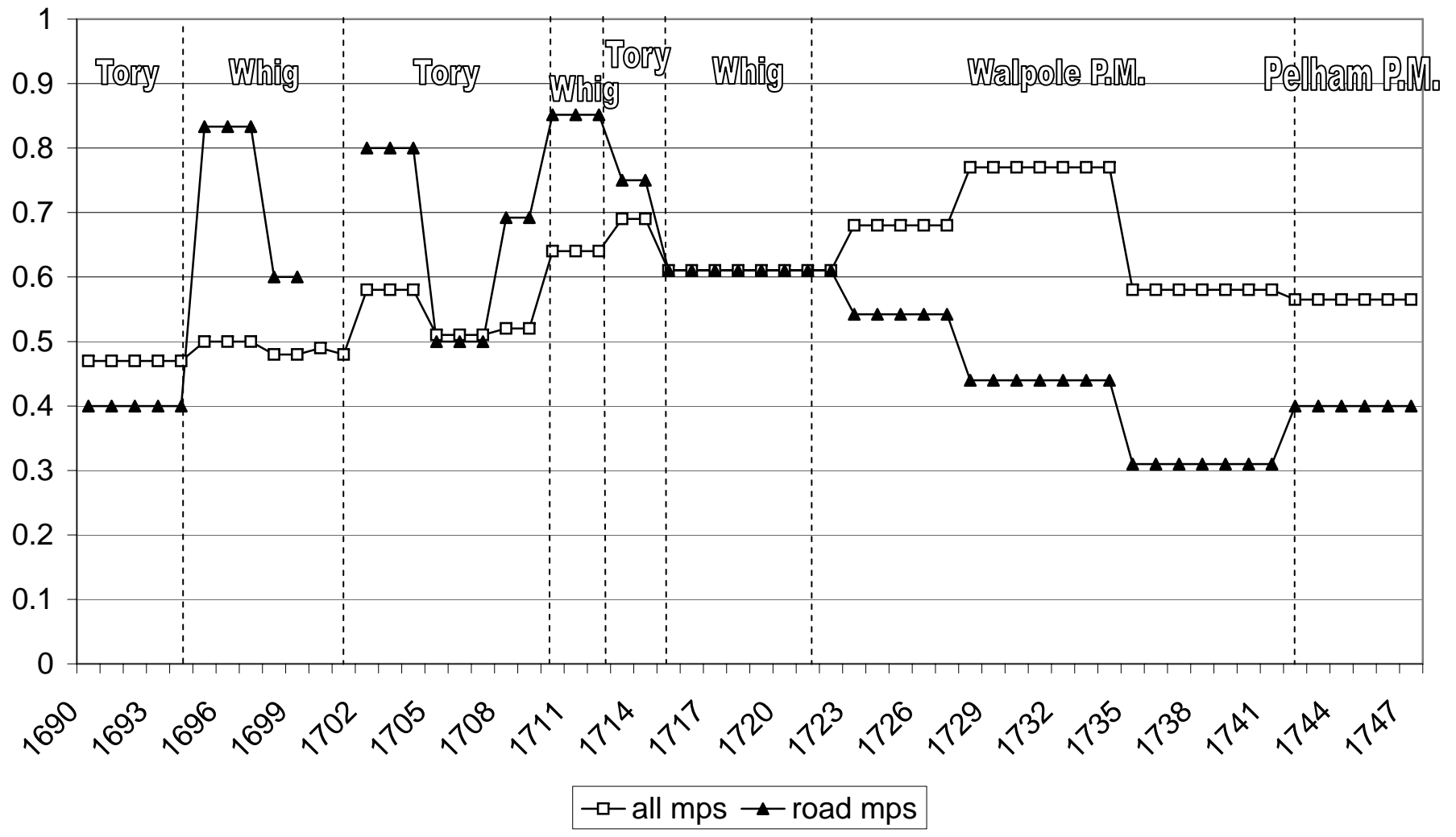


Figure 5: Proportion of River and Road MPs who presented or reported on more than one bill within previous two years, 1695-1749

