How Merchant Towns Shaped Parliaments: From the Norman Conquest of England to the Great Reform Act*

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This version: 28 October 2018

Abstract

After centuries of stagnation in the "Dark Ages," the Commercial Revolution led to a boom in economic activity and urbanization across Western Europe. The surge in trade and commerce that began in the 11th century was followed by the emergence of self-governing merchant towns. Soon after, these merchant towns gained representation in regional and national parliaments. This paper establishes the mechanism by which trade led to parliamentary representation, via municipal autonomy. We focus on England after the Norman Conquest of 1066 and build a novel comprehensive dataset of 554 Medieval towns (boroughs), tracking their institutional development over eight centuries. We document a two-step process: First, inefficiencies in the king's centralized system of tax collection became increasingly distortive to trading towns. In a mutually beneficial solution, merchant towns paid higher annual taxes in exchange for Farm Grants – the right of self-governed tax collection, cutting out royal officials. Second, Farm Grants were stepping stones towards representation in the English Parliament: To raise extra-ordinary taxes (e.g., for wars) from self-governed towns, the king had to negotiate with them – and negotiations took place in Parliament. We also show that Medieval self-governance had important long-term consequences and interacted with nationwide institutional changes. Boroughs with Medieval Farm Grants continued to have broader voting rights in the 17th to 19th centuries, they raised troops to back Parliament against the king during the Civil War in 1642, and they supported the Great Reform Act of 1832 that extended the franchise.

JEL: D02, D73, N43, P14, P16.

Keywords: Trade, Merchants, Parliament, Self-Governance, Institutions

*This paper was previously circulated under the title "The Medieval Roots of Inclusive Institutions: From the Norman Conquest of England to the Great Reform Act." We would like to thank Daron Acemoglu, Sascha Becker, Alberto Bisin, Ernesto dal Bo, James Fenske, Ed Glaeser, Martin Fiszbein, Jonas Hjort, Saumitra Jha, Sukhun Kang, Amit Khandelwal, Horacio Larreguy, Nathan Nunn, Alessandro Lizzeri, Nicola Persico, Patrick Rey, Shanker Satyanath, Andrei Shleifer, Ennio Stacchetti, Jean Tirole, Felipe Valencia, Joachim Voth, John Wallis, and Noam Yuchtman, as well as seminar audiences at Brown, Columbia, EEA-ESEM 2017, Frankfurt, Harvard (Economics), Harvard (Government), MIT Sloan, the NBER Summer Institute (POL/EFBGZ), the NBER OE workshop, NYU PoliSci, NYU Stern, PSE, Queen Mary, SIOE 2017, UCLA, Warwick, and Yale for helpful comments and suggestions. Patrick Kennedy provided outstanding research assistance; we thank Andrea Matranga for help with the FAO data and Ondre Padgett for help with the Civil War data. Corresponding author: Nico Voigtländer (nico.v@ucla.edu)

1 Introduction

Political institutions and the protection of property rights are important drivers of economic growth and development (c.f. North and Thomas, 1973; Acemoglu and Robinson, 2012). In Medieval times, institutions throughout Western Europe were shaped by "coalitions of power holders" – important actors holding military, administrative, and religious power (North, Wallis, and Weingast, 2009). Initially, these included the king, the nobility, and the high clergy. By the early modern period, merchant towns had ascended to the coalition of power holders, and they were included in an overwhelmingly important institution that exerted constraints on monarchs – parliament. Merchants' inclusion in parliaments played a crucial role during critical junctures in subsequent centuries, determining economic outcomes. For example, Acemoglu, Johnson, and Robinson (2005) find that where "initial" institutions before 1500 placed checks on monarchs and protected property rights, the gains from Atlantic trade post-1500 were particularly large.[1] Conversely, trade also affected institutional change: Acemoglu et al. (2005) show that Atlantic trade further strengthened merchant groups, helping them to obtain improved protection of property rights – but only where "initial" institutions gave merchants a voice. These "initial" institutions have typically been taken as given by the literature.[2] This bears the question: How did merchants gain representation in parliaments?

In this paper, we study the process by which the merchant class became an essential part of the coalition of power holders, culminating in its representation in parliaments. This process was triggered by the Commercial Revolution – a surge in economic activity in Western Europe beginning in the 11th century (Lopez, 1976). The rise of trade went hand-in-hand with the emergence of municipal autonomy of cities across Europe. Soon thereafter, kings summoned towns' representatives in general assemblies, which evolved into parliaments. We study the relationship between trade, municipal autonomy, and parliamentary representation in the prominent context of England – "the mother of parliaments."[3] Our analysis begins with the Norman Conquest of England in 1066 – long before the creation of England's first parliament. The Norman Conquest – "the single greatest political change England has ever seen"[4] – represents a key turning point in English history. The Normans asserted strong control over the territory, implemented a feudal society, and replaced the Anglo-Saxon ruling elite with their own. This resulted in largely homogeneous formal institu-

[1] Similarly, Pascali (2017) shows that the introduction of the steamship in the 19th century had a positive effect on economic development only in countries with strong constraints on executive power.

[2] Contributions in political economy that explain the enfranchisement of non-elite groups tend to focus on the 18th and 19th century (Acemoglu and Robinson, 2000; Lizzeri and Persico, 2004). Some historical studies have documented a close relationship between trade and institutions in the Medieval Mediterranean (Greif, 1993; Puga and Trefler, 2014). While the institutions studied in these papers supported Medieval trade, they eventually lost importance.

[3] Original quote attributed to British politician John Bright in 1865 (Oxford Dictionary of Quotations, revised 4th edition, 1996, p. 141).

[4] The Economist, December 24th, 2016, p. 33.

tions at the onset of the Commercial Revolution, so that England provides an ideal starting point for our analysis.

We argue that the Commercial Revolution increased the need for efficient tax collection and specialized law enforcement – especially in trading towns, where the old system of 'tax farming' distorted economic activity. The king resolved this conflict by issuing Farm Grants – mutually beneficial agreements that allowed trading towns to self-administer their tax collection and appoint local officials. This municipal autonomy strengthened towns' bargaining power, elevating them into the coalition of power holders. Self-governed tax collection fostered towns' representation in Parliament, whose main purpose was the discussion of nationwide taxation. Self-governance also implied a broader participation of townsmen in the administration of their borough (i.e., more open local institutions). We find that this affected long-run nation-wide institutional development: Medieval municipal autonomy predicts the behavior of boroughs during institutional change in the centuries that followed (such as the Civil War and the Great Reform Act). The diagram below summarizes the steps of our argument.

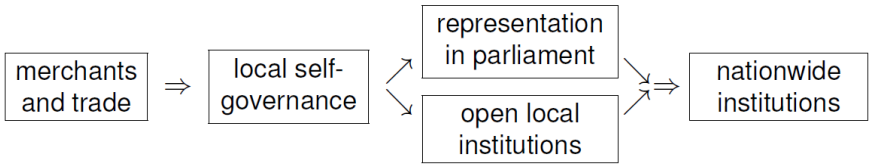

Diagram: Steps of the Argument

Our argument is based on both the historical record and on detailed newly assembled data regarding political liberties of Medieval English boroughs (towns with a market and a trading community). We build a novel dataset for all 554 boroughs that existed before 1348 (using the time of the Black Death as a natural breakpoint). For each borough, we code its institutional history between 1066 and 1832, including Charters of Liberties, parliamentary franchise, troops raised to support Parliamentarians during the Civil War in 1642, and voting for the Great Reform Act of 1832. We also code borough-level characteristics such as taxable wealth assessed by the Normans in 1086, historical commercial importance, and geographic features. Our analysis is organized into three parts.

We first examine how merchant towns obtained the right of self-administered tax collection. After the Norman Conquest, the kings ruling England relied on tax farming to collect revenues from their boroughs: Each borough had to pay an annual fixed amount (the "farm") that was based on the taxation of property, courts, and trade. For each shire (county), the king appointed a sheriff ("shire reeve") to run tax collection and provide law enforcement. Sheriffs, in turn, appointed local officials in their boroughs. Sheriff were entitled to keep revenues collected in excess of the annual lump sum. In addition, their tenure was often short, and they lacked knowledge of the local econ-

omy. This led to widespread opportunistic and distortionary behavior, as illustrated by countless complaints of burgesses and subsequent royal enquiries (e.g., the "Inquest of the Sheriffs" in 1170). Merchant towns and the king found a mutually beneficial solution to the inefficiencies associated with tax farming: Beginning in the 12th century, the king issued *Farm Grants* to some boroughs, giving local burgesses the authority to appoint their tax collectors, judges, and market officials.[5] In exchange for Farm Grants, boroughs typically agreed to pay a higher annual lump sum to the king. Farm Grants reduced extortions and distortions, enabling more effective local law enforcement for commercial purposes. By the time of the Black Death in 1348, 90 out of 554 boroughs had obtained Farm Grants. We show that Farm Grants were particularly likely to be granted to royal boroughs with geographic characteristics conducive to trade (proximity to navigable rivers, the sea coast, or Roman roads). We also use other proxies to show that Farm Grant boroughs were commercially more important in Medieval times. This supports our argument that Farm Grants were particularly valuable to commercial towns, where the inefficient royal administration created the most severe distortions.

The second step of our argument connects Farm Grants to representation in Parliament. The 'Model' Parliament in England assembled in 1295 and met on a regular basis thereafter. A central purpose of Parliament was to discuss extra-ordinary taxes, which were typically levied to finance wars.[6] The need to negotiate extra-ordinary taxation was particularly pronounced for boroughs that had obtained the right to self-administer their tax collection. There, the king lacked both the information about local movable wealth and the administrative means to unilaterally impose additional taxes. In other words, Farm Grants increased the bargaining power of boroughs and thus the likelihood of being enfranchised (see González de Lara, Greif, and Jha, 2008, for a similar reasoning). Conversely, since extra-ordinary taxation was mostly levied on movables and trade, the merchant class in boroughs with Farm Grants had a natural interest in being enfranchised (North and Thomas, 1973).[7] We find strong empirical support for a close relationship between Farm Grants and representation in Parliament. Out of the 90 boroughs with Farm Grants, 64 (71.1%) were enfranchised by 1348; as compared to 66 out of all other 464 boroughs (14.2%). This stark

[5]Farm Grants were only introduced after the Norman Conquest; they did not exist during Anglo-Saxon times, as documented by Maitland (1921, p. 204), Tait (1936, p. 71), Barlow (1961, p. 25), and Reynolds (1977, pp. 95-6). Besides Farm Grants, there were also other Charters of Liberties; for instance, these granted the right to hold a market, to prevent the entry of royal officials, or they provided freedom from tolls throughout the realm. We predominantly use Farm Grants, but also explore other charters in our empirical analysis.

[6]Parliament was an efficient way to hold negotiations with many stakeholders. See for example Bates and Lien (1985, p. 56) who observe that "bargaining for taxes was costly to monarchs. Monarchs therefore appear to have desired to bargain with fewer agents – ones representative of the set of all agents." Negotiating taxes in Parliament also helped to legitimize them and thus avoided protests (Strayer, 1947).

[7]This point is related to theories that link taxation of movable wealth (which could be avoided more easily than taxes on land) to institutional change. For example, Bates and Lien (1985, p. 53) argue that "Revenue-seeking governments may well find it to their advantage to strike bargains with citizens whose assets they seek to tax. [...] Such bargains may become more beneficial...the more mobile the assets the citizens hold."

difference proves highly robust in our regression analysis.

In the third part of our analysis, we provide results that illustrate how Farm Grants affected local and national institutions over centuries after they were granted. At the *local* level, we show Medieval Farm Grants boroughs were still more independent from the king centuries later in electing their local governing body. They also had a persistently wider franchise in electing their Members of Parliament (MPs) between the 17th and early 19th century. At the *nationwide* level, we show that Farm Grant boroughs were significantly more likely to provide volunteer troops to fight on the side of the parliamentarians at the outbreak of the Civil War in 1642, which resulted in greater parliamentary control over the crown. In addition, we find that Medieval Farm Grants are a strong predictor of a borough's MPs voting in favor of the Great Reform Act of 1832 – a crucial step in the democratization of England (Aidt and Franck, 2015).

Our empirical results potentially suffer from endogeneity bias. For example, politically well-connected boroughs may have obtained both Farm Grants and seats in Parliament. To isolate our trade- and commerce-based mechanism, we use trade-favoring geography as instruments for Farm Grants (navigable rivers, sea coast, and ancient Roman roads). We confirm our OLS results both in terms of magnitude and statistical significance. For our identification strategy to be valid, the exclusion restriction must hold: Trade geography did not affect institutional outcomes independent of Farm Grants (e.g., via wealth). A historical feature helps us to check the exclusion restriction: Boroughs belonged either directly to the king ("royal boroughs"), or to a local mesne (lay or ecclesiastical) lord. For reasons that we discuss in detail below in Section 3, Farm Grants were almost exclusively granted to royal boroughs by the king. Mesne lords very rarely issued Farm Grants to their towns.[8] Consequently, we can use mesne boroughs as a 'placebo' to test if the exclusion restriction holds: For mesne boroughs, we find no relationship between trade geography and representation in Parliament – despite the fact that it was composed in nearly equal proportions of royal and mesne boroughs. In other words, in the absence of Farm Grants, merchant boroughs were not more likely to be enfranchised.[9]

We perform an additional placebo check for our long-run outcomes. We use historical records to identify boroughs where exogenous events (such as silting up of rivers) permanently obstructed

[8]We perform a host of checks to show that royal and mesne territories were otherwise largely comparable, and that differences – where they existed – do not affect our results. For example, royal and mesne boroughs had a similar distribution of taxable wealth right after the Norman Conquest, and royal boroughs were evenly distributed across England (see also Figure 4). In addition, trade geography predicts other economic outcomes such as commercial importance or population equally well in *both* royal and mesne boroughs. Finally, all our results hold when we exclude the largest (royal and mesne) towns, and when we control for taxable wealth in 1086.

[9]We argue that Farm Grant boroughs were more likely to be enfranchised because the king had to negotiate extra-ordinary taxes with them. For our use of mesne boroughs as a 'placebo,' it is thus important to note that – despite being administered by local lords – mesne boroughs also had to pay extra-ordinary taxation to the king. The reason is that extra-ordinary taxes were typically used to finance wars; they thus concerned the whole realm and were collected from *all* boroughs.

trade *after* they received Farm Grants. We show that, even in the absence of trade, Farm Grants predict long-run institutional outcomes. This makes it unlikely that our results are confounded by a direct effect of trade on institutions (or by unobserved correlates of trade). Our results thus suggest that Farm Grants acted as stepping stones for merchant towns' representation in Parliament and for their contribution to England's nationwide institutional development. After documenting this mechanism for England, we show parallels to the historical development of institutions in other regions of Western Europe.

Our paper makes novel contributions along three main dimensions: First, we study the economic determinants of Medieval self-governance in a large cross-section of towns, drawing attention to the so-far understudied role of Medieval Farm Grants. Second, we establish the link between Farm Grants and towns' representation in Parliament. Third, we document long-run interactions between local self-governance and nation-wide institutions. We discuss the related literature in Section 2. In Section 3 we present the historical background, and in Section 4, our data. Section 5 presents our main empirical results on Farm Grants and representation in Parliament by 1348, and Section 6, our results on local and nationwide institutions in the centuries thereafter. Section 7 offers a comparative analysis of five regions in Western Europe, discussing under what conditions our proposed mechanism was at play. Section 8 concludes.

2 Related Literature

The relationship between inefficient local bureaucracies and the emergence of local political liberties has been investigated in the modern context (Bardhan, 2002; Bardhan and Mookherjee, 2006). Our paper contributes to this literature by systematically analyzing the relationship between trade, taxation, and self-governance over the long run, and linking it to the emergence of broader voting rights. Greif, Milgrom, and Weingast (1994), Stasavage (2014), and Puga and Trefler (2014) investigate the link between the interests of the merchant class and institutional developments.[10]

The interaction between local and national institutions links our paper to Barzel (1997), González de Lara et al. (2008) and Van Zanden, Buringh, and Bosker (2012), who argue that the balance of administrative power between king, feudal lords, and towns was an important determinant of the early European national representative system. In line with our findings, González de Lara et al.

[10] Greif et al. (1994) emphasize the role played by Medieval merchant guilds as a commitment device for autocratic rulers. By coordinating the responses of merchants to expropriations by rulers, Medieval guilds allowed for an increase in trade volumes, from which both rulers and merchants benefitted. Stasavage (2014) analyzes ca. 170 Western European towns between AD 1000 and 1800 and shows that the control of local institutions by merchant (and craft) guilds initially fostered population growth, but later hampered it. Since this study covers cities across Europe, it relates to our discussion of city autonomy in areas governed by small local vs. large territorial lords in Section 7. Puga and Trefler (2014) show that in late Medieval Venice, trade led first to constitutional constraints on autocratic rulers and then to the rise of a narrow oligarchy. While Puga and Trefler (2014) examine merchant families within Venice, we focus on a large cross-section of towns and analyze how local institutions interacted with national ones (e.g., Parliament).

(2008) argue that the rising administrative power of towns in Medieval times constrained English monarchs – long before the Civil War and the Glorious Revolution in the 17th century, which have received most attention by scholars. In a similar context, Acemoglu and Robinson (2017) model the competition for dominance between the state and civil society. Relating our empirical findings to their theory, early modern England represents a "happy middle ground" where state and civil society were in relative balance. This triggered positive competition that resulted in the emergence of an inclusive state.[11] Glaeser and Shleifer (2002) make the case that the English kings' ability to control the territory vis-à-vis feudal lords is important to understand the spread of the Common Law legal system, in which the king delegates adjudications to better-informed local juries.[12] We contribute to this strand of the literature by investigating the sources of towns' fiscal and judicial autonomy, and the far-reaching effects of local liberties.

North and Thomas (1973), North and Weingast (1989), Bates and Lien (1985), and Stasavage (2011) also emphasize the relationship between the rise of trade and the evolution of constitutional constraints on rulers. Jha (2015) shows that financial innovations – i.e., stock ownership in overseas companies – fostered MPs' support for Parliament during the English Civil War, which in turn strengthened parliamentary control over sources of revenues. Our focus is on the earlier – and often overlooked – spread of political liberties to merchant towns and their initial representation in Parliament. In the spirit of Levi (1999), self-governance restricted the ruler's ability to extract resources from towns, and led to their representation in Parliament, where extra-ordinary taxation was negotiated. Wars – and the need to finance them – are often considered vital to the evolution of political liberties (see, for instance Bates and Lien, 1985). We point to a novel channel through which wars can lead to liberties. Because conflicts were often fought abroad, the king's absence from England and his significant need for revenues exacerbated the issue of controlling the local administration, which in turn increased the king's willingness to issue Farm Grants.[13] Since these, in turn, led to representation in Parliament, warfare did not only affect state capacity (c.f. Tilly, 1990; Besley and Persson, Besley and Persson; Gennaioli and Voth, 2015), but also institutional change.

Finally our paper is related to the literature on the determinants of franchise extensions. One

[11] A concrete example for this "positive competition" is English cities obtaining liberties in exchange for paying higher taxes that supported the state. Liberties, in turn, improved cities' bargaining power.

[12] There are parallels to our analysis: Similar to Glaeser and Shleifer (2002), we argue that decentralization (by issuing Farm Grants) was an efficiency-enhancing outcome because it allowed better-informed local stakeholders to collect taxes and enforce justice. Crucially, in boroughs that obtained independent justice, the king kept the right to intervene in case of judicial conflict via itinerant royal justices who regularly checked on local officials. In line with Glaeser and Shleifer (2002), this system could only work because the English kings were sufficiently powerful to have local influence.

[13] Appendix B.1 shows that the timing of Farm Grants in Medieval England is closely aligned with external wars. Complaints about royal officials were also particularly frequent when the king was away due to wars, so that his administration governed largely unchecked. See for example the "Enquiry into offences by royal officials during the king's absence 1286-9" reported in Douglas and Rothwell (1996).

leading explanation is that democratization serves as a commitment device for redistribution under the threat of revolution (see Acemoglu and Robinson (2000) for a theoretical contribution and Aidt and Franck (2015) for empirical results that support this channel). In addition, oligarchies may voluntarily extend the franchise when this process leads to a more efficient provision of public goods (Lizzeri and Persico, 2004). Our results emphasize the "deep roots" of voting for the Great Reform Act of 1832. This may have been motivated both by their history of self-governance (and thus broader local franchise), but also because the Act increased the pro-trade coalition in Parliament. This finding – together with our result that towns with Medieval Farm Grants were more likely to support parliamentarians during the Civil War – contributes to the literature on the historical roots of political institutions (Persson and Tabellini, 2009; Giuliano and Nunn, 2013; Guiso, Sapienza, and Zingales, 2016).

3 Historical Background

This section summarizes the historical background of institutions in England after the Norman Conquest, with a focus on the emergence of Farm Grants and the representation of boroughs in Parliament. Appendix A complements this section with a case study of two trading towns, one royal and one mesne, that were ex-ante similar but took different institutional paths.

3.1 The Norman Conquest

In 1066, William the Conqueror (Duke of Normandy) landed at Pevensey, heading a large French army to conquer England. The conquest resulted in a dramatic change in land ownership, as documented in the Domesday Book of 1086. The Normans replaced the entire Anglo-Scandinavian elite: by 1086, 180 barons had appropriated the land of 80 English lay lords; only two Englishmen were still holding large estates from the king (Barlow, 1961, pp. 94-96). The ecclesiastical landholders (e.g., bishops) were also replaced. Compared to the Anglo-Saxon period, the Normans strengthened the control over the territory by greatly diminishing the power of the earls and imposing a homogeneous feudal society (Brooke, 1961). In addition, the local administration was also largely replaced, as we document below. In sum, the Norman Conquest resulted in relatively homogenous formal institutions across England and thus constitutes an ideal starting point for our analysis.

3.2 Territorial Administration: Royal and Mesne Territories

Post-Norman-Conquest England was divided into shires (modern-day counties), and these were in turn divided into hundreds. Each hundred was composed of manors within which rural and urban settlements – villages and boroughs – coexisted. Boroughs were characterized by the presence of a market and a trading community. While villagers provided labor services to their lord, burgesses held land at a money rent (land *gable*); burgesses could also sell, mortgage, and leave their land

property in the borough in inheritance.[14] Our focus is on boroughs because these were the main locations of merchant activities in Medieval and early modern England.

Figure 1 illustrates the administrative layers in Medieval England. The person with the highest authority over an area was its owner: either the king or a local (*mesne*) lord. In the centuries following the Norman Conquest, approximately 25% of all boroughs belonged to the king, 50% to lay mesne lords, and 25% to ecclesiastical mesne lords.[15] Our dataset contains 145 royal and 409 mesne boroughs (explained in detail in Section 4.1). While mesne lords were tied to the king by feudal (military) obligations, they were entitled to receive almost the entirety of their land's profits. As shown in Figure 1, the king and mesne lords appointed officials who enforced the law and collected taxes in their respective territories. The king appointed sheriffs in each shire. These, in turn, appointed bailiffs in hundreds and boroughs that belonged to the royal demesne (Tait, 1936). Officials had fiscal and judicial authority within their jurisdiction, and each responded to the officials with wider jurisdiction.[16] Mesne lords organized the administration of their territories largely independently of royal officials. However, they governed significantly smaller territories than the king. Thus, the range of officials in mesne territories was more limited. In particular, an equivalent office to that of the royal sheriff did not exist in mesne territories; instead, mesne lords directly appointed and monitored local officials in their boroughs.

3.3 The Commercial Revolution: Boroughs, Markets, and Trade

Our analysis coincides with the Commercial Revolution – a period of booming economic activity that saw substantial increases in urban settlements and trade across Western Europe. In England, the number of recorded urban settlements increased drastically: Boroughs went from 112 in 1086 to 554 by 1348. Around 150 fairs were established by the end of the twelfth century, and more than 1,000 newly licensed markets were recorded between 1200 and 1349 (Britnell, 1981; Masschaele, 1997; Langdon and Masschaele, 2006). Tolls and fees from trade became a substantial part of the royal budget. Richard I introduced the first national customs tariff. In 1203-4, a total of £4,958 were collected from 35 ports, a sum equal to the total value of all mesne lords' lands in 1086, as recorded in the Domesday Book (Langdon and Masschaele, 2006).

[14] Land tenure in boroughs was known as burgage tenure, which was similar to freeholding (Ballard, 1913; Tait, 1936). Burgesses could move as part of their trading activity. However, acquiring the status of burgess in a borough other than that determined by birth was difficult.

[15] Throughout the text, we refer to both lay and ecclesiastical lords as mesne lords. "Mesne" means "middle" in Medieval French, referring to the position of mesne lords, who had vassals, but were themselves vassals of the king.

[16] See Ballard (1913) and Green (1989). Other officials existed at both the shire/hundred level (e.g., shire justiciars and itinerant justices) and the borough level (e.g., coroners, ale-tasters, and toll collectors). See Cam (1963) for detail. These officials were also appointed by higher layers of the royal administration – except for the local officials in boroughs with self-governance, as we discuss below.

3.4 Taxation and Tax Farming

In the Middle Ages, there existed a distinction between 'ordinary' and 'extra-ordinary' taxation: The former accrued to the lord of the borough and the latter, to the king. In what follows, we describe both.

Ordinary Taxation. The contractual arrangement between the king – or, in mesne territories, the lord – and his tax-collecting officials was known as *tax farming*. The *farm* of a territory was a fixed amount of money representing the sum of all tax revenues from that territory. For urban settlements, this included taxes on trade such as tolls and market transaction fees, as well as court fees and the gable (a tax on the "burgage tenement" – the land owned by burgesses).[17] Farms were customarily fixed for each borough (and also for rural villages and manors) right after the Norman Conquest, based on the Domesday survey of 1086.[18] Within each shire (county), the sum across all boroughs and manors gave the customary shire farm. With the booming economic activity in the late Medieval period, the king adopted a system that allowed him to benefit from the increased tax base without the need to adjust the customary farm. He began to auction off the right to collect the farm at the shire level, and the customary farm reflected the king's "reservation price." Whenever the winning bid exceeded this value, the king enjoyed an *increment*. The official who won the auction became the sheriff ("shire reeve"), who was responsible for the farm of the shire (Ballard, 1913). The sheriff retained any revenue in excess of his bid to the king. This system created incentives for extortionary behavior by the sheriff, as discussed in detail below.

Extra-Ordinary Taxation. In 'cases of necessity' (i.e., during wars), the king was entitled to 'extra-ordinary' taxation from *all* subjects, including all boroughs independently of their ownership (c.f. Willard, 1934, p. 10). That is, mesne boroughs were just as concerned with extra-ordinary taxation as royal boroughs. For instance, "in 1296 all towns alike paid an eight [of their movable goods]" (Pasquet, 1964, p. 152). There is also an important connection between extra-ordinary taxation and Parliament: Boroughs acknowledged the existence of a 'case of necessity' by giving their consent to extra-ordinary taxation in Parliament.

Sheriffs. The sheriff appointed officials in royal boroughs who were in charge of tax collection and markets (constables, market viewers, etc.). He also presided over the shire court and appointed officials (bailiffs/reeves) who ran borough courts that dealt with trespassing, debts, and disputes

[17] See Ballard (1904) and Masschaele (1997). Other permanent sources included the proceeds from the lord's demesne houses (*gablum*) and receipts from mints (Ballard, 1904, pp. 63-64).

[18] The Domesday Book was an exhaustive survey of all English lands (landholders, tenants, inhabitants, etc) conducted in 1086. The main purpose of the survey was to assess the value of the land and its assets. To conduct it, England was divided into seven regions, with three to four royal commissioners sent to each. These royal commissioners surveyed thousands of settlements, by subjecting juries composed of nobles and burgesses to detailed questioning. As Jenkins (2011, pp. 38-39) observes, "The survey was...dubbed the Domesday Book by the Saxons, because its decisions, like those of the Day of Judgment, were unalterable. [...] It did more than record. It marshalled Norman England into an administrative whole."

between merchants (Cam, 1963). In addition, the sheriff administered the collection of extra-ordinary taxes in *both* royal and mesne boroughs alongside royal tax assessors. In the former, he relied on his appointed officials (except in Farm Grant boroughs, who elected their own officials); in mesne boroughs, the sheriff cooperated with the lord and his officials to collect extra-ordinary taxes. Sheriffs were often drawn from the royal court (*curia regis*); they had limited knowledge of local economic conditions and were not commercial specialists (Poole, 1955; Harris, 1964; Carpenter, 1976; Green, 1989). This lack of specialization became particularly relevant after the onset of the Commercial Revolution, when there was increasing demand for an efficient handling of markets and commercial contracts. Due to the frequent bidding for the office (especially in the 13th century), sheriff positions also had a relatively high turnover, with typical term lengths of about 3-5 years (Heiser, 1997). The short tenure of sheriffs invited predatory behavior and contributed to their wide-spread misconduct.

Misconduct of Officials. Keeping local officials in check was a significant problem, especially in the vast territory owned by the king, and during the frequent absences of the king and his household during external wars and crusades. The severity of misbehavior is reflected in countless complaints about local officials. For example, the contemporary Henry of Huntingdon (ca. 1088-1154) wrote "Sheriffs and reeves, whose office was justice and judgment, were more terrible than thieves and plunderers, and more savage than the most savage" (cited in Bisson, 2009, p. 178). The flood of complaints triggered numerous formal inquiries, many of which lasted several years. Surviving records of inquiries give a vivid picture of local officials' misconduct. For instance, the Inquest of the Sheriffs in 1170, which led to the removal of most sheriffs and lower-level officials, tells us of reeves extracting unauthorized tolls and of sheriffs abusing shire courts by summoning burgesses to act as jurors at inconvenient times and places, only to fine those unable to attend (Poole, 1955; Cam, 1963). Similarly, the Hundred Rolls Inquiries in 1274-75 contain complaints involving over 1,000 officials (Cam, 1963, p. 229). Sheriffs were accused of imposing arbitrary financial penalties, making arrests without any formal accusation, refusing to give proper receipts for payments in order to collect debts twice, and extracting unauthorized tolls (Cam, 1963; Masschaele, 1997).

Attempts to Curtail Misconduct of Officials. English kings were aware of the widespread misconduct of their officials, and they tried to address this issue – albeit with limited success. Several legal reforms encompassing statutes, ordinances, and provisions explicitly addressed the issue of controlling local officials. At least 34 major reforms (out of a total of ca. 80 pieces of legislation over the period 1086-1307) contained chapters dealing with this issue, either by limiting officials' prerogatives or by creating new offices whose purpose was to monitor existing officials (see Luders et al., 1810 and Douglas and Rothwell, 1996). For instance, local shire justiciars and coroners were introduced during the 12th century to diminish the sheriff's judicial prerogatives (Carpenter, 1976).

Similarly, the Exchequer – instituted around 1110 – tightened control over the sheriffs' financial accounts (Cam, 1963; Powicke, 1962). In 1212-3, John summoned knights of the shire – local notables elected by 40 shilling freeholders within each county – from each shire to report complaints about local officials' behavior to the king's council (Holt, 1981). The Magna Carta (1215-1217) – famous for empowering lords vis-à-vis the king – also included provisions that sought to limit the pervasiveness of the administration. For instance, it forbade the shire court from meeting more than once a month, and the sheriff from making more than two *tourns* through his shire per year.[19] In the 1240s-50s, Henry III attempted to increase the minimum price at which a shire could be farmed. This led to an explosion of complaints about officials' misbehavior and eventually to reforms in 1258-9 (Carpenter, 1976). The boom in commercial activity in the 12th-13th century exacerbated the distortions imposed by an inefficient administration.[20] At the same time, the various attempts to fix the system (e.g., appointing salaried local gentry as sheriffs) proved largely ineffective.

3.5 Farm Grants in Royal Territories

The misbehavior and lack of commercial specialization by officials disrupted trade, preventing boroughs from reaching their full economic potential. This meant that there was scope for efficiency gains, and the key laid in self-administered tax collection. Although this implied a significant loss of administrative control over communities and burgesses for the king, granting boroughs autonomy over their administration had the potential to ensure more efficient tax collection and law enforcement, and thus greater realized gains from trade.

Starting with Henry I, many boroughs obtained the right to self-administer the collection of the borough farm ("Farm Grants"). Lincoln was the first borough to receive a Farm Grant in 1130.[21] The initiative in seeking administrative autonomy was often taken by merchant guilds or similar local collective action bodies (Reynolds, 1977). Boroughs paid the king in exchange for these liberties. Payments included a one-time lump-sum known as *fine*, as well as two annual components: i) the *farm* (which had previously been collected by the sheriff), and ii) an *increment* on the farm. The fine – usually of a similar magnitude as the annual farm – was often used to quickly raise money during wars (Tait, 1936). This can explain the close association between

[19] The *tourn* was the circuit of hundreds done by the sheriff. In each visited hundred, he would preside over the hundred court, often using these occasions to extract unauthorized fines.

[20] Accordingly, several statutes sought to addressed the need for registered commercial contracts and more potent dispute resolution (e.g., the Statute of Acton Burnell in 1283, the Statute of Merchants in 1285, and the Statute of Westminster II in 1285). The Statute of Merchants states that i) speedy justice is needed to support trade, ii) the sheriffs meant to provide it abused their position, and iii) justice to merchants is therefore the responsability of mayors elected by burgesses (where relevant). For further detail see Ballard and Tait (1923); Tait (1936); Poole (1955); Powicke (1962); Cam (1963).

[21] Earlier, other Charters of Liberties were granted to some boroughs – most prominently the right to hold a market and have a borough court. It was a royal prerogative to grant charters bestowing market licenses across both royal and mesne territories. However, this was not the case for Farm Grants, which could only be granted by the owner of the respective territory (who also collected the borough's farm). The king neither had the right nor an interest in unilaterally issuing Farm Grants to mesne boroughs, because he was not the recipient of their ordinary taxation.

Farm Grants and external wars (see Appendix B.1). The Charter of Andover (granted in 1205) illustrates the two annual components of Farm Grants:

> "Know ye that we have granted [...] to our burgesses of Andover our manor of Andover with all its appurtenances at fee farm, to hold to them and their heirs of us and our heirs by the ancient farm, to wit, at £80 a year, and as increment £15 which they formerly gave us for having the said manor at farm during our pleasure, and in addition £10 which they afterwards added for having the said manor at fee farm, and this farm, to wit, £105 in the whole, they shall pay at our Exchequer yearly to us by their own hands [...]."

The Charter first notes that Andover used to pay a farm of £80 a year (collected by royal officials). Andover then agreed to pay an increment of £15 per year for the right of self-administered tax collection, and an extra £10 per year for the right to keep this contract in perpetuity.[22] Where detailed records survived, they suggest that this setup is representative, and that Farm Grants typically constituted a net gain in tax revenue to the king (c.f. Ballard, 1913, pp. lxxvi-lxxvii). This gain for the king arguably compensated for the (expected) loss of administrative control and future information about local economic conditions.[23]

Did burgesses gain equally from Farm Grants? To provide quantitative evidence, we would need to know how much royal officials were extracting for themselves prior to a grant. This information was not recorded. However, Farm Grants were not imposed; they were an option for burgesses. This implies that burgesses must have benefitted, as well. Bristol's petition to the King in 1283 illustrates that merchants were well-aware of the benefits of Farm Grants:

> "Since none can know so well as those whose work is concerned with merchandise, and who earn their living by it, how to regulate the affairs of merchants properly and honestly, the Commonalty of Bristol entreats the Lord King that, if he should wish to grant his town at farm to anyone, he should concede it to them, since they would be prepared to give as much for it as any outsider. For an outside farmer would not seek it except for his own personal gain, which would be to the serious loss of the Commonalty. And the Commonalty seeks it to farm, not for the sake of profit, but to safeguard, according to the law merchant, both themselves and others coming there." (Cronne, 1946, pp. 42-3).

Farm Grants included the right for burgesses to elect the local officials in charge of the financial and judicial administration of the borough, such as reeves and market officials (Gross, 1906; Ballard, 1913; Tait, 1936).[24] As suggested by Bristol's petition, Farm Grants gave boroughs an op-

[22] Farm Grants – even those issued in perpetuity – were subject to revocation: In case burgesses failed to pay the agreed-upon farm, the king would temporarily remove these liberties and send royal officials into town.

[23] In particular, a net gain for the king implies that a borough's annual fee for its Farm Grant was larger than the decline in the total farm collected from the corresponding shire. For instance, in Lincoln, burgesses paid £180 to the king, while the sheriff's farm of the entire shire was reduced by only £140, implying a gain of £40 to the king. One may presume that sheriffs would oppose Farm Grants because they were the losing party. Even though sheriffs tried to oppose early legislation that limited their judicial prerogatives (Holt, 1981), their position was much too weak – as shown by their wholesale dismissal in several occasions (Maddicott, 1981) – to stage successful opposition to Farm Grants, and no such incidences are documented.

[24] Because borough officials also collected taxes on merchants coming from different boroughs, burgesses – once in control of the local administration – may have been tempted to extract high taxes from external merchants. However, the king forbade this practice and enforced limits to taxes on trade (Britnell, 1978; Masschaele, 1997).

portunity to select a more commercially specialized administration. Typically, all male burgesses had a say in the election of a borough's officials. For example, the Ipswich Dom-Boc of 1291 states that "...the whole town of the borough of Ipswich gathered in the churchyard of St. Mary at Tower to elect two bailiffs and four coroners for the town, according to the specifications of the charter of the aforesaid lord King [John], which that king recently granted to the borough."[25]

3.6 (The Absence of) Farm Grants in Mesne Territories

Farm Grants were almost exclusively granted to boroughs in royal territories – despite the fact that these merely accounted for one-fourth of all boroughs. As shown in Figure 2, 90 out of 554 boroughs that existed in 1348 received Farm Grants. Among the 145 royal boroughs, 74 received Farm Grants (51.0%). In stark contrast, among the 409 boroughs governed by mesne lords, only 16 obtained Farm Grants (3.9%).[26] These differences likely resulted because mesne lords faced less severe administrative problems than the king, due to three reasons: First, mesne lords were in charge of much smaller territories than the king. Consequently, they were geographically closer to their officials.[27] Second, the administrative layer that created most upset among royal boroughs was absent: There was no equivalent to sheriffs in mesne territories (see Figure 1). Mesne lords directly appointed and monitored local officials. Consequently, mesne lords exerted a firmer control over their administration (Tait, 1936). Third, sheriffs in royal territories were typically not locals and were frequently replaced (see Section 3.4). This invited predatory behavior, and their limited local knowledge was an obstacle to the efficient enforcement of commercial contracts. In contrast, mesne lords often had castles, fortifications, or other dwellings in the boroughs under their control and thus possessed detailed local knowledge that was also passed on to their heirs. This reduced the scope for efficiency gains of delegating tax collection and law enforcement to locals.[28] Correspondingly, complaints against officials in mesne territories were less common than in the royal demesne (Jobson, 2012, p. 30).

[25] Original text (in Latin) from Gross (1890, pp.116-123). Translation adapted from "History of Medieval Ipswich" (http://users.trytel.com/∼ tristan/towns/ipswich2.html). In practice, councils composed of wealthy individuals were often in charge of choosing officials. Examples include Norwich, where by the end of the 13th century, officials were chosen by an annually elected body of 24 (usually wealthy) citizens. In Exeter, surviving records indicate that, in the 1260s, 36 electors (chosen by a group of four influential citizens) chose the chief officials of the city (Attreed, 2001, pp. 14-22). Nevertheless, even in this case, local interests were represented to a larger extent than in boroughs without Farm Grants, where the sheriff alone appointed local officials.

[26] Figure A.2 in the appendix provides a map of Farm Grants, showing that there is no apparent clustering; Farm Grant boroughs are spread relatively evenly across England.

[27] One may think that royal boroughs closer to London would have suffered less from monitoring issues. However, in that period, the royal court was itinerant rather than permanently based in London. Moreover, the king himself was constantly on the move due to conflicts (c.f. Hindle, 1976). Also, there were no administrative restrictions on Farm Grants in mesne territories: Mesne lords were independent from the king in granting charters to their boroughs.

[28] An example is the borough of Arundel in south England. The borough was under the control of the Fitzalan mesne lord dynasty, who resided in Arundel Castle. Arundel did not receive a Farm Grant, despite the fact that it "as the trading centre of the honour, had by [the early 14th century] developed to quite substantial proportions" (http://www.historyofparliamentonline.org/volume/1386-1421/constituencies/arundel).

The Role of Territory Size. We argue that larger territories gave rise to monitoring problems and a lack of knowledge of local economic conditions. If this can explain the issuance of Farm Grants, it should also apply to relatively large mesne territories. Figure 3 shows that this is indeed the case: Among the lords with the smallest territories (seigneurs, abbots, and nunneries), there are essentially no Farm Grants. Boroughs in territories administered by bishops (which were of intermediate size) received some Farm Grants. Finally, among the largest mesne lords (earls and archbishops), the proportion of boroughs with Farm Grants was significantly larger – albeit still only one-fifth of the frequency in the much bigger royal territories.

3.7 Additional Liberties

Boroughs that obtained Farm Grants often obtained additional Charters of Liberties that restricted the entry of the sheriff and his officials. These included i) the right to forbid the sheriff from entering the borough to perform judicial tasks (*non-intromittat clause*), ii) the right to circumvent the sheriff, by handing over the farm and all other debts owed to the king directly to the Exchequer (*direct relation with the Exchequer*), and iii) the right for burgesses to execute royal orders themselves within the borough – for example, to summon local juries for assessment and collection of extra-ordinary taxation (*return of writs*).[29] These rights complemented Farm Grants by strengthening the independence of local officials and thus the extent of self-governance. In Appendix C.8 we code additional frequently awarded liberties: the right to collect special taxes to repair walls ("Murage") or pave streets ("Pavage"), and the right to elect local officials (other than those involved in the collection of the farm, e.g., mayors). These liberties provided a lower degree of self-governance than Farm Grants; we use them as proxies for burgesses' capacity to organize.

3.8 Early Parliaments and Negotiation of Taxation

The origins of the English Parliament can be traced back to the great councils of the realm whose main purpose was to gather information about local economic and political conditions (Holt, 1981; Post, 1943) and to discuss extra-ordinary taxation (Mitchell, 1914). Originally, only barons and the higher clergy were summoned to these assemblies. However, starting in c. 1212, knights of the shire were summoned from each shire to meet the king alongside the higher clergy and the barons. The Magna Carta in 1215, and the events leading up to it, further entrenched the importance of the great councils as a check on royal power. Soon after, it became customary to refer to these broader councils as *parlement* (from the Anglo-Norman verb *parler* – 'to talk').

These councils, however, did not initially include merchants and burgesses. This changed in 1265, when Simon de Montfort headed the Second Baronial Revolt. Facing dwindling support among the barons, Montfort also summoned boroughs to a national assembly in an attempt to ex-

[29] For further detail see Ballard (1913) and Ballard and Tait (1923). Similar to Farm Grants, these additional liberties had to be petitioned by burgesses. They were paid for by an up-front fine, but did not require annual payments.

pand his coalition against the king. This set the precedent for the representation of burgesses in what became the *Commons* (lower chamber) in the English Parliament (while lords and bishops are represented in the Upper House – the 'House of Lords'). From 1268 onwards, shortly after having re-established his authority, the king summoned similar assemblies that included borough representatives, and, in 1295, Edward I called what would become known as the 'Model Parliament.' The composition of Parliament reflected the new "dominant coalition" brought about by the Commercial Revolution: the king, the clergy, the nobility, two knights of the shires from each county, and two burgesses from selected boroughs.

The spread of borough liberties in the 12th and 13th centuries had resulted in a separation between boroughs' and counties' (shire) administrations, tax collection systems, and systems of local courts. This made it desirable for the king to summon burgesses to Parliament, in addition to knights of the shire. This separation was particularly strong for boroughs that enjoyed self-governance (Farm Grants), and especially for those that had explicitly purchased the right to exclude the sheriff (e.g., the rights of *non-intromittat* and *return of writs*). By summoning representatives from boroughs, the king acquired information about local conditions and facilitated the collection of taxes on movables and trade needed to finance wars (Bates and Lien, 1985). In particular, the Parliament enabled the king to discuss "local tax assessment and collection, supervising local government, administering the law locally, and collecting and reporting complaints" (Holt, 1981, p. 28).

Parliament was not sitting continuously. Instead, the king summoned it, typically when there was the need to raise extraordinary taxes for warfare. Once summoned, enfranchised boroughs had a few weeks to elect their MPs. To legitimize MPs' authority in representing enfranchised boroughs, all male householders doing "watch and ward" (i.e., participating in the local system of peace-keeping) were entitled to vote for their MPs (Porritt, 1909, p. 5). In the course of the fourteenth century, the Parliament came to acquire increasing prerogatives in the areas of administration, justice, and finance. This evolution became evident during the reign of Edward III, "and the year 1327, in which Parliament participated in the deposition of a king, divides as accurately as any single date can the phase when Parliament was still essentially a royal tool from that when it developed a political momentum of its own" (Harriss, 1981). By the 1330s, the *Commons* were separated from the *Lords* and, by 1376, they had a speaker. At the close of Edward III's reign, most of the legislation was based on petitions made by the *Commons*, and statutes required the assent of the Parliament (Harriss, 1981).

4 Data

In this section, we describe the construction of the variables that are novel to the literature: borough level data on Medieval Farm Grants, parliamentary franchise, influence of the king on local

politics, and geographic features. We also discuss the division into royal and mesne boroughs, and the empirical conditions for using the latter as a 'placebo' to test the exclusion restriction. The remaining outcome variables (e.g., votes for the Great Reform Act) are described briefly in the respective empirical sections below and in Appendix B.

4.1 Borough-Level Data in Post-Norman Conquest England

We collect data on the number of English boroughs, their foundation date, the nature of their ownership (royal vs. mesne), taxation, and local liberties between 1066 and 1348. This information comes mostly from the digitized version of original Medieval documents (e.g., charters and letter patents collected in the Pipe Rolls, Charter Rolls, Fine Rolls, Close Rolls, and Patent Rolls).

Borough Ownership: Royal vs. Mesne. To obtain the number of boroughs in existence by 1348, we use the primary data collected by Beresford and Finberg (1973) and Letters, Fernandes, Keene, and Myhill (2003). We know of 554 boroughs as of 1348, and we obtain information on whether these were owned by royal or mesne lords from the British History Online (https://www.british-history.ac.uk), Ballard (1913), and Ballard and Tait (1923). Our coding yields 145 royal and 409 mesne boroughs.[30]

Data on Charters of Liberties Granted to Boroughs. We use the information on different Charters of Liberties (e.g., judicial, commercial, financial) contained in the collection of borough charters reported in Ballard (1913), Ballard and Tait (1923), and Weinbaum (1943). We further expand on the information in these datasets by coding liberties contained in the Charter Rolls, Close Rolls, Fine Rolls, and Patent Rolls of the reigns of Henry III, Edward I, Edward II, Edward III, and Richard II.[31] For every borough, we document the Charters it received with the date of the grant. Farm Grants were the most important liberties that boroughs could obtain.[32] Figure 2 provides an overview of the Farm Grants obtained by royal and mesne boroughs. We also code whether a borough obtained restrictions on the entry of royal officials in judicial functions (*non-intromittat*), to enforce royal orders (*return of writs*), and in financial functions (*direct access to the Exchequer*).

Parliamentary Franchise. Beginning with the first English Parliaments summoned by Edward I, we record the date when boroughs gained parliamentary franchise. Until the 17th century, en-

[30] Appendix B.2 describes the ownership coding in more detail and explains how we address changes in ownership.

[31] These sources are digitized and available at http://www.medievalgenealogy.org.uk/sources/rolls.shtml. To identify the Charters of Liberties granted to each borough, we read through the text in all Charter Rolls. We interpret the non-observance of a grant in a given borough as evidence for the absence of a grant. This approach is warranted by the high data quality and survival rate of historical data on Charters of Liberties (e.g., Pipe Rolls, Quo Warranto records). In addition, grants are often recorded in multiple documents because they were repeatedly confirmed by successive lords or by the king, which reduces the probability of missing them.

[32] The vast majority of boroughs either obtained Farm Grants in perpetuity or renewed them successively. However, a few Farm Grant boroughs suffered temporary revocations, either because of their failure to pay their farm as promised, or because they failed to uphold Common Law. In Appendix C.7 we show that our main results also hold when using the duration of each borough's Farm Grant over the period 1066-1348 – even within the subsample of the 90 boroughs that received Farm Grants by 1348.

franchisement was a royal prerogative (Hawkyard, 1991). Enfranchisement was customary: If a borough was once summoned to Parliament, it could claim the right to representation forever after.[33] We collect information on boroughs' parliamentary franchise from the series of volumes *History of Parliament: The House of Commons*, which covers the period from the creation of Parliament to the Great Reform Act of 1832.[34]

Royal Influence on Local Politics. To code the king's influence on local politics, we use election rules contained in boroughs' Charters of Incorporation. Weinbaum (1943) provides this information for 157 boroughs in our dataset that were incorporated between 1345 and 1641. We create an indicator variable for strong royal influence that takes on value one if two conditions hold: i) the king appointed the first members of the governing body right after the borough's incorporation, and ii) subsequent members of the governing body were selected by co-optation, thus perpetuating the initial influence of the king (see Appendix B.3 for detail). This coding yields 66 boroughs (42.0%) with strong royal influence.

Taxable Wealth in 1086, Geography, and Commercial Importance. We code the taxable wealth of urban settlements in 1086, which was assessed by the Normans and recorded in the Domesday Book (available at http://opendomesday.org). Appendix B.4 provides detailed information on the source and our coding. Taxable wealth is available for 354 boroughs in our sample, 85 royal and 269 mesne. To obtain geographic characteristics, we geocode the location of all boroughs as well as Medieval navigable rivers and Roman roads in use in the 11th and 12th centuries. We also compute two terrain controls: ruggedness and soil quality in a radius of 10 km around each borough. The sources for these geographic variables are listed in Appendix B.5. We code the commercial importance of Medieval boroughs based on two variables: whether a borough was among the 51 commercial centers in the mid-14th listed by Masschaele (1997) and whether a borough had obtained "freedom from tolls" – a grant that exempted its merchants from taxes on trade throughout the realm (see Appendix B.6 for detail). Finally, we also geocode the four historic pre-Norman kingdoms (Mercia, Wessex, Northumbria, and East Anglia) by relying on Hill (1981).

4.2 Balancedness of Royal and Mesne Boroughs

As explained in Section 3, Farm Grants were almost exclusively granted by the king to royal boroughs, while they were largely absent in territories administered by mesne lords. This bears the question to what extent royal and mesne boroughs were actually comparable – could it be, for example, that the king "cherry-picked" commercially important towns after the Norman Conquest,

[33] However, boroughs that let their franchise expire (e.g., by failing to return members for long periods of time) could be denied re-enfranchisement. In our baseline analysis, we only code boroughs as enfranchised that retained their seats in Parliament until 1830. In Appendix C.7 we show that our results are very similar when coding also those boroughs as enfranchised that were later denied re-enfranchisement.

[34] In particular, Roskell (1993), Bindoff (1982), Hasler (1981), Ferris and Thrush (2010), Henning (1983), Cruickshanks, Handley, and Hayton (2002), Sedgwick (1970), Namier and Brooke (1964), Thorne (1986), and Fisher (2009).

so that mesne boroughs were mostly poor rural places? In what follows, we examine balancedness by using information that was available to the king when boroughs were distributed after the Conquest: geography and taxable wealth in 1086. Figure 4 shows the location of the 554 boroughs in our dataset. There does not seem to be spatial clustering – the 145 royal boroughs (solid squares), and the 409 mesne boroughs (hollow dots) are distributed relatively evenly across England. This is likely a result of the king trying to ensure his influence across the realm. However, there is a tendency for royal boroughs to be located on rivers or Roman roads. We examine this systematically in Table 1. Columns 1-3 in Panel A show that 31% of royal boroughs were located on a navigable river, as compared to 13% among the mesne boroughs. The proportions for Roman roads are 44% vs. 28%. These differences are statistically significant (while for location on the sea coast, there is no significant difference).

A likely explanation for these differences is that the king needed to ensure that royal officials and troops could reach his boroughs, thus favoring locations on waterways and roads (Tait, 1936). This interpretation – as opposed to the king systematically picking the *richest* boroughs – is also supported by the data on taxable wealth of boroughs from the Domesday Book in 1086. Figure 5 shows that the distribution of taxable wealth was similar across royal boroughs (dashed line) and mesne boroughs (solid line). Panel B in Table 1 shows that royal boroughs were on average somewhat wealthier, with a p-value of 0.10. However, the average difference is mostly driven by the three richest boroughs (which were all royal). Once these are excluded, the p-value drops to 0.30. In addition, when controlling for the geographic features from Panel A, the p-value drops to 0.64, while the geographic variables are strong predictors of taxable wealth (see Appendix C.4 for detail). This suggests that there was no selection on borough wealth per se; instead, the king picked more accessible locations, which resulted in royal boroughs being somewhat richer due to an advantage in trade.

While the lack of geographic balancedness potentially raises concerns, we argue that this is unlikely to affect our results for two reasons: First, all our empirical results hold after controlling for royal status of boroughs, and also within the subset of royal boroughs. This means that 'selection' by the king does not directly affect our findings. Nevertheless, balancedness is still desirable when we use mesne boroughs as a 'placebo' (i.e., boroughs that looked otherwise similar to royal ones, but that very rarely got Farm Grants). This is where the next point comes in: Second, we can 'create' balancedness. As shown in Panel A in Table 1, there are in fact *overall more* mesne boroughs on navigable rivers, Roman roads, and on the sea coast. It is merely the *proportion* that is higher in royal territories. Thus, we can achieve balancedness by assigning lower weights to those mesne boroughs that are not on rivers, roads, or the sea. This is implemented by the Entropy balancing algorithm of Hainmueller and Xu (2013). The right part in Table 1 shows the results of rebalancing observations in the 'control group' (mesne boroughs) so that they match mean and

variance of the three geography variables in the 'treatment group' (royal boroughs). After Entropy balancing, the means in the two groups are very similar and statistically indistinguishable, with p-values of 0.94 or higher. In Panel B, we show that balancing yields virtually identical means for taxable wealth (the higher precision results because now only one variable is involved, as opposed to three in panel A). In the empirics below, we show that our results that use mesne boroughs as a 'placebo' are robust to Entropy balancing.

Predictive Power of Geography in Royal and Mesne Boroughs. In Appendix C.1 we perform an additional check that underlines the comparability of royal and mesne boroughs. Table A.1 shows that trade-favoring geography predicts economic activity in *both* royal and mesne territories, using three different indicators: taxable wealth in 1086, commercial importance in the 14th century, and city population in the mid-17th century (the first period for which population is available for a large number of boroughs). These findings supports our use of mesne boroughs as a 'placebo' region where Farm Grants were extremely rare, while other economic relationships that are central to our analysis were similar to those in royal boroughs.

5 Main Empirical Results: Farm Grants and Representation in Parliament

In this section we present our main empirical results. We begin by examining which boroughs received Farm Grants and then show that these are strong predictors of representation in Parliament.

5.1 Determinants of Farm Grants

We have already shown that Farm Grants were given almost exclusively to royal boroughs (see Section 3 and in particular Figure 2). In the following we show that this finding is extremely robust and not driven by differences across royal and mesne boroughs such as geography or wealth. We run the following regression for a cross-section of boroughs i, where the dependent variable is an indicator for a Farm Grant received before 1348:

$$FarmGrant_i = \alpha + \beta Royal_i + \gamma \mathbf{X}_i \; + \; \delta Trade_i + \varepsilon_i \; , \tag{1}$$

where α is a constant term, $Royal_i$ is a dummy for royal ownership of borough i, and $\mathbf{X}_i$ is vector of control variables, such as taxable wealth in 1086, terrain controls, and fixed effects for geographic units (either 4 pre-Norman kingdoms or the 40 English counties). $Trade_i$ denotes different geographic characteristics of a borough that favor trade: location on a navigable river, location on the sea coast, and location on a Roman road. Finally, ε_i is the error term.

Table 2 presents the first set of results. Column 1 shows that royal boroughs were 47 percentage points (p.p.) more likely to receive Farm Grants, relative to an average of 16 percent across all boroughs. The (highly significant) coefficient corresponds to the difference shown in Figure 2. Could the relationship between *Royal* and Farm Grants be driven by pre-existing differences, such

as geography, culture, or local institutions? In what follows, we address this possibility in several ways. In column 2, we show that the coefficient on *Royal* is virtually unchanged when we control for soil suitability and ruggedness, and include fixed effects for the four kingdoms that existed in England before the Norman Conquest (Wessex, Mercia, Northumbria, and East-Anglia). In fact, all dummies for the pre-Norman kingdoms are individually statistically insignificant, and they are also jointly insignificant (with a p-value of 0.66). This suggests that there are no relevant regional differences dating back to the division of England before 1066 that later affected Farm Grants. Soil suitability is unrelated to Farm Grants, while there is a negative relationship with ruggedness. This is in line with our argument below that more remote places – with less trade – were less likely to receive Farm Grants. In column 3 we include county (shire) fixed effects. Again, the coefficient on *Royal* is unchanged.

Next, we use data on taxable wealth of boroughs in 1086, which is available for 354 boroughs in our sample. We thus first check whether our results in Table 2 also hold in this smaller subsample. Comparing column 4 with the same specification for the full sample in column 1, we see that the coefficient on *Royal* is very similar. Next, in column 5, we control for log taxable wealth (and for completeness, for soil suitability and ruggedness). The coefficient on *Royal* does not change, which implies that differences in wealth across royal and mesne boroughs (see Section 4.2) are not responsible for the fact that Farm Grants are almost exclusively observed in royal territories. We check this further in the following two columns: In column 6 we use entropy weights so that the mean and variance of *Wealth* are the same in royal and mesne boroughs (see Section 4.2); and in column 7 we use propensity score matching, comparing royal vs. mesne boroughs with similar or identical taxable wealth. In both cases, the coefficient on *Royal* is almost exactly the same as in our baseline specification in column 1. Finally, in column 8 we include an interaction term between taxable wealth and the status as a royal borough. This term is positive and significant, implying a total coefficient on taxable wealth of 0.118 in royal boroughs, as compared to 0.017 in mesne boroughs. To illustrate the magnitude, suppose that we first move a royal borough from the 10th to the 90th percentile of taxable wealth. This will raise its odds of receiving a Farm Grant by 38.0 p.p. (on top of a baseline probability of 26.5 percent, as indicated by the coefficient on *Royal*). In contrast, in mesne boroughs, the number is 5.3 p.p. (on top of a baseline probability of zero). We thus have two central findings: i) royal boroughs had *on average* a much higher chance to receive Farm Grants; ii) wealthier boroughs had a markedly larger *incremental* probability of receiving Farm Grants in royal territories.

Geography-Based Proxies for Trade. We now turn to the role of trade as a predictor of Farm Grants. Following our discussion in Section 3, we expect a positive effect of trade. Trade made boroughs richer, resulting in higher potential efficiency gains of self-administered tax collection and enforcement of commercial contracts (by elected officials with better local knowledge). This

information advantage of local merchants raised the gains from self governance. We use three geographic variables as predictors for trade: A borough's location on navigable rivers, on the sea coast, and on Roman roads.[35] Table 3 shows that all three proxies for trade are significantly positively associated with Farm Grants (col 1). The coefficients are larger when we restrict the sample to royal boroughs (col 2), and they are particularly strong for the two water-based proxies for trade. This is in line with estimates by Masschaele (1993) that in the 13th century, the cost of transporting goods by sea or by navigable river was about one-sixth the cost of road transport.

Next, column 3 in Table 3 restricts the sample to mesne boroughs, showing that there is, if anything, a small *negative* relationship between trade geography and (the few) Farm Grants that are observed in mesne territories.[36] The coefficients on trade geography remain small and become statistically insignificant in column 4, where we use Entropy weights to create balanced geographic features in royal and mesne boroughs (see Section 4.2 and Table 1). The non-results for mesne boroughs imply that favorable trade locations did not experience an increased likelihood of self-governance when they were owned by local lords. We further underline the royal-mesne difference in column 5, where we use interactions of our three trade variables with the status as royal borough. The interaction terms are highly significant and positive, while the trade proxies themselves are small and negative. The same result holds in column 6, where we add county fixed effects, and in column 7, which uses Entropy weights. The interaction results underline that trade-favoring geography boosted the odds of obtaining Farm Grants only in royal boroughs.

Additional Results on Trade Geography and Wealth. In Appendix C.4 and C.5 we provide a number of additional results and robustness checks that we briefly discuss here. In Table A.3 we show that trade geography predicts taxable wealth in 1086, and that the relationship between trade and Farm Grants worked at least in part via taxable wealth – royal boroughs that were richer because of trade were also more likely to obtain Farm Grants. As expected, this effect is not present in mesne lords' territories. In Table A.4 we show that boroughs with Farm Grants tended to be commercially more important already in the 14th century. This further supports our interpretation that commercially important towns had more to gain from self-administered tax collection. At the same time, it is coherent with Farm Grant boroughs thriving commercially, i.e., with a positive

[35] As Michaels and Rauch (2017) point out, the collapse of the Western Roman Empire in the 5th century AD temporarily ended urbanization in Britain. After the recovery in late Medieval times, towns in Britain were less frequently located on Roman roads, as compared to continental Europe. Instead, British towns often located on navigable waterways. Thus, our three proxies for trade capture both pre-existing infrastructure, as well as natural geography. Our main results hold when we use only navigable rivers and sea coast as proxies for trade. Also, despite its significant negative association with Farm Grants (see Table 2) we do not include ruggedness in our geography-based proxies for trade. The reason is that ruggedness also reduces agricultural productivity (Nunn and Puga, 2012).

[36] Mesne lords often had dwellings in the most important boroughs of their territories, giving them a strong degree of control over these towns. Thus, there were two opposing forces that can explain the zero (or slightly negative) net effect of trade geography: On the one hand, trading towns had more to gain from Farm Grants. On the other hand, in mesne territories, they were more likely to be under direct control of local lords, which made it less likely that those lords would grant them liberties (as in the example of the borough Arundel, discussed in footnote 28).

feedback from self-governance to economic performance.

5.2 Farm Grants and Representation in Parliament

We now turn to the second step of our argument: The relationship between Farm Grants and representation in the English Parliament. We focus on the House of Commons, where boroughs and counties were represented.

Background on Enfranchisement. Figure 6 provides an overview of enfranchisement over time. By 1348 (using the same cutoff date as for Farm Grants), 130 boroughs had obtained seats in Parliament; 74 of these were royal, and 56 were mesne boroughs. The second and third bars show that the majority of boroughs with Farm Grants had obtained seats in Parliament (64 out of 90), while this proportion was much smaller among boroughs without Farm Grants (66 out of 464). In other words, seats in Parliament in 1348 were almost evenly split between boroughs with and without Farm Grants, despite the fact that there were much fewer of the former.

We argue that boroughs with Farm Grants were enfranchised because they were in a more powerful bargaining position: Given their self-governance, the king had to negotiate extra-ordinary taxation with them. But why were boroughs without Farm Grants enfranchised? The historical literature offers a variety of explanations. For some towns, a powerful bargaining position – for reasons unrelated to Farm Grants – led to their enfranchisement. For example, many enfranchised boroughs without Farm Grants belonged to mesne lords who had the right to exclude royal officials from their territories (Willard, 1934).[37] Similarly, boroughs that played a strategic military role such as the Cinque Ports – which provided most of the royal naval service for warfare – were enfranchised even though not all of them had received Farm Grants. For other, much less powerful boroughs, "strategic enfranchisement" played a role – an attempt by the king to control the House of Commons by giving seats in Parliament to small rural boroughs that were under the close control of his allies. This motive was particularly salient for enfranchisement after 1348. The right part of Figure 6 shows that in the later period, between 1349 and 1700, 73 additional boroughs were enfranchised, and the vast majority of these (62) did not have Farm Grants. In Appendix C.6 we provide empirical and historical evidence for "strategic enfranchisement." We find that enfranchised boroughs without Farm Grants were particularly likely to become "rotten boroughs" (i.e., economically unimportant and under the close control of a local patron) – especially those enfranchised after 1348. This suggests that many of the boroughs without Farm Grants that obtained seats in Parliament were enfranchised strategically by kings, in an attempt to gain influence in the House of Commons and to counterbalance the coalition of merchant towns.

Empirical Results. We continue with our main empirical result, showing that there is a close

[37] Given his limited ability to tax these boroughs, and because parliamentary taxes were imposed on both royal and mesne boroughs (Mitchell, 1914; Willard, 1934), the king thus had an interest in summoning their representatives to Parliament in order to negotiate the taxes needed to fight wars (Levi, 1999).

(and likely causal) relationship between Farm Grants and enfranchisement in Parliament by 1348. We run the following regression:

$$Enfranchised_i = \alpha + \beta FarmGrant_i + \gamma \mathbf{X}_i + \varepsilon_i \,, \tag{2}$$

where α is a constant term, $\mathbf{X}_i$ is a vector of control variables for borough i (such as royal status, terrain controls, and regional fixed effects), and ε_i is the error term. We run OLS and 2SLS specifications; the latter uses trade geography to instrument for $FarmGrant$ in (2). Table 4 presents the results. Column 1 shows that there is a quantitatively large relationship in the raw data: Boroughs that had received Farm Grants were 46.6 percentage points more likely to be represented in Parliament – relative to an average share of 23 percent enfranchised among all boroughs. We also control for the status as royal borough; the coefficient is statistically significant but quantitatively much smaller than the one for Farm Grants. Column 2 shows that the results are almost identical when we control for county fixed effects and terrain characteristics, and the coefficient on Farm Grants is even larger when we restrict the sample to royal boroughs (col 3). In column 4, we present reduced-form results for royal boroughs, using our instruments for trade-favoring geography. All three variables are positive predictors of enfranchisement, and they are jointly highly significant with a p-value of 0.008. Next, we perform two analyses to examine whether this reduced-form relationship works via Farm Grants. First, in column 5, we add Farm Grants as a regressor. The coefficient is almost identical to the previous regressions, while the three instruments become quantitatively small and individually and jointly insignificant. This suggests that the relationship between trade geography and representation in Parliament works via Farm Grants.[38] Second, in column 6, we present 2SLS results, using trade geography to predict Farm Grants in royal boroughs. We find a highly significant coefficient on (predicted) Farm Grants that is quantitatively very similar to the OLS specification in column 3.

Checking the Exclusion Restriction. The exclusion restriction in the 2SLS specification is that trade geography affected enfranchisement only via Farm Grants. That is, other factors that are associated with trade geography (such as higher wealth or better connections to the central authority) should not systematically affect representation in Parliament independent of Farm Grants. To check whether the exclusion restriction holds in our data, we use mesne boroughs – where Farm Grants were rarely granted. Focusing on mesne boroughs, we can thus examine if trade geography is related to enfranchisement in the absence of Farm Grants. Column 7 in Table 4 shows that there is essentially no (if anything, a small negative) relationship between trade geography and enfran-

[38] This specification must be interpreted with caution due to correlated regressors. However, note that all explanatory variables are dummies and that, if anything, Farm Grants (based on historical records) are more prone to measurement error than geographic features of boroughs. Thus, the "bad control problem" (Angrist and Pischke, 2009) is unlikely to drive the strong coefficient on Farm Grants.

chisement. The same is true in column 8, where we use Entropy weights to create balancedness between royal and mesne boroughs. Thus, in the absence of Farm Grants, trade-favoring geography does not predict representation in Parliament (while it does predict other economic outcomes, as we have shown in Table A.1). The non-result for mesne boroughs makes it unlikely that our findings for royal boroughs are driven by unobserved correlates of trade geography.

The last two columns in Table 4 perform 2SLS analyses in the full sample. Column 9 uses the three geographic variables as well as their interaction with *Royal* to predict Farm Grants, showing a highly significant coefficient in the second stage that is similar in magnitude to the OLS results. In column 10, we perform a particularly restrictive exercise: As instruments, we use only the interaction terms of our trade-based instruments with *Royal*, and we include all level variables (i.e., navigable river, sea coast, Roman road, and *Royal*) as controls. This specification complements our analysis of the exclusion restriction above. The small and insignificant coefficients on the geography variables (with a joint p-value of 0.97) suggest that trade did not affect enfranchisement directly. This lends further support to our argument that Farm Grants were a crucial 'stepping stone' on the way into Parliament.

Our test of the exclusion restriction assumes that royal and mesne boroughs are comparable. While Figure 5 has shown that this is approximately true for taxable wealth in 1086, the figure also reveals that the wealthiest boroughs (with taxable wealth above 50) tended to be royal. This raises the concern that these rich boroughs may have been more likely to receive Farm Grants and to be enfranchised, which could drive our results. In columns 1-4 of Table 5 we exclude all boroughs with wealth above 50. Both the OLS and the 2SLS specifications (cols 1 and 2) show coefficients on Farm Grants that are almost identical to the full sample in Table 4. Next, column 3 uses propensity score matching based on taxable wealth in 1086 and the status as a royal borough. For each royal (mesne) borough, the algorithm matches the two boroughs with the same ownership status that have the most similar taxable wealth. The coefficient on Farm Grants is statistically significant and of similar magnitude as in our main results. In column 4, we perform a particularly restrictive analysis: We match by ownership status and population in 1290, which is available from Campbell (2008) for 60 boroughs in our sample; this is the most comprehensive source of borough population before 1348. After excluding the wealthiest boroughs, 52 observations remain. Even in this subsample, the coefficient on Farm Grants is almost identical to our main results: Boroughs with Farm Grants were 49.7 p.p. more likely to be enfranchised than towns without Farm Grants of the same ownership status and the same (or similar) population size. In columns 5-8 we further restrict the sample, including only boroughs with taxable wealth below the 90th percentile (corresponding to wealth below 25 in Figure 5), and towns whose (known) population size in 1290 was below 10,000 (corresponding to the 90th percentile of cities with known population). We repeat the previous OLS, 2SLS, and matching specifications. Even in

this highly restrictive setting, the coefficients on Farm Grant are essentially unchanged. Thus, the strong positive relationship between Farm Grants and enfranchisement is not driven by the largest or richest boroughs.

Additional Results on Enfranchisement, and Organizational Capacity. We argue that Farm Grants made enfranchisement more likely because it was harder for the king to unilaterally impose extra-ordinary taxation in boroughs with self-governance. Autonomous towns had to be persuaded to cooperate in financing national projects. We expect this to be particularly true for boroughs that did not only have Farm Grants but also additional liberties that restricted the entry of royal officials in judicial, financial, or law-enforcing functions. Figure 7 analyzes this dimension. By 1348, 90 boroughs held Farm Grants, and among these, 39 had obtained additional liberties that restricted the entry of royal officials. In these 39 towns, it was in practice very difficult for the king to impose extra-ordinary taxes without negotiation. Correspondingly, we find that 87.1% of the boroughs with Farm Grants *and* restrictions on royal officials were represented in Parliament by 1348. Among the 51 boroughs that had Farm Grants but no restrictions on entry by royal officials, 58.8% were represented in Parliament. While these towns had their own (locally elected) tax collectors, the king could still send his officials to enforce royal orders. Thus, these towns had a somewhat weaker bargaining position vis-à-vis the king, which can explain their lower representation in Parliament. Nevertheless, towns with (only) Farm Grants were still substantially more likely to be represented in Parliament than those without: Among the boroughs without Farm Grants, only 14.2% had seats in Parliament.

Appendix C.7 provides additional results on parliamentary representation. It shows that our results also hold for boroughs' representation in the 'Model Parliament' of 1295 and for enfranchisement in 1700. In addition, we show that longer duration of Farm Grants before 1348 was strongly associated with enfranchisement. Finally, we examine whether our results may be driven by (unobserved) organizational capacity. For example, well-organized merchants may have been more successful at lobbying the king for both Farm Grants and representation in Parliament. We address this issue in Appendix C.8, using two types of Charters of Liberties as proxies for the organizational capacity of boroughs: the right to elect officials (other than via Farm Grants) and rights to collect Murage or Pavage (funds used to repair town walls and streets). Controlling for these variables does not change our results on enfranchisement, and the coefficients on the two proxies are significantly smaller than those for Farm Grants. These results fit a broader context, in line with González de Lara et al. (2008), where the capacity to organize and obtain liberties increased the bargaining power of boroughs, with Farm Grants being the most important rights of self-administration (and thus also the strongest predictor of enfranchisement).

6 Farm Grants and Institutional Outcomes after 1400

In this section we examine the relationship between Medieval Farm Grants and institutional dynamics in the long-run, over five centuries after 1348. We use the same regression setup as in (2), but replace the dependent variable with different institutional outcomes.

6.1 Independence of Boroughs Politics in the 15-17th Century

We begin by examining the independence of boroughs from the king in appointing their local officials between the 15th and 17th century. The corresponding data are available from Charters of Incorporation, from which we construct the dependent variable *influence king* as described in Section 4.1. Table 6 presents our results. The sample includes only those 158 boroughs that received Charters of Incorporation by 1660 (77 royal and 81 mesne). We find that boroughs with Farm Grants were 22 p.p. less likely than other boroughs to be subject to strong influence of the king (col 1). For comparison, the average proportion of boroughs with strong influence of the king is 42%. Since Charters of Incorporations were granted by the king, we control for royal ownership of boroughs. This variable is quantitatively small and statistically insignificant – a likely explanation is that the distinction between Medieval royal and mesne boroughs lost importance with the decline of feudalism in the early modern period (Cam, 1940). Our results are robust to including county fixed effects and terrain controls in column 2. Column 3 presents 2SLS results, using the trade geography variables and their interaction with $Royal$ to predict Farm Grants. The coefficient is statistically significant and somewhat larger than its OLS counterpart. However, due to the reduced sample size of incorporated boroughs, weak instruments are a concern, so that the coefficient size must be interpreted with caution. Overall, the results in Table 6 suggest that – even centuries after having received Farm Grants – Medieval self-governing boroughs continued to be more independent in appointing their local officials.

6.2 Voting Rights in MP Elections

Boroughs with Medieval Farm Grants had the right to elect their local officials. Despite a general tendency for boroughs to be run by closed oligarchies, local franchise rules concerning MP elections exhibit significant variation. In what follows, we test the hypothesis that Medieval Farm Grants also led to broader voting rights in elections of Members of Parliament over the subsequent centuries. In our main analysis, we use several indicators for broad voting rights over the period 1820-31: i) *Openness Index*: an index from 1-3 for how "open" MP elections were for candidates to run – the extent to which a borough's choice of MP candidates was subject to the control of a patron; ii) *Contested Elections*: the number of contested elections (out of a total of four) over the period 1820-31, i.e., MP elections for which there were more candidates than seats for a borough; iii) *Broad Franchise*: a dummy variable that takes on value 0 if the borough had a "narrow franchise" where the right to vote for MPs was attached to land holdings or titles, and value 1

otherwise. This variable reflects the breadth of the electorate that voted for MPs; iv) *Patronage Index*: This index ranges from 0 (closed constituency, controlled by a local patron) to 2 (open constituency without patronage). The third and fourth variable are from Aidt and Franck (2015). All four variables are coded such that higher values indicate MP elections with broader voting rights; Appendix B.7 provides further detail. All regressions use only the subset of 185 boroughs that had seats in Parliament in 1820-31 and for which data are available.

Results for 1820-31. Columns 1-4 of Table 7 show that Medieval Farm Grants are a strong predictor of all four indicators for broader voting rights. The coefficients on Farm Grants are statistically highly significant. In terms of magnitude, Farm Grants account for about one-third of the average of the various measures. In columns 5-9, we combine the four measures into their first principal component and run a number of additional checks. Column 5 shows a strong positive coefficient on Farm Grants, corresponding to 0.67 standard deviations of the dependent variable. In column 6 we include several controls used by Aidt and Franck (2015).[39] In column 7 we restrict the sample to royal boroughs, and in column 8 we include county fixed effects and terrain controls. Finally, in column 9 we present 2SLS results using the trade geography variables and their interaction with *Royal* as instruments. All specifications yield highly significant coefficients of similar magnitude.

Results for 1604-1831. In Appendix C.10 we show that the relationship between Farm Grants and broader voting rights in MP elections holds with continuity between the early 17th and 19th century. The available historical sources allow us to extend the *Openness* measure back to 1690, and the *Broad Franchise* measure back to 1604.[40] Tables A.9 and A.10 present the results. Throughout the various time periods, we find that among the boroughs that were represented in Parliament, those with Medieval Farm Grants were significantly more open in terms of nominating candidates for MP seats, and had a broader electorate that voted for MP candidates.

6.3 The Civil War

The English Civil War (1642-1646 and 1648-49) and the events following it ultimately strengthened the English Parliament. In the events leading up to the Civil War, Parliament issued the *Militia Ordinance* without royal approval to raise troops in support of its cause. As a response, the king issued the *Commissions of Array* to raise his own men. The choice whether to obey the *Militia Ordinance* or the *Commissions of Array* forced local officials, lords, and burgesses to pick a side.

[39] We thank Toke Aidt and Raphaël Franck for kindly sharing their data. The controls include market integration (travel distance between any given constituency and the 243 other constituencies weighted by the population), distance to urban center (travel days from each constituency to the nearest of the 13 largest towns in 1831), Connection to London (graphical, economic, and informational connections to London), and a dummy for boroughs controlled by the treasury. Aidt and Franck (2015) also control for borough population. Since this is an endogenous outcome of commercial activity that is also predicted by trade-favoring geography (see Table A.1), we do not include this variable.

[40] See Appendix B.7 for detail on the sources and the coding of *Openness* and *Broad Franchise*.

The parliamentary records from 1642 mention 30 boroughs whose volunteer troops (in support of parliamentarians) were sufficiently important to be explicitly discussed in Parliament. We create the dummy variable *Volunteers* for these boroughs. An important motivation to oppose the king during the Civil War was the concern that the crown would increase its power relative to the other members of the dominant coalition in Parliament, which included merchant towns (North et al., 2009).[41] In addition, in Farm Grant boroughs, the eventual rebel elite was more likely to enjoy sufficient administrative autonomy to organize military action against the king. For these reasons, we expect a positive relationship between Medieval Farm Grants and *Volunteers*. Appendix B.8 provides further detail on the data and more background information on the Civil War.

Figure 8 illustrates our result for the Civil War: Among the boroughs with Farm Grants, 23% raised volunteer troops, while less than 2% of all other boroughs did so. Table 8 presents the corresponding regression results. We begin with the full sample in column 1. We find that boroughs with Medieval Farm Grants were 20 p.p. more likely to raise pro-parliamentarian troops, relative to a sample mean of 5.5%.[42] In column 2 we control for county fixed effects and terrain characteristics; in column 3, we restrict the sample to royal boroughs. Both specifications confirm the strong positive coefficient on Farm Grants. Because incentives to support Parliament may have been larger for enfranchised boroughs, we next restrict the sample to those 189 boroughs in our dataset that existed by 1348 *and* had seats in Parliament by 1640. Out of these, 28 raised volunteers. The coefficient on Farm Grants is almost identical to the full sample (col 4); it is also similar in the (even smaller) subsample of 91 royal boroughs that were enfranchised by 1640 (col 5). Thus, results for enfranchised boroughs reflect those in the full sample, and we use the latter for our final analysis: Column 6 reports 2SLS results that use trade geography (and its interaction with *Royal*) to predict Farm Grants; column 7 uses only the interaction terms as instruments, controlling for the variables in levels.[43]

[41] This relationship is blurred by the fact that the king granted and protected many municipal and individual privileges. In fact, previous research has shown that individual MPs often followed their private interests (such as overseas stock holdings or personal monopolies issued by the king) when deciding to support the king or parliamentarians during the Civil War (Jha, 2015). This often led to MPs from the same borough supporting opposite sides: Among the 194 boroughs with more than one MP, 80 saw split support (we are grateful to Saumitra Jha for sharing his data with us). Consequently, individual MP behavior is not a strong indicator for *borough*-level preferences during the Civil War.

[42] We also control for *Royal* as a potentially important determinant for support for the king. However, the coefficient is small and insignificant, which is coherent with the declining distinction between royal and mesne boroughs in the early modern period (Cam, 1940). Note that the sample size is 550 boroughs in the 17th century. This is because four boroughs disappeared or were merged with other settlements after 1348 (see Appendix B.2). We do not include locations that obtained borough status *after* 1348 in any of our regressions.

[43] Note that we only present the second 2SLS specification for outcomes that use the full sample of boroughs (enfranchisement and Civil War). All other long-run outcomes examine subsamples – those boroughs that received Charters of Incorporation (Table 6) or were represented in Parliament (Tables 7 and 9). In these cases, the more restrictive 2SLS lacks power. Similarly, we only present the reduced form results separately for royal and mesne boroughs in the full sample (for enfranchisement in Table 4 cols 4 and 8, and for the Civil War in Table A.11 in the appendix). For the other long-run outcomes, the reduced form is less informative because it effectively involves two

6.4 The Great Reform Act of 1832

The Great Reform Act of 1832 is considered a milestone towards democratization of the UK Parliament. It implemented two major changes: i) disenfranchising smaller "rotten" boroughs, while enfranchising the newly industrialized ones (e.g., Manchester), and ii) harmonizing the franchise across boroughs, which resulted in an extension of the franchise from 3% to more than 6% of the population. The first Bill was proposed in March 1831, and although approved by the House of Commons by a narrow margin, was then rejected by the House of Lords. This event prompted the collapse of the Government and new MP elections (held in April 1831). Importantly, the MPs that voted in March 1831 had been appointed by their constituencies to vote on a variety of other major issues such as Catholic emancipation, slavery, and the Corn Laws (Fisher, 2009; Brock, 1973). In contrast, the general elections of April 1831 were effectively a referendum on the parliamentary reform, closely tying MPs to their constituencies' preferences on the Reform Act. Two bills were proposed in June and September 1831 and, after some amendments and compromises, a new bill was voted in December 1831 and finally approved in March 1832. Appendix B.9 provides further historical detail.

We focus on the two voting rounds on the Reform Act in March and December 1831. For these two voting rounds, we record the voting behavior of each borough's MPs from the Parliamentary Papers (available at https://parlipapers.proquest.com/parlipapers) and compute the share of votes in favor of the Reform Act. We also record whether the borough was to be totally or partially disenfranchised (Section A and B boroughs). In addition, we merge borough-level characteristics (see footnote 39) and a dummy for whether a borough was located in proximity to the peasants' Swing Riots (collected by Aidt and Franck, 2015).

Table 9 presents our empirical results. Column 1 shows that there is essentially no relationship between Farm Grants and pro-reform votes in March 1831, i.e., for the vote by MPs who had been elected based on other issues, before the Reform Act became the major topic. Starting from column 2, we focus on the decisive vote in December 1831, when MPs had been specifically appointed to vote on the Great Reform Act, so that their mandate was closely tied to their borough's preferences on parliamentary reform. Column 2 shows that Medieval Farm Grants are a strong predictor of voting behavior of MPs. The coefficient is also quantitatively important: Support was about 17 p.p. higher among boroughs with Medieval Farm Grants, relative to an average level of support of 56 percent among the boroughs with representatives in Parliament in 1831. We also control for whether a borough was to be disenfranchised; as expected, the coefficient is strongly negative.

Next, in column 3 of Table 9 we also control for the vote in March 1831. Thus, we effectively exploit the *change* in voting behavior after the newly appointed MPs were closely tied to their bor-

'steps' – e.g., geography first predicting enfranchisement itself, and second, the parliamentary outcomes within the subsample of enfranchised boroughs.

ough's preferences on the reform. This specification implicitly controls for unobserved political preferences that were already reflected in the appointment of the MPs that had voted in March. While the coefficient on the March vote is large and significant, the coefficient on Farm Grants remains almost unchanged. This suggests that omitted variables related to other political preferences do not confound our results. We also add a control for whether a borough was located in proximity to rural Swing Riots and thus felt a "threat of revolution" (Aidt and Franck, 2015). The coefficient is slightly smaller than the one on Farm Grants (but the two are statistically indistinguishable). In column 4 we restrict the sample to boroughs that were royal in Medieval times. All previous results hold. The same is true in column 5, where we add county fixed effects and additional controls for borough characteristics. Columns 6 and 7 present 2SLS results, using trade geography interacted with the Medieval status as a royal borough to predict Farm Grants. We confirm the OLS results in both magnitude and significance.

What explains the pro-reform voting of boroughs that had received Farm Grants in Medieval times? We provide two (possibly complementary) explanations: First, in line with North et al. (2009), Parliament adapted itself to reflect England's new coalition of power holders that had emerged during the Industrial Revolution. The incentives of newly industrialized towns (that were to be enfranchised by the Reform Act) were aligned with those of established commercial towns.[44] As a result, it is plausible that merchants in boroughs with Medieval Farm Grants pushed their MPs to support a strengthening of the pro-trade coalition in Parliament. Our second explanation is related to boroughs' internal politics. In line with Lizzeri and Persico (2004), when pork barrel politics prevail, the local elite in power has an incentive to extend the franchise under two conditions: i) a substantial need for public good provision and ii) a relatively large elite with electoral power (so that swing voters must content themselves with small bribes). Consistent with this rationale, the Industrial Revolution increased the demand for public goods (e.g., better sanitation systems). Moreover, as we showed in Section 6.2, boroughs with Farm Grants had indeed broader voting rights in their MP elections.

6.5 Obstruction of Trade after Farm Grants

A potential concern with our findings is that trade affected institutional outcomes directly, and not only via Farm Grants. We have addressed this possibility above, using mesne boroughs as a 'placebo' to check the exclusion restriction. For some of our long-run outcomes, there are limitations to this approach (see footnote 43). In what follows, we thus provide an additional placebo exercise, showing that Farm Grants predict long-run institutional outcomes after 1348 even in the absence of trade. We code an indicator for boroughs in which exogenous shocks obstructed trade

[44] Boroughs that were commercially more developed in Medieval times were still more reliant on trade in the 1830s. To show this, we regress the share of employment in trade-related professions in 1831 (coded by Aidt and Franck, 2015, based on the 1831 census) on Medieval Farm Grants in the same sample as used in Table 9. We obtain a highly significant coefficient of 0.075 (s.e. 0.019), relative to a standard deviation in trade employment of 0.129.

after they had received Farm Grants. We focus on two types of shocks to transportation infrastructure: First, natural disasters – the silting up or destruction of harbors located on the sea coast (in the spirit of Jha, 2013), and second, the obstructions of parts of navigable rivers due to watermills (and the associated milldams) that were erected upstream or downstream of boroughs. Particularly severe shocks or obstructions of trade triggered petitions by burgesses asking for subsidies for repairs or tax reductions. Information on these petitions is available from the History of Parliament. Among the 90 boroughs with Medieval Farm Grants, 17 suffered trade obstructions between the 13th and 17th centuries – all occurred *after* these boroughs had received a Farm Grant. Appendix C.12 provides further detail.

In Table 10 we split boroughs with Medieval Farm Grants into those with and without trade obstructions. The first two columns perform a plausibility check: Columns 1 and 2 show that in Medieval times, Farm Grants are strongly correlated with taxable wealth and commercial importance – with similar coefficient sizes for boroughs with and without (later) trade obstructions. In contrast, in the 18th and 19th century, only Farm Grants without trade obstructions predict commercial employment (col 3) and borough population (col 4). In other words, the boroughs that later suffered trade obstructions started off with very similar wealth and commercialism as all other Farm Grant boroughs, but they lost their commercial and population lead in the centuries after their trade was obstructed. Thus, if trade had a direct effect on long-run institutional outcomes, this channel should be switched off in those boroughs. Columns 5-7 in Table 10 re-examine our long-run outcomes after the 17th century. We find that even when trade was obstructed, Farm Grants predict volunteer troops during the Civil War in 1642, broad franchise of MP elections in 1820-31, and support for the Great Reform Act. The coefficient sizes are statistically significant and similar in magnitude for both Farm Grants with and without trade obstruction – despite the fact that there are fewer boroughs in the former set.[45] These results make it unlikely that unobservables that are correlated with trade (in royal boroughs only) confound our results.

6.6 Matching, Spatial Correlation, Taxable Wealth

In the appendix, we perform a number of robustness checks of our results for the various outcome variables from Tables 4-9. Appendix C.13 replicates our main results, accounting for possible spatial dependence of error terms. Appendix C.14 shows that all our results hold when we control for taxable wealth in 1086, and when we exclude the top-10 percentile of richest and most populous cities. Appendix C.15 provides matching estimates: We match, to each 'treated' royal borough with a Farm Grant, two 'control' mesne boroughs (without Farm Grants) with exactly the same trade geography. All specifications confirm our results, both in terms of magnitude and

[45] Among the 17 boroughs that suffered trade obstructions after receiving Farm Grants, five obstructions occurred before 1348 (but after Farm Grants were obtained by these boroughs). Table A.12 in the appendix shows that the results also hold when we exclude these boroughs.

significance.

7 Taking Stock: Municipal Liberties and Assemblies in Western Europe

We argue that the Commercial Revolution brought about municipal autonomy because of a need for a more specialized and less distortive local administration. Trading towns' autonomy, in turn, led to the representation of merchant interests in Parliament. In this section, we briefly analyze the extent to which this chain of events – which we identified for England – is relevant in other regions of Western Europe. We document historical evidence that elements of our mechanism were at play throughout; but the degree to which the individual pieces connected to the same overall chain varied. By and large, our mechanism operated in France and Spain. In contrast, in Flanders and Northern Italy, decentralized military power fostered the emergence of strong *independent* cities. In Flanders, this concentrated the power in parliament in the hands of the three main cities (*Trois Villes*); in Northern Italy, cities became *fully* independent from the king, and therefore did not even gather in (his) parliament. Finally, we analyze Sicily, where the overwhelming strength of local lords and the small size of their territories suffocated municipal liberties and ultimately merchants' representation in general assemblies. We conclude that for our mechanism to operate after the Commercial Revolution, two key pre-conditions had to be met: First, the sovereign's territory had to be relatively large. This gave rise to administrative inefficiencies, which in turn was resolved by granting cities the right of autonomous tax collection. Given the large territories, parliaments allowed for coordination of taxation across the realm. Second, military capacity had to be concentrated in the hands of the central power. This prevented that towns gained full independence – which otherwise (for example in Italy) reduced the king's ability to summon them to parliament (Blockmans, 1978). In what follows, we provide an overview for each of these countries and regions.

France. In contrast with England, the 11th century French kings were relatively weak and controlled only a small territory, whereas French local lords governed large territories (Henneman, 1971, p. 8). In the 12th century, the territory was administratively divided into bailiwicks headed by royal officials. In towns, either the king or local lords appointed *prévôtes* who farmed taxes (Baldwin, 1986, pp. 43). The initial path of town liberties mirrors that of England. The Commercial Revolution led to urban growth and demand for an efficient administration of taxes on trade. By the 13th century, many trading towns – *bonnes villes* – received Charters of Liberties granting them the right of self-governance and, sometimes, the right to exclude royal officials (Baldwin, 1986, pp. 60-63; Challier, 2011, p. 18). Towns received charters in both royal and lords' territories. This finding is compatible with our argument, since French lords ruled over much larger territories than their English counterparts and had similarly complex layers of administration as the king. The rivalry between lords and the frequent conflicts with England also led both the king

and lords to favor the emergence of *communes* – a bond between locals who provided a militia to defend their town (Petit-Dutaillis, 1947).

The autonomous trading towns and *communes* were summoned to general and regional assemblies, mainly to discuss extra-ordinary taxation (Hervieu, 1876). In contrast to England, the nationwide assembly (Estates General) met only intermittently and had very limited power. Regional assemblies, on the other hand, emerged earlier and were more prevalent than national ones, arguably because of the fragmentation of the territory and the large autonomy of local lords. These assemblies exerted a constraint on the crown until the 18th century (Blockmans, 1978; Beik, 2005). Nevertheless, the absence of an effective national assembly explains in part the rise of absolutism in France, which went hand-in-hand with a decline in municipal liberties from the 16th century onwards (Strayer and Taylor, 1939).

Spain. In the 11th century, Spain was highly fragmented. The south of the Iberian Peninsula was composed of Muslim polities, and the north, of separate Christian kingdoms. The latter resembled the English case, with royal and lords' territories. The king and local lords oversaw the administration of justice, taxes, and military affairs in their respective territories (O'Callaghan, 2013). As in England, urban life flourished with the Commercial Revolution. The rising urban bourgeoisie was a major source for taxes to finance the Reconquista. Tax farmers were the focus of endless complaints by townsmen, who subsequently sought to collect taxes themselves. By the 12th century, trading towns in the different kingdoms obtained charters (*fueros*) granting them local autonomy over tax collection and the administration of justice (Ladero Quesada, 1994; Daileader, 1999). As in England, towns belonging to local lords gained fewer liberties than their royal counterparts (Font i Rius, 1945). In contrast to England – and similar to French communes – *fueros* also had a military emphasis, presumably because of towns' importance during the recurring conflicts between the various polities (O'Callaghan, 2013; Arrizabalaga, 2010).

At the end of the 12th century, assemblies (*Cortes*) emerged in all the Christian kingdoms of Spain. Similar to England, self-governing trading towns were represented in these assemblies, mainly to discuss extra-ordinary taxation (García Díaz, 2015). By the end of the 13th century, many towns began to lose part of their autonomy – for instance, because jurisdiction over them was transferred to local lords or larger trading towns – and representation in the *Cortes* in the process (O'Callaghan, 2013). In the 15th century, the Catholic Kings unified much of the Spanish territory. Even though the old (regional) *Cortes* were rarely summoned, they survived and represented a constraint on the monarchy's financial decisions in the centuries that followed (Jago, 1981; Drelichman and Voth, 2014).

Flanders. For most of the Middle Ages, the "county" of Flanders was formally under the over-lordship of the King of France. In practice, the count of Flanders – who had an hereditary grip on the county – enjoyed wide autonomy. The territory was divided into castellanies – mil-

itary and judicial territorial subdivisions headed by bailiffs (Nicholas, 1992, pp. 80-7). As in England, in the course of the 11th and 12th centuries, trade increased the need for specialized and autonomous municipal administrations. Trading towns obtained the right to have an administration (urban *échevinage*) separate from that of the rural castellanies (Ganshof, 1951). By the end of the 12th century, townsmen elected town's magistrates (aldermen), although their overlord – the count – maintained influence over this choice (Nicholas, 1992, pp. 120-3 and 132-5; Dumolyn, Declercq, and Haemers, 2018, p. 138). Unlike England, towns possessed militias that controlled large surrounding territories and posed a constant military threat to the count. Therefore, not only trade but also towns' military capabilities may have fostered municipal autonomy.

The most important Flemish trading towns – the *Trois Villes* of Ghent, Bruges and Ypres – extended their jurisdiction over the surrounding communities (Nicholas, 1978). As a result of this dominance, by and large, the *Trois Villes* were the only towns summoned to general assemblies throughout the 12th to 14th century (Nicholas, 1992, pp. 162, 186). The Habsburg house, who acquired over-lordship of Flanders in the 15th century, significantly diminished towns' military capabilities. The major towns suffered from a partial loss of autonomy, which weakened the merchants' voice in representative institutions. The Flemish assemblies, however, continued to exert a constraint on the crown – in particular in tax collection – in the centuries that followed (Dhondt, 1950).

Sicily. In a period lasting less than three hundred years, Sicily underwent four conquests, each associated with large changes in land ownership. The Normans founded the Kingdom of Sicily in c. 1130, at the onset of the Commercial Revolution. Similar to England, the Norman king divided the territory between himself and lay and ecclesiastical Norman lords. He appointed officials to collect taxes in the royal demesne and enforce the law throughout the realm. In contrast to England, the king kept the highly efficient pre-existing (Arab) bureaucracy (Smith, 1968, p. 27). This can help to explain why town liberties are rarely observed in the period immediately following the conquest. Only Palermo and Messina, two large royal trading towns, gained limited autonomy during the 12th century. In the first half of the 13th century, the new king Frederick II faced a rebellion from local barons. Once control was re-established, Frederick kept a tight grip on the local administration and did not grant autonomy to towns. After his death in 1250, a state of near-anarchy prevailed. On the one hand, in royal trading towns, some municipal autonomy was encouraged by the king to gain support against the barons (Smith, 1968, pp. 43-46); whether trade was also a factor that facilitated self-governance is unclear. On the other hand, local lords acquired control of a large number of towns that, as a consequence, lacked administrative autonomy altogether (Smith, 1968, p. 100).

Concomitant with the emergence of self-governance in royal towns, the Sicilian parliament was established, where trading towns' representatives discussed extra-ordinary taxation. However,

the long-lasting lack of self-governance, which had hampered the formation of a strong class of merchants, meant that powerful barons had significant influence over these towns' administrations and representation in parliament (Smith, 1968; D'Alessandro and Corrao, 1994). When, in the course of the 15th and 16th centuries, the Spanish kings' increasing reliance on extra-ordinary taxes allowed the (regional) parliament to gain power, trading towns lacked the necessary independence from royal absolutism to exert any meaningful influence (Smith, 1968; Koenigsberger, 1978)).

Northern Italy. At the end of the 10th century, the Kingdom of Italy belonged to German kings and emperors. The royal authority was very weak: The kingdom was divided into highly autonomous domains belonging to dukes, counts, and bishops, from which royal officials were often excluded. The weakness of the central authority also forced the German king to increasingly rely on townsmen to form sworn associations (*communes*) in order to defend towns against raids by Hungarians and Saracens (Tabacco, 1989, pp. 151-7).

During the 11th and 12th century, similar to Flanders, a handful of urban trading *communes* (e.g., Florence) enjoyed significant military power, which they used to subject the surrounding towns and rural areas to their jurisdiction (Comba, 1991). A conflict between *communes* and emperor Frederick 'Barbarossa' arose when the latter attempted to limit towns' autonomy. The Peace of Constance (1183) resulted in wider royal concessions of autonomy to urban *communes*, some of which evolved into city-states (Tabacco, 1989). By and large, these powerful towns were under the control of assemblies in which nobles and merchant guilds – often intertwined (as in Venice) – were represented (Jones, 1979; Artifoni, 1986). Overall, in contrast to England, military considerations rather than trade seem paramount when analyzing the emergence of self-governing trading towns.

Because of internal conflicts between various factions of nobles and merchants, many large autonomous towns evolved into a *signoria*, in which the *signore* (often a local noble) rather than town assemblies appointed local officials (Chittolini, 1979; Ventura, 1979). The *signoria* paved the way to the formation of stable and relatively small regional states (e.g., the Duchy of Milan), in which most towns enjoyed limited self-governance and, with few exceptions (e.g., the County of Savoy) were almost never represented in regional – let alone national – assemblies (Gamberini, 2008; Astuti, 1979).[46]

8 Conclusion

After centuries of stagnation in the "Dark Ages," economic activity in Western Europe began to grow in the 11th century. The Commercial Revolution brought about a surge in trade, fostering urbanization. The rise of trade and commerce coincided with the emergence of municipal self-

[46]The Republics of Venice and Genoa stand out from this account. Arguably because noble families were also involved in trade, these two towns never evolved into *signorie* and instead came to be controlled by the town's closed oligarchy of wealthy merchants (Tabacco, 1989, pp. 292-4; Puga and Trefler, 2014).

governance, granted by sovereigns across Western Europe to trading towns in their realms. The period also saw the evolution of Medieval assemblies into parliaments, where merchant towns gained direct representation. We argue that the concurrent emergence of trading towns' self-governance and their representation in parliaments is not a historical coincidence: Municipal autonomy was an important stepping stone for the parliamentary representation of the merchant class.

We focus on the prominent case of England, which shows many parallels with the rest of Western Europe. England provides uniquely rich historical data and offers an institutional setting that allows us to establish a causal argument. We begin our analysis with the Norman Conquest of 1066, which resulted in relatively homogeneous formal institutions. We develop a two-step argument to explain how merchant towns gained representation in Parliament. In the first step, we study the process by which merchant towns obtained the right of self-governance. While Medieval English kings exerted strong military control over the royal territory, their administration was relatively inefficient. Royal officials abused their power when collecting taxes, and they lacked specialized knowledge when enforcing commercial contracts. The resulting distortions became particularly severe in trading towns during the Commercial Revolution. Farm Grants – the right of self-administered tax collection and law enforcement – offered an efficiency-improving solution. Thus, the boom in economic activity led to the emergence of municipal self-governance. In the second step, we relate self-governance to boroughs' representation in Parliament by 1348. The Parliament discussed extra-ordinary taxation and grievances about the royal administration. The administrative autonomy of Farm Grant boroughs made it harder for the king to unilaterally raise their extra-ordinary taxes; instead, he had to negotiate taxation with these boroughs – and the place to do so was Parliament. Correspondingly, we find that boroughs with Farm Grants were significantly more likely to be enfranchised.

In the second part of the paper, we examine the long-term implications of merchant boroughs' representation in Parliament. Boroughs with Medieval self-governance maintained a more autonomous local administration and broader voting franchises for MP elections throughout the subsequent centuries. They also supported the Parliamentarians during the Civil War in 1642 and voted for the Great Reform Act of 1832, which is considered a milestone in the English democratization process.

We identify a causal mechanism by using trade-favoring geography of boroughs (which in turn predicts their commercial activity) to instrument for Farm Grants. We provide two sets of placebo checks for the exclusion restriction: In the absence of Farm Grants, trade-favoring geography did not affect institutional outcomes; on the other hand, Farm Grants do predict institutional outcomes even if trade was later obstructed by exogenous events. This suggests that Farm Grants – rather than other potential factors that correlate with trade geography – were an important stepping stone for the evolution of England's local and national institutions.

Our empirical results for England and the historical discussion in Section 7 highlight a close connection between economic development and the evolution of institutions (Lipset, 1959). Across Western Europe, rising trade and commerce led to municipal autonomy, which increased the efficiency of the local administration; it also lifted merchant towns into the coalition of power holders, enabling them to shape nationwide institutions. Thus, municipal self-governance improved both local and national institutions, creating a positive feedback for trade and commerce. This process paved the way for subsequent expansions of trade and further extensions of merchants' political power (c.f. Acemoglu et al., 2005), culminating in the Industrial Revolution and the democratization that followed.

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FIGURES

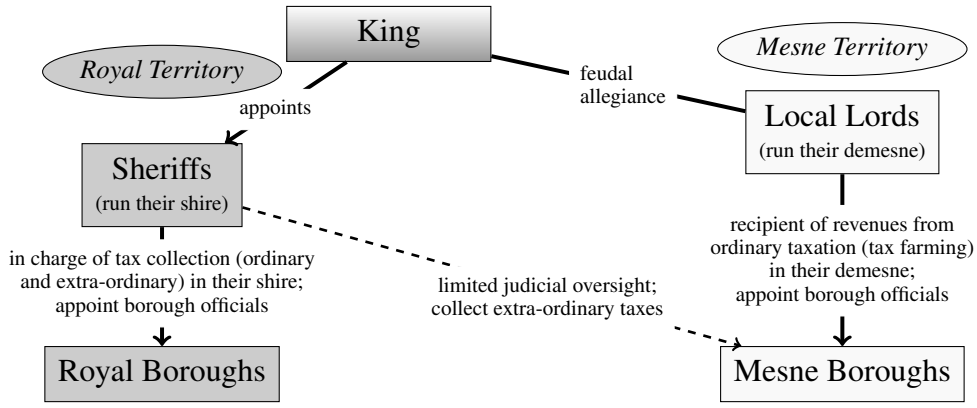

Figure 1: Administration in Royal and Mesne Territories

Note: The figure illustrates the main administrative layers in royal and mesne territories for the case of boroughs without Farm Grants. See Section 3.4 for a description of ordinary taxation (tax farming) and extra-ordinary taxation (typically for warfare). For boroughs with Farm Grants, local officials were elected by the borough's burgesses, and tax collection was self-administered by elected officials. This cuts out the role of the sheriff in royal territories.

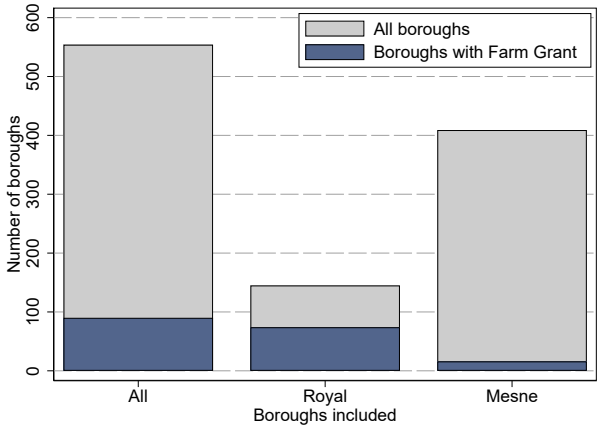

Figure 2: Farm Grants before 1348, by Borough Ownership

Note: This figure shows that Farm Grants were granted almost exclusively to boroughs in royal territories, and to a much lesser degree to boroughs owned by mesne lords (who owned smaller land areas). Overall, 90 out of 554 boroughs that existed in 1348 received Farm Grants. Among the 145 royal boroughs, 74 received Farm Grants (51%); among the 409 boroughs owned by mesne lords, only 16 (3.9%).

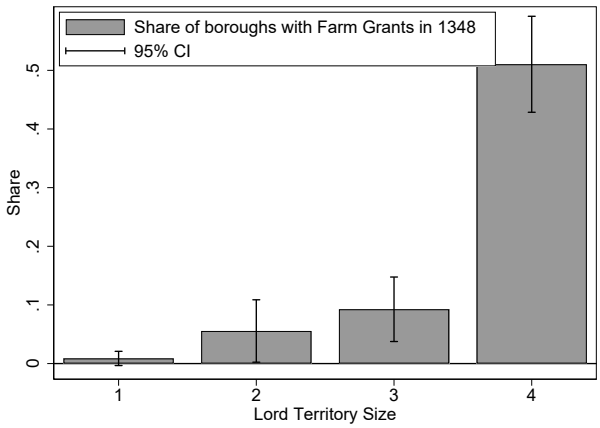

Figure 3: Farm Grants before 1348, by Lord's Territory Size

Note: The figure shows that boroughs owned by lords with larger territory were more likely to receive Farm Grants by 1348. The x-axis reflects the size of lord's territory, from smallest to largest: 1=seigneur/abbot/nunnery (overall 229 boroughs); 2=bishop (72 boroughs); 3=earl/archbishop (108 boroughs); 4=king (145 boroughs). The y-axis plots the proportion of boroughs in a lord's territory that received Farm Grants. Appendix B.2 describes the categorization of boroughs by the size of their lords' territories.

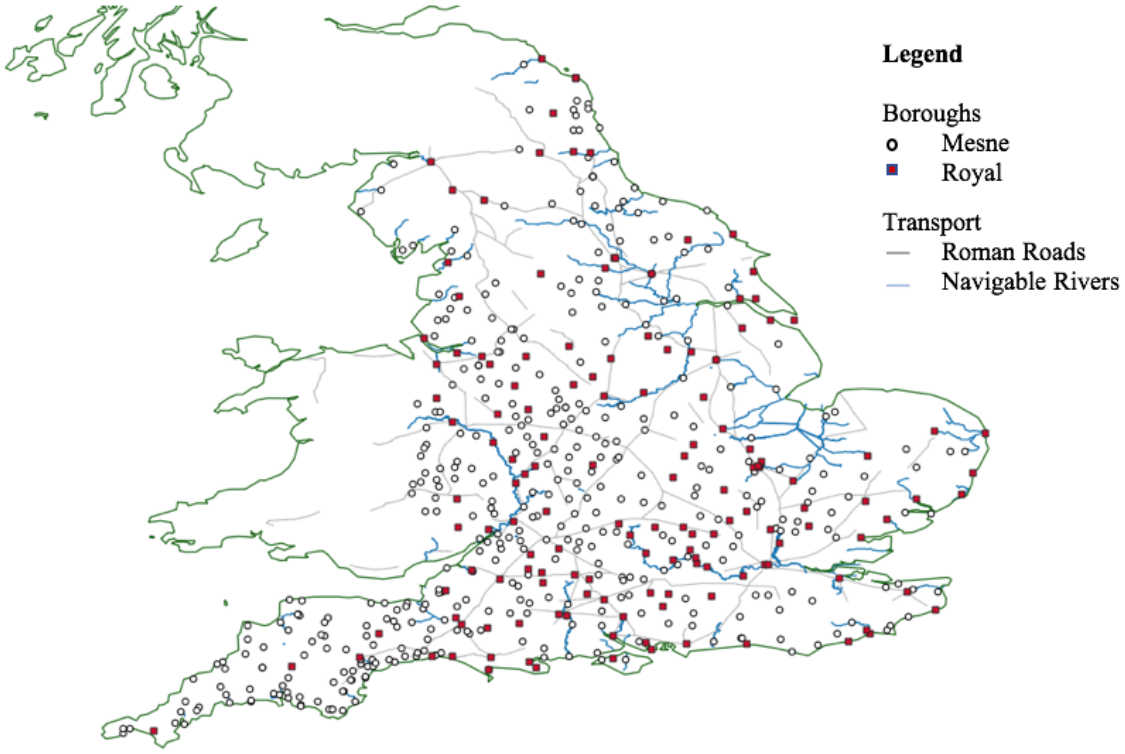

Figure 4: All Boroughs in the Dataset, by Royal and Mesne

Note: This figure shows the location of the 554 boroughs in our dataset that existed by 1348. Solid squares indicate the 145 royal boroughs, and hollow dots, the 409 mesne boroughs (owned by local lords or by the Church). The figure also shows the location of navigable rivers and of Roman roads.

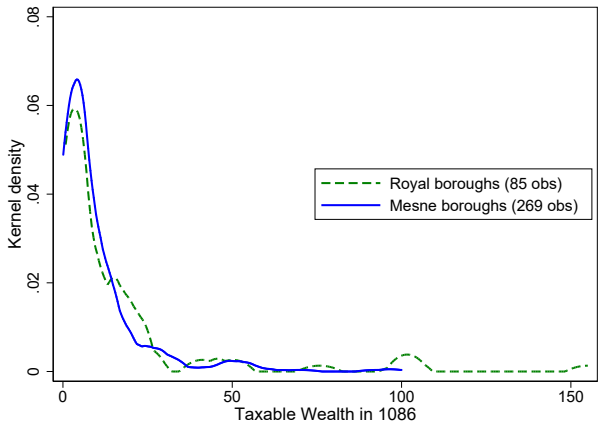

Figure 5: Taxable Wealth in 1086, by Borough Ownership

Note: This figure shows that taxable wealth was similarly distributed across royal boroughs (dashed line) and mesne boroughs (solid line). Taxable wealth was assessed by the Normans after their conquest of England in 1066, and summarized in the Domesday Book in 1086. There are 85 royal boroughs and 269 mesne boroughs with data on taxable wealth in 1086.

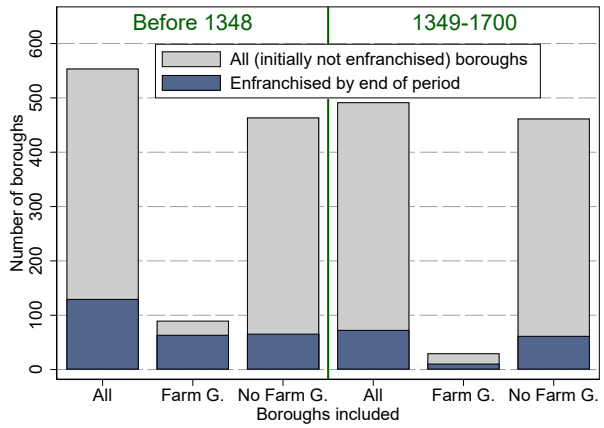

Figure 6: Enfranchisement in Parliament of Boroughs over Time

Note: The figure shows the enfranchisement in Parliament for boroughs with and without Farm Grants, before and after 1348. The left part of the figure contains data for all 554 boroughs that existed before 1348; out of these, 130 were enfranchised in 1348. By 1348, 90 boroughs had Farm Grants; among these, 64 boroughs (71.1%) were enfranchised. Among the 464 boroughs without Farm Grants, 66 (14.2%) were enfranchised. The right part of the figure contains data for 492 boroughs that existed by 1700 and had *not* been enfranchised by 1348 (altogether, 621 boroughs existed in 1700; 71 were newly formed after 1348, and four boroughs had ceased to exist; see Appendix B.2 for detail). Out of these 492 boroughs, 73 were enfranchised by 1700 – the majority (62) were boroughs without Farm Grants.

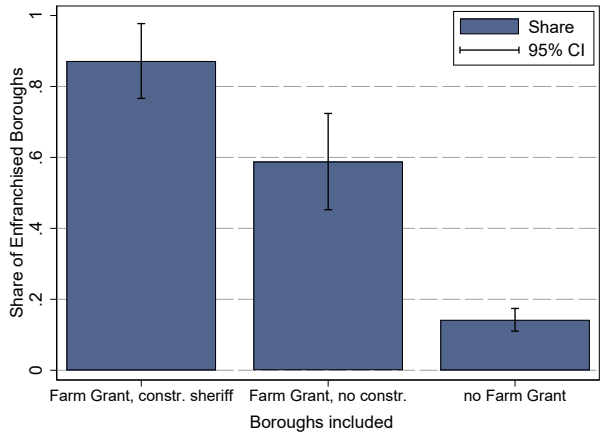

Figure 7: Enfranchisement: The role of Farm Grants and Restrictions on Entry by Royal Officials

Note: The figure shows that boroughs with Farm Grants were significantly more likely to be represented in the English Parliament by 1348. This relationship is particularly strong for boroughs that also had constraints on sheriffs entering the borough (and thus restricted means for central authorities to collect extra-ordinary taxes). Restrictions on entry comprise a borough's liberties that prohibited royal officials from entering the borough in their judicial functions (*non-intromittat*), in financial functions (*direct access to the Exchequer*), or to enforce royal orders (*return of writs*).

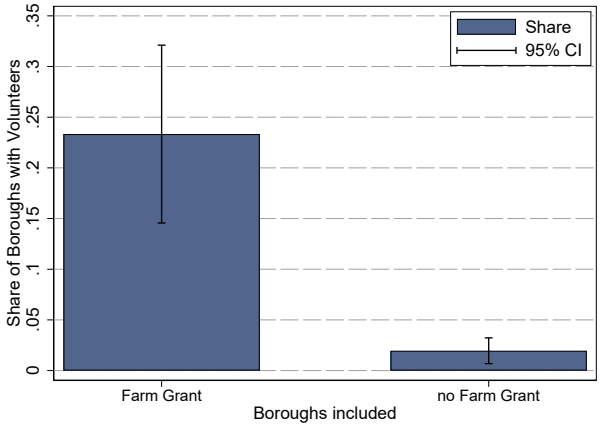

Figure 8: Voluntary Troops to Support Parliament during the Civil War in 1642

Note: The figure shows that boroughs with Farm Grants were significantly more likely to raise volunteer troops to support Parliament at the beginning of the Civil War in the summer of 1642. Data on volunteer troops are from Parliamentary records, as described in Appendix B.8.

TABLES

Table 1: Balancedness of Geography and Wealth in Royal vs. Mesne Boroughs

	Raw Data					Values after Entropy Balancing‡		
Panel A: Trade-related geographic features of boroughs								
boroughs with data:	Royal Boroughs (overall 145)		Mesne Boroughs (overall 409)		p-value for difference in share	Mean for Royal Boroughs	Mean for Mesne Boroughs	p-value for difference in share
	#boroughs	share	#boroughs	share				
Navigable River	45	31.0%	53	13.0%	<0.001	31.0%	30.7%	0.95
Sea Coast	29	20.0%	66	16.1%	0.309	20.0%	19.9%	0.99
Roman Road	64	44.1%	114	27.8%	0.001	44.1%	43.7%	0.94
Panel B: Taxable wealth of boroughs in 1086 (Domesday book data)								
boroughs with data:	Royal Boroughs (overall 85)		Mesne Boroughs (overall 269)		p-value for difference	Mean for Royal Boroughs	Mean for Mesne Boroughs	p-value for difference
ln(taxable wealth in 1086)	1.885		1.622		0.098	1.885	1.884	0.995

Note: The table examines the balancedness of trade-related geography and taxable wealth for royal boroughs vs. mesne boroughs. While royal boroughs were *relatively* more likely to be located on trade-favoring locations, the *overall* number of boroughs with trade-favoring features was larger in mesne territories. In addition, the table shows that Entropy weighting can create balanced samples also in relative terms.

‡ Entropy balancing creates balanced samples by reweighing the observations in mesne boroughs to match the mean and variance of covariates in royal boroughs. In Panel A, these covariates are all three geographic variables jointly; in Panel B, taxable wealth only. See Hainmueller and Xu (2013) for details.

Table 2: Farm Grants: The Role of Royal Boroughs and Taxable Wealth

Dependent variable: Indicator for boroughs that obtained Farm Grants by 1348

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Boroughs included	— all boroughs —			— boroughs with data in Domesday Book (1086) —				
Note:	OLS	OLS	OLS	OLS	OLS	E-weights‡	PS Matching†	OLS
Royal borough	0.471***	0.467***	0.475***	0.461***	0.451***	0.456***	0.502***	0.265***
	(0.043)	(0.043)	(0.045)	(0.056)	(0.055)	(0.054)	(0.058)	(0.092)
Soil suitability		0.008	0.019		-0.013			-0.009
		(0.013)	(0.016)		(0.016)			(0.016)
Ruggedness		-0.024**	-0.025**		-0.011			-0.015
		(0.011)	(0.013)		(0.013)			(0.013)
ln(Taxable wealth in 1086)					0.044***	0.068***	[mv]	0.017
					(0.013)	(0.020)		(0.011)
ln(Taxable wealth) x Royal								0.101***
								(0.037)
Pre-Norman Kingdom FE		✓						
p-value for kingdoms		[0.66]						
County FE			✓					
Mean Dep. Var.	0.16	0.16	0.16	0.16	0.16	0.28	0.16	0.16
R^2	0.32	0.32	0.37	0.30	0.32	0.30		0.34
Observations	554	554	554	354	354	354	354	354

Note: The table shows that royal boroughs were significantly more likely to receive Farm Grants, and that this pattern is highly robust to adding control variables, including taxable wealth in 1086. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Regarding fixed effects (FE): There are 40 counties, and 4 pre-Norman kingdoms: Wessex, Mercia, Northumbria, and East-Anglia.

‡ Entropy balancing reweighs the observations in mesne boroughs to match the mean and variance of ln(Taxable Wealth) in royal boroughs. See Hainmueller and Xu (2013) for details.

† Propensity score matching with two nearest neighbors. Matching variable indicated by "mv."

Table 3: Farm Grants: Geography-Based Proxies for Trade

Dependent variable: Indicator for boroughs that obtained Farm Grants by 1348

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Boroughs included:	all	royal	mesne	mesne	all	all	all
Notes:				E-weights‡			E-weights‡
Navigable River	0.213***	0.291***	0.004	0.016	0.004	0.019	0.065
	(0.050)	(0.082)	(0.027)	(0.031)	(0.027)	(0.036)	(0.047)
Sea Coast	0.099**	0.340***	-0.036*	-0.017	-0.036*	-0.052*	-0.041
	(0.046)	(0.091)	(0.019)	(0.027)	(0.019)	(0.028)	(0.039)
Roman Road	0.067*	0.119	-0.035**	-0.024	-0.035**	-0.027	-0.005
	(0.035)	(0.079)	(0.018)	(0.020)	(0.018)	(0.022)	(0.031)
River x Royal					0.286***	0.292***	0.289***
					(0.086)	(0.092)	(0.095)
Sea coast x Royal					0.376***	0.351***	0.300***
					(0.093)	(0.098)	(0.101)
Roman Road x Royal					0.155*	0.183**	0.158*
					(0.081)	(0.083)	(0.083)
Royal borough					0.245***	0.241***	0.260***
					(0.065)	(0.064)	(0.062)
County FE						✓	✓
Mean Dep. Var.	0.16	0.51	0.04	0.04	0.16	0.16	0.27
R^2	0.07	0.15	0.01	0.01	0.39	0.43	0.45
Observations	554	145	409	409	554	554	554

Note: The table shows that boroughs at locations that favored trade were more likely to receive Farm Grants. However, this relationship holds only for Royal boroughs. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

‡ Entropy balancing reweighs the observations in mesne boroughs to match the mean and variance of navigable river, sea coast, and Roman road in royal boroughs. See Hainmueller and Xu (2013) for details.

Table 4: Farm Grants and Representation in Parliament

Dependent variable: Indicator for borough enfranchised in Parliament by 1348

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Boroughs included:	all	all	royal	royal	royal	royal	mesne	mesne	all	all
Notes:						2SLS[#]		E-weights[§]	2SLS[†]	2SLS[‡]
Farm Grant 1348	0.466***	0.447***	0.558***		0.550***	0.609***			0.616***	0.612***
	(0.063)	(0.064)	(0.069)		(0.075)	(0.185)			(0.181)	(0.197)
Royal borough	0.154***	0.160***							0.083	0.082
	(0.050)	(0.049)							(0.099)	(0.103)
Navigable River				0.194**	0.034		-0.001	-0.010		0.003
				(0.085)	(0.074)		(0.050)	(0.047)		(0.043)
Sea Coast				0.145	-0.042		0.006	-0.003		-0.000
				(0.104)	(0.085)		(0.048)	(0.048)		(0.041)
Roman Road				0.200**	0.134*		-0.055	-0.074**		0.015
				(0.083)	(0.074)		(0.035)	(0.036)		(0.033)
p-value joint significance River, Coast, Road				*[0.008]*	*[0.201]*		*[0.456]*	*[0.184]*		*[0.973]*
County FE		✓								
Terrain Controls		✓								
Mean Dep. Var.	0.23	0.23	0.51	0.51	0.51	0.51	0.14	0.13	0.23	0.23
R^2	0.26	0.36	0.31	0.08	0.33	–	0.01	0.01	–	–
Observations	554	554	145	145	145	145	409	409	554	554

Note: The table shows that boroughs with Farm Grants were significantly more likely to have seats in Parliament by 1348. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Terrain controls include soil quality as well as ruggedness in a 10 km radius around each borough.

[#] Two-stage least square regression that uses location on a navigable river, the sea coast, and on a Roman road to predict Farm Grants by 1348 in the first stage. The first-stage F-statistic is 10.4.

[§] Entropy balancing reweighs the observations in mesne boroughs to match the mean and variance of navigable river, sea coast, and Roman road in royal boroughs. See Hainmueller and Xu (2013) for details.

[†] Two-stage least square regression that uses the following variables to predict Farm Grants by 1348 in the first stage: location on the sea coast, on a navigable river, and on Roman roads, and the interaction of these three variables with status as royal borough, as well as the status as royal borough itself. The first-stage F-statistic is 6.7.

[‡] Two-stage least square regression that uses only the three interaction terms and controls for the variables in levels. The first-stage F-statistic is 10.6.

Table 5: Farm Grants and Representation in Parliament – Wealth and Borough Size

Dependent variable: Indicator for borough enfranchised in Parliament by 1348

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Boroughs included:	— taxable wealth in 1086 below 50 —				— taxable wealth<90pctile & Pop^{1290}<10,000 —			
Estimation:	OLS	2SLS‡	Matching# on wealth	Matching# on Pop^{1290}	OLS	2SLS‡	Matching# on wealth	Matching# on Pop^{1290}
Farm Grant 1348	0.475***	0.510**	0.394**	0.497**	0.496***	0.461**	0.430**	0.462***
	(0.064)	(0.200)	(0.157)	(0.219)	(0.067)	(0.213)	(0.169)	(0.171)
Royal borough	0.155***	0.135	[mv]	[mv]	0.136***	0.152	[mv]	[mv]
	(0.050)	(0.100)			(0.050)	(0.102)		
River, Coast, Road		✓				✓		
p-value joint significance		*[0.93]*				*[0.92]*		
Mean Dep. Var.	0.22	0.22	0.19	0.75	0.21	0.21	0.18	0.70
R^2	0.27	–	–	–	0.27	–	–	–
Observations	539	539	339	52	514	514	318	44
Royal boroughs	139	139	79	30	130	130	74	23
Mesne boroughs	400	400	260	22	384	384	244	21

Note: The table shows that our main results (from Table 4) are robust to excluding wealthy and large Medieval boroughs. Columns 1-4 exclude boroughs with taxable wealth above 50 (the 15 richest boroughs, 6 royal and 9 mesne – see Figure 5 for the distribution of wealth). Columns 5-8 exclude the top-10 percentile of boroughs in terms of taxable wealth or population in 1290 (where the 90th percentile is 10,000) – this excludes 40 boroughs, 15 royal and 25 mesne. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

‡ Two-stage least square regressions that use the three interaction terms of Royal Borough with Navigable River, Sea Coast, and Roman Road to predict Farm Grants in the first stage. The first stage also controls for the three geography variables in levels; the p-value for their joint significance is reported. The first-stage F-statistic is 10.1 in col 2 and 8.8 in col 6 (both corresponding to a max. 10% relative IV bias).

Propensity score matching with two nearest neighbors. In columns 3 and 7, using taxable wealth in 1086 (from the Domesday Book) as matching variable, and in cols 4 and 8, using borough population in 1290. Additional matching variable (Royal borough) indicated by "mv."

Table 6: Farm Grants and Influence of the King on Boroughs' Local Institutions in 15-17C

Dep. Var.: Dummy for strong influence of the king on appointment of local officials

	(1)	(2)	(3)	(4)
Note:			royal only	2SLS†
Farm Grant 1348	-0.222**	-0.279**	-0.345***	-0.509**
	(0.104)	(0.129)	(0.122)	(0.247)
Royal borough	0.120	0.168		0.297*
	(0.103)	(0.134)		(0.180)
County FE		✓		
Terrain Controls		✓		
Mean Dep. Var.	0.42	0.42	0.42	0.42
R^2	0.03	0.28	0.10	
Observations	158	158	77	158

Note: This table shows that after being incorporated (in the 15th-17th century), boroughs with Farm Grants saw significantly less influence of the king on the appointment of their local public officials. Influence of the king is a dummy variable that takes on value one if, at the time of incorporation of a borough, the following two conditions held: i) *First appointment*: the king appointed the first members of the newly formed corporation's governing body (mayor, aldermen, and councilmen), and ii) *Co-Optation*: the initial council appointed subsequent council members – a process that maintained closed governing bodies. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Terrain controls include soil quality as well as ruggedness in a 10 km radius around each borough.

† Two-stage least square regression that uses the following variables to predict Farm Grants by 1348 in the first stage: location on the sea coast, on a navigable river, and on Roman roads, and the interaction of these three variables with status as royal borough. Since the dependent variable reflects royal influence, the status as royal borough is included as a control. The first-stage F-statistic is 5.0 (corresponding to a max. 30% relative IV bias)

Table 7: Openness of MP Elections at the Borough Level in the 1820s

Dependent variables: Various indicators for openness of MP elections at the borough level in the 1820-31

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dependent Variable:	Openness Index	Contested Elections	Broad franchise	Patronage index	— First Principal Component of (1) – (4) —				
Notes:								royal only	2SLS†
Farm Grant 1348	0.385***	0.653***	0.190***	0.433***	0.671***	0.644***	0.521***	0.788***	0.828***
	(0.112)	(0.206)	(0.066)	(0.099)	(0.149)	(0.147)	(0.167)	(0.200)	(0.194)
Additional Controls#						✓	✓	✓	✓
County FE							✓		
Terrain Controls							✓		
R^2	0.07	0.06	0.04	0.09	0.10	0.17	0.42	0.25	0.16
Observations	185	185	185	185	185	185	185	82	185
Mean Dep. Var.:	1.54	1.35	0.69	0.92	— [Principal Component: Mean 0, Std 1] —				

Note: This table shows that Medieval Farm Grants are a strong predictor of more open borough-level elections of Members of Parliament in the 1820s. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Terrain controls include soil quality as well as ruggedness in a 10 km radius around each borough.

Additional controls include the following variables constructed by Aidt and Franck (2015): market integration (travel distance between any given constituency and all other 243 constituencies in their sample, weighted by the population); Distance to urban center (travel days from each constituency to the nearest of the 13 largest towns in 1831); Connection to London (graphical, economic, and informational connections to London); a dummy for 13 boroughs controlled by the treasury.

† Two-stage least square regressions that use the following variables to predict Farm Grants by 1348 in the first stage: location on the sea coast, on a navigable river, and on Roman roads, and the interaction of these three variables with status as royal borough, as well as the status as a royal borough itself. The first-stage F-statistic is 65.0 (corresponding to a max. 5% relative IV bias).

Table 8: Support for Parliamentarians during the Civil War

Dependent variable: Indicator for pro-Parliamentary volunteer troops raised by borough in 1642

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Notes:				Enfranchised by 1640			
			royal only		royal only	2SLS†	2SLS‡
Farm Grant 1348	0.201***	0.189***	0.242***	0.224***	0.244***	0.268***	0.324**
	(0.045)	(0.042)	(0.053)	(0.066)	(0.068)	(0.067)	(0.152)
Royal borough	0.019	0.013		-0.022			-0.056
	(0.022)	(0.025)		(0.055)			(0.065)
County FE		✓					
Terrain Controls		✓					
River, Coast, Road							✓
Mean Dep. Var.	0.055	0.055	0.139	0.148	0.209	0.055	0.055
R^2	0.12	0.24	0.12	0.08	0.08		
Observations	550	550	144	189	91	550	550

Note: The table shows that boroughs with Farm Grants were significantly more likely to raise pro-Parliamentary volunteer troops at the beginning of the Civil War in 1642. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Terrain controls include soil quality as well as ruggedness in a 10 km radius around each borough.

† Two-stage least square regression that uses the following variables to predict Farm Grants by 1348 in the first stage: location on the sea coast, on a navigable river, and on Roman roads, and the interaction of these three variables with status as royal borough, as well as the status as royal borough itself. The first-stage F-statistic is 37.3 (corresponding to a max. 5% relative IV bias).

‡ Two-stage least square regression that uses only the interaction terms and controls for all level variables. The first-stage F-statistic is 13.5 (corresponding to a max. 5% relative IV bias).

Table 9: MP Votes Supporting the Great Reform Act

Dependent variables: Share of votes in favor of the Reform Act at different points in 1831

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Vote in:	March 1831	— December 1831 —					
Notes:				royal only		2SLS†	2SLS†
Farm Grant 1348	0.031	0.165**	0.121**	0.189**	0.107*	0.225**	0.133*
	(0.062)	(0.070)	(0.055)	(0.077)	(0.064)	(0.099)	(0.076)
Disenfranchise	-0.277***	-0.296***	-0.163***	-0.088	-0.181**	-0.279***	-0.176***
	(0.060)	(0.073)	(0.057)	(0.090)	(0.071)	(0.077)	(0.061)
March 1831 votes			0.742***	0.696***	0.736***		0.735***
			(0.056)	(0.089)	(0.077)		(0.066)
Swing Riot within 10km			0.105**	0.177**	0.076		0.075
			(0.053)	(0.078)	(0.111)		(0.095)
County FE					✓		✓
Terrain Controls					✓		✓
Additional Controls#					✓		✓
Mean Dep. Var.	0.47	0.56	0.56	0.69	0.56	0.56	0.56
R^2	0.12	0.16	0.57	0.57	0.65		
Observations	176	176	176	80	176	176	176

Note: This table shows that Medieval Farm Grants are a strong predictor of voting behavior of MPs in favor of the Great Reform Act in the decisive vote of December 1831. The earlier vote in March 1831 serves as a placebo, as explained in the text. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

Additional controls include the following variables constructed by Aidt and Franck (2015): market integration (travel distance between any given constituency and the 243 other constituencies weighted by the population); Distance to urban center (travel days from each constituency to the nearest of the 13 largest towns in 1831); Connection to London (graphical, economic, and informational connections to London); a dummy for 13 boroughs controlled by the treasury.

† Two-stage least square regressions that use the following variables to predict Farm Grants by 1348 in the first stage: location on the sea coast, on a navigable river, and on Roman roads, and the interaction of these three variables with status as royal borough, as well as the status as royal borough itself. The first-stage F-statistics are 53.6 in col 6 and 24.2 in col 7 (both corresponding to a max. 5% relative IV bias).

Table 10: Obstructions of Trade after Farm Grants

Dependent variable as indicated in table header

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Plausibility checks				Long-run institutional outcomes		
	Pre-1348 outcomes		Post-1348 outcomes				
Dependent variable:	ln(Taxable Wealth in 1086)	Commercial Importance 14C†	Trade employment share in 1831	Population in 17th century	Volunteer troops during Civil War	Openness of MP elections 1820-31‡	Vote share for Great Reform Act 1832
Trade not obstructed after Farm Grant	0.592***	1.546***	0.086***	1.027***	0.230***	0.727***	0.251***
	(0.211)	(0.185)	(0.021)	(0.150)	(0.052)	(0.171)	(0.073)
Trade obstructed after Farm Grant	0.987***	1.631***	0.004	0.093	0.157*	0.486**	0.245*
	(0.353)	(0.279)	(0.032)	(0.263)	(0.093)	(0.203)	(0.130)
p-value: test for equality of coefficients	*[0.323]*	*[0.798]*	*[0.020]*	*[0.002]*	*[0.488]*	*[0.308]*	*[0.966]*
Mean Dep. Var.	1.69	[s.d.=1]†	0.39	6.89	0.05	[s.d.=1]‡	0.56
R^2	0.04	0.33	0.09	0.17	0.13	0.11	0.07
Observations	354	554	190	403	549	185	177

Note: The table provides suggestive evidence that Farm Grants affected institutional outcomes in the long run, even if trade was obstructed (after boroughs received Farm Grants) by exogenous events such as silting of rivers and harbors, or the construction of watermills up/downstream that hampered transport. The dependent variable in column 3 – the share of employment in trade-related professions – is from the 1831 census, and has been collected for enfranchised boroughs by Aidt and Franck (2015). Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

† First principle component of two indicators for commercial importance: "Freedom from tolls" (a grant of liberty that exempted a borough's burgesses from tolls throughout the realm) and an indicator variable for whether a borough was a commercial hub during the 14th century, based on Masschaele (1997). The variable has mean zero and standard deviation 1.

‡ First principle component of the four proxies for open MP elections used in Table 7. The variable has mean zero and standard deviation 1.

Online Appendix

How Merchant Towns Shaped Parliaments: From the Norman Conquest of England to the Great Reform Act

Charles Angelucci (Columbia) Simone Meraglia (Exeter) Nico Voigtländer (UCLA, NBER, and CEPR)

A Case Study – A Tale of Two Towns

In this appendix, we complement the historical discussion in Section 3 in the paper with two case studies – a royal and a mesne town, of similar trade geography and size in 1066. We discuss the evolution of their local institutions over the period between the Norman Conquest and the Great Reform Act.

A.1 Bridport – A Royal Town

We begin by describing the institutional history of Bridport – a settlement in Dorset that was in existence at the time of the Norman Conquest.[1] The Domesday Book (1086) recorded Bridport as a royal settlement, with taxable wealth equal to 6.4 fiscal units (geld).[2] Its geographical position – along the rivers Bride and Ahser, and ca. one mile distant from the Dorset coast – was conducive to trade, as reflected by the presence of a market in the 11th century. By the beginning of the 13th century, Bridport was experiencing a surge in trade and population.[3] In this period, Bridport also obtained municipal autonomy. In 1228, the community paid the king ten marks to acquire the right to collect the yearly farm and elect local officials (i.e., a Farm Grant). In 1253, it paid thirty marks to have these liberties granted in perpetuity.[4] Elections of borough officials (e.g., bailiffs) were held annually at Michaelmas (a Christian festival on September 29th).[5]

In the 14th century, Bridport was active in trade, especially with London, Southampton, and Portsmouth. A new harbor contributed to the expansion of commercial activity.[6] Bridport's Farm Grant of 1253 was repeatedly confirmed until, in 1619, the town bought a Charter of Incorporation for $£150$ at the request of Robert Millar – a feltmaker. The Charter conferred to the king the right

[1] Our main sources are the entries for Bridport in the *History of Parliament*. These are available for various periods, beginning in 1386 (which also includes earlier information), and ending in 1832. All subperiods can be accessed here: https://historyofparliamentonline.org/volume/1386-1421/constituencies/bridport. Whenever we use additional sources, we cite these in footnotes.

[2] http://opendomesday.org

[3] https://dorset-ancestors.com/?p=167

[4] In 1953, Bridport celebrated the 700th anniversary of the 1253's Charter of Liberties (https://dorset-ancestors.com/?p=167).

[5] See the Fine Rolls of Henry III (https://finerollshenry3.org.uk/index.html) and Ballard and Tait (1923).

[6] https://dorset-ancestors.com/?p=167

of *first appointment* of the capital burgesses (Weinbaum, 1943). The administration continued to be in the hands of fifteen capital burgesses, who chose two bailiffs and renewed themselves by cooptation.

Bridport was represented in the Model Parliament (1295). In the 14th and 15th centuries, Members of Parliament (MPs) were largely drawn from local traders and manufacturers. Over the 16th century, the high steward, the Admiralty, and several large landowners residing nearby, began to exercise influence over MP elections. At the beginning of the 17th century, the body of fifteen capital burgesses fully controlled parliamentary elections. This state of affairs was short-lived. In 1628, the commonalty petitioned the Commons, who re-established the broad parliamentary franchise based on the evidence that burgesses at large had participated in past elections. Bridport actively supported the Parliamentarians during the Civil War, by providing volunteer troops.[7]

During the 18th century, and up until the Great Reform Act, the franchise was vested in the 'inhabitant householders paying scot and lot,' who numbered approximately 250 to 350, relative to a population of 3,117 in 1801. Parliamentary elections were open to contests: Local merchants trading with the West Indies were among the main contestants, alongside the local gentry. The issues of anti-slavery, malt duties, and Catholic emancipation were central during the August 1830 general election. The radical Whig Henry Wharburton (a timber merchant) and Sir St. Paul (a soldier) were elected. Shortly after the 1830 election, parliamentary reform became paramount. Bridport's inhabitants petitioned the Commons in favor of reform in November 1830. The members of the corporation – mainly merchants and manufacturers – also supported the Grey ministry's Reform Bill of March 1831, despite the fact that Bridport was scheduled for partial disenfranchisement (Schedule B). Only Wharburton voted in favor of the March 1831 bill. Both MPs ran and were re-elected at the following general election made necessary by the defeat of the Reform Bill. The partial disenfranchisement of the borough met with opposition among the inhabitants.[8] Eventually, Bridport was excluded from the list of partially disenfranchised boroughs. Wharburton voted in favor of the December 1831 bill. The reform resulted in an increase in the number of electors, from ca. 300 to 400.

A.2 Faversham – A Mesne Town

Faversham is a borough in the county of Kent that was in existence at the time of the Norman Conquest.[9] Faversham was initially a royal settlement, as recorded in the Domesday Book (1086). In c. 1135, Faversham became mesne when it was granted to the Earl of Kent for his military service against the empress Maud. In c. 1148, Faversham was granted 'in perpetual alms' by the

[7] See the sources listed in Appendix B.8.

[8] A petition against disenfranchisement was supported by St. Paul. Also, the Bridport freeholders lent some support to the anti-reform candidate in the county elections.

[9] See Beresford and Finberg (1973). Most of the information reported in this account can be found in the British History Online (https://www.british-history.ac.uk/survey-kent/vol6/pp318-371).

king (in accordance with the Earl) to the newly founded abbey.[10] After being granted to the abbey, Faversham was subject to the jurisdiction of the abbot in matters concerning the local administration. Faversham offers an ideal comparison to Bridport, because both had a similar starting point – including being initially royal. Faverham's taxable wealth was assessed as 7 fiscal units (geld) in the Domesday Book (as compared to 6.4 for Bridport).[11] Both towns also had a very similar geography: Faversham's position on the navigable Swale creek and close to the Kentish coast was conducive to trade, as reflected by the early establishment of a market and a fair, and by it obtaining a grant of 'freedom from tolls throughout the realm' in 1252 (Ballard and Tait, 1923; Letters, Fernandes, Keene, and Myhill, 2003).

Since the 1250s, the community of burgesses was headed by a mayor and twelve jurats. The abbot – the borough's mesne lord – interfered heavily with the local administration. He appointed a steward and exacted various sums from burgesses (e.g., for exposing merchandize in the market). The mayor was chosen by the abbot from a list of three candidates proposed by the burgesses. The community of burgesses did not obtain a Farm Grant. This state of affairs generated frequent disputes, which often required the intervention of the king's officials to re-establish the abbot's rights (Ballard and Tait, 1923). Faversham had an important military role, being part of the confederation of the Cinque Ports since 1229. As a member of the Head Port of Dover, it sent one ship for royal naval service during wars.[12] Several royal charters granted Faversham most of the privileges enjoyed by the Liberty of the Cinque Ports, such as exemption from hundred and shire courts.[13]

Faversham was not represented in Parliament, arguably because of its lack of administrative autonomy. At the dissolution of the abbey in 1538, the borough reverted to the crown. Royal ownership finally paved the way for (some) municipal autonomy of this important trade community. In 1546, Henry VIII granted the burgesses a Charter of Incorporation and a Farm Grant. The corporation was composed of a mayor, 12 jurats, and 44 freemen. However, Faversham's degree of autonomy was limited – arguably due to the long history of mesne ownership and the late attainment of a Farm Grant.[14] The Charter of 1546 conferred to the king the right of *first appointment* of town magistrates, i.e., mayor and jurats (Weinbaum, 1943), and the Lord Warden's influence over the town's internal affairs remained strong (Murray, 1935, p. 95). During the Civil War, Faversham

[10] Thus, Faversham is one of the 76 boroughs that changed ownership, as discussed in Section B.2. Since Faversham was mesne for 213 out of 262 years between 1086-1348, it is one of the 17 mixed boroughs that were "mainly mesne," i.e., those with mixed ownership that belonged to a mesne lord for more than 75% of the time period (see footnote 17 in the appendix).

[11] http://opendomesday.org.

[12] Because of their military importance, the inhabitants of towns belonging to the Cinque Ports were sometimes referred to as 'barons' (Tait, 1936, p. 260).

[13] In matters concerning the Cinque Ports, Faversham was subject to the jurisdiction of the *court of Shepway* presided by the Lord Warden, a royal official (Ballard and Tait, 1923).

[14] Only three other boroughs obtained Farm Grants in the 16th century, when the importance of the boroughs' farms relative to other taxes began to decline significantly (Webb and Webb, 1963, p. 287).

did not provide volunteer troops in support of the Parliamentarians. Faversham did not vote during the Great Reform Act, because it was not a parliamentary constituency.

B Data and Background

B.1 Timing: Farm Grants and Wars

Starting with Lincoln in 1130, Farm Grants were issued to boroughs throughout England. Figure A.1 presents the timing of royal and mesne Farm Grants for the period 1130-1348. Although Farm Grants were issued in almost every decade, kings John and Henry III stand out as the most active grantors. Figure A.1 also highlights England's wars with France: Periods of war often coincided with the granting of numerous Farm Grants to royal towns. This had two reasons: First, during wars, the need for financing was particularly strong. Second, the king was often absent while fighting abroad, which rendered the monitoring issues in controlling his tax-collecting administration even more severe.[15] Farm Grants offered a way to address both these issues, since they decentralized tax collection and also typically resulted in the payment of up-front fees and higher annual lump sums (see Section 3.5 in the paper for detail). Figure A.1 also illustrates that Farm Grants were much less common in mesne boroughs, as discussed in Section 3.6.

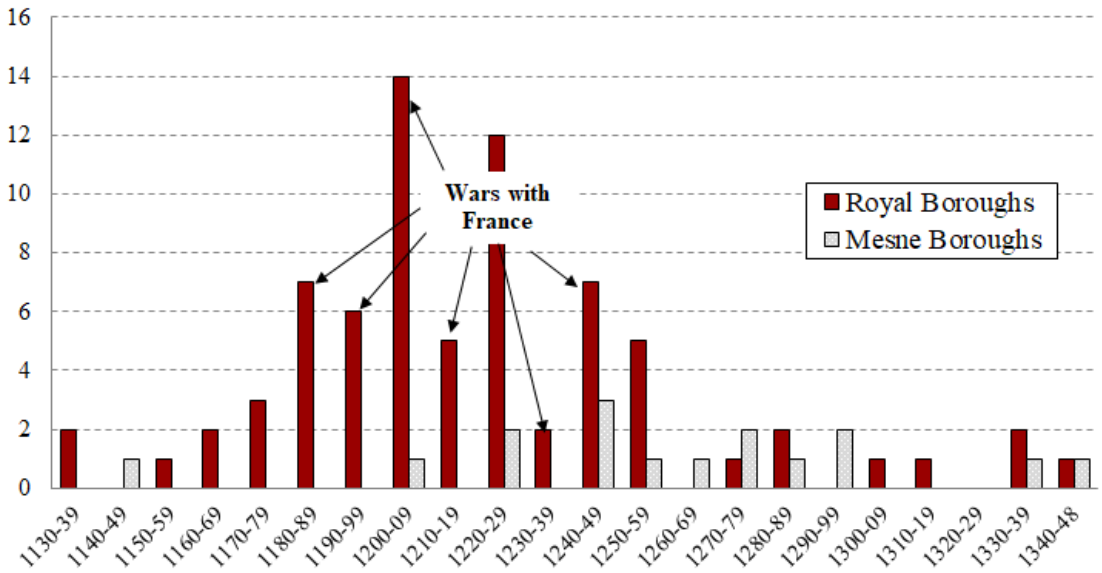

Figure A.1: Timeline of Farm Grants for Royal and Mesne Boroughs

Note: The figure illustrates the timing of all Farm Grants that were issued before 1348 – overall 74 to royal boroughs and 16 to mesne boroughs. Farm Grants were often granted during periods of external wars, when the king was in need of finance.

[15] Arguably, the introduction of *Scutage* and the employment of mercenaries allowed mesne lords to transform their military duties into money payments. As a result, periods of absence must have been less frequent among mesne lords.

B.2 Classification of Borough Ownership

For our analysis, we focus on locations that became boroughs prior to the Black Death in 1348 and existed at least until this year.[16] We classify boroughs according to their ownership as *mainly royal*, *mainly mesne*, and *mixed*. For each borough, we compute the years since its foundation until 1348. We also calculate the time spent as part of the royal or mesne lords' demesne between foundation and 1348. For this, we use the following criteria: Boroughs that belonged to the king for at least 75% of the period between their foundation and 1348 are classified as *mainly royal*. Those boroughs that belonged to mesne lords for more than 75% of the time are counted as *mainly mesne*. According to these criteria, 91 boroughs were *mainly royal*, and 386 were *mainly mesne*. An additional 54 *mixed* boroughs belonged to both the king and a mesne lord for a non-negligible part of the period 1086-1348 (i.e., more than 25% to each).[17] Because even relatively short ownership by the king was sufficient for charters of liberties to be granted, we include these *mixed* boroughs under "royal" in our main analysis.[18] This yields a total of 145 (91+54) royal boroughs for the purpose of our main analysis. Finally, there are 23 boroughs that were founded before 1348, but for which systematic information of ownership is not available for the full period prior to 1348. In the vast majority of cases, the scattered information at our disposal points to the presence of a mesne lord. We thus classify these boroughs as *mainly mesne*. Altogether, we thus count 409 (386+23) mesne boroughs that were founded before 1348. In Appendix C.2, we show that our results are robust to a more conservative definition of royal ownership, based on a 90% threshold and excluding mixed boroughs and those without systematic documents on ownership.

Number of Boroughs pre- and post-1348. Altogether, there are 554 boroughs with documented

[16] We exclude boroughs that were founded after 1348. Similarly, we exclude locations (e.g., villages) with documented existence before 1348 that had not received the status of borough by 1348. The reason for excluding these is that non-borough settlements were largely rural and much less involved in trade; with very few exceptions, these did not receive Farm Grants or were enfranchised in Parliament. Thus, including them would bias the relationship between Farm Grants and enfranchisement upward. Finally, we exclude boroughs that disappeared before 1348 – these were all very small settlements that got borough status for idiosyncratic reasons. None of these received a Farm Grant or were enfranchised, so that excluding them represents a conservative choice, making it less likely to find a systematic relationship between Farm Grants and representation in Parliament.

[17] Changes in ownership were typically due to inheritance issues and are thus unlikely to be related to our analysis in a systematic fashion. During the period 1086-1348, altogether 77 boroughs changed ownership from the king to a mesne lord, or viceversa. Among these, 12 (17) belonged to the king (mesne lords) for more than 75% of the time and are thus included in the 91 *mainly royal* (386 *mainly mesne*) boroughs. This leaves 77-12-17=48 boroughs that belonged more than 25% of the period 1086-1348 to each the king and mesne lords. These are classified as *mixed*. During the same period, further 6 boroughs belonged jointly to the king and a mesne lord; we classify these 6 also as *mixed* ownership (i.e., at 50% each). Thus, 48+6=54 boroughs are classified as *mixed*.

[18] Among the boroughs that changed ownership, there were instances of new Farm Grants being issued by the king immediately after previous mesne boroughs became royal. For example, Chester became royal in ca. 1237 and received a Farm Grant in 1239. There are also instances of charters being revoked after a switch from royal to mesne. For example, Liverpool and Newcastle-under-Lyme lost their liberties when they became mesne boroughs in about 1266 and 1292, respectively (Ballard and Tait, 1923, p. lvi). By contrast, there are no recorded instances of charters being revoked when boroughs became royal, and also no instances of new charters being granted in the first few years following the change in ownership from royal to mesne.

existence prior to 1348. For our analysis of long-run outcomes in the 17th-19th centuries, the sample reduces to 550 boroughs because one borough disappeared,[19] two were bought by larger boroughs after the Dissolution of Monasteries in the 16th century,[20] and two boroughs (Weymouth and Melcombe) were merged into one ("Weymouth and Melcombe Regis") for parliamentary purposes. Between 1348 and 1700, 71 boroughs were newly formed. Thus, the total number of boroughs in 1700 is 621 (550+71). We use this full set of boroughs only in Figure 6 in the paper for a complete illustration of enfranchisement after 1348. Otherwise, we only use boroughs that existed in 1348.

Index of Borough Ownership. We also create an *index of ownership* that exploits the official standing of lords (e.g., earls and bishops) as an indicator for the size of the territory they own. We assign (i) 4 points to boroughs belonging to the king, queen, or prince (royal boroughs), (ii) 3 points to boroughs belonging to earls or archbishops,[21] (iii) 2 points to boroughs belonging to bishops and (iv) 1 point to boroughs belonging to either seigneurs (lesser barons) or abbots/nunneries.[22] According to this index, there are 145 royal boroughs, and the remaining 409 mesne boroughs that existed by 1348 are divided as follows: 108 with size=3 (earls or archbishops), 72 with size=2 (mostly owned by bishops), and 229 with size=1 (seigneur/abbot/nunnery). These are the size categories underlying Figure 3 in the paper.

B.3 Coding of Royal Influence on Local Politics

Beginning in the second half of the 14th century, the king issued Charters of Incorporation to boroughs.[23] Incorporated boroughs were allowed to own property and issue by-laws. They were governed by municipal councils headed by mayors (Tait, 1936). The Charters of Incorporation include information on the election of the governing body. We code two variables, based on the information reported in Weinbaum (1943). First, we code whether the king appointed the first members of this body right after the borough's incorporation (*first appointment clause*). Second, we code whether subsequent members of the governing body were selected by co-optation, thus perpetuating the initial influence of the king (*cooptation*). For all 157 boroughs with available data that were incorporated between 1345 and 1641 (and that existed by 1348), we then create the

[19] Ravenserodd was destroyed by the sea in ca. 1366.

[20] Bootham was bought by York, and Templemead was bought by Bristol in ca. 1550.

[21] We have evidence that even after the Norman Conquest, earls were the greatest barons (Brooke, 1961, pp. 103-05).

[22] For boroughs that changed ownership between their date of foundation and 1348, we use the criteria described above to define royal boroughs. When boroughs changed hands between different types of mesne lords, we assign them the average number of points on the ownership index and then round to the nearest integer.

[23] Boroughs paid to receive these charters. They sanctioned town-level prerogatives accumulated in the preceding centuries, harmonized governance structures, and bestowed new prerogatives (Weinbaum, 1943). Often, these included the right to collect the farm for boroughs that had previously not possessed Farm Grants – however, this does not affect our results because we only code Farm Grants until 1348. Mesne boroughs could also receive a Charter of Incorporation from the king with their lord's assent. Following the Dissolution of the Monasteries of 1536-41, many ecclesiastical boroughs passed into the king's hands and received Charters of Incorporation soon after.

indicator *Influence King* that takes on value one for boroughs with both *first appointment clause* and *cooptation*.

B.4 Taxable Wealth in 1086

In 1086, the Normans assessed and recorded the taxable wealth of rural and urban settlements in the Domesday Book.[24] Taxable wealth was assessed in (fiscal) hides, which historically had reflected land area but, by 1086, had evolved into a broader measure of taxable worth of a settlement that had no fixed relationship to its area or its population (Faith, 1999, p. 91). An open source for the Domesday Book is available at http://opendomesday.org. For each settlement, this source reports taxable wealth in the variable called "Total tax assessment." The units of measurement of this variable can vary across boroughs. In the vast majority (ca. 80%) of cases, the unit of measurement is called "geld units." In the remaining ca. 20% of cases, the units are referred to as "exemption units" (in less than 1% of cases they are named "unchanged units"). To the best of our understanding, despite this difference in labeling, the variable "Total tax assessment" is measured in the *same* fiscal unit (hides), even when it is not referred to as "geld."[25] We thus use taxable wealth for all boroughs, including those for which "Total tax assessment" is not in "geld" units.[26]

We exclude seven boroughs for which we have strong reasons to believe that our source (http://opendomesday.org) provides an incomplete (and therefore low) estimate. For instance, in the case of Oxford our source reports several entries, some of which have no figure for taxable wealth. As a result, the reported total (4 exemption units) is rather low. Our concern is corroborated by Ballard (1904), who provides a separate estimate of 100 geld units for Oxford (which we do not use in order to keep the data source consistent). As a further example, in the case of Southampton, the reported total (2.5 exemption units) is too low when compared to historians' general assessment of the settlement's importance. All of these seven boroughs that we exclude were royal boroughs with Farm Grants and were represented in Parliament. Thus, if anything, excluding them from our regressions with taxable wealth stacks the odds against our main result – a strong relationship between Farm Grants and enfranchisement in royal boroughs.

B.5 Geographic Variables

We collect information on Medieval navigable rivers from Edwards and Hindle (1991), Langdon (1993), Jones (2000), Langdon (2000), Peberdy (1996), Gardiner (2007), Hooke (2007), Langdon (2007), and Rippon (2007). We only use non-minor rivers as reported in Edwards and Hindle (1991) and listed as navigable in Langdon (1993) and/or Jones (2000). For the areas not covered by the analysis in Langdon (1993) and Jones (2000), we consider as naviga-

[24] See footnote 18 in the paper for more detail on the Domesday Book.

[25] See http://www.domesdaybook.net/domesday-book/data-terminology/taxation).

[26] All our results hold when we use only the 80% of boroughs for which "Total tax assessment" is reported in "geld." These results are available upon request.

ble rivers those that are listed as non-minor in Edwards and Hindle (1991), or those that are listed as minor but for which we have evidence for their navigability in the History of Parliament (http://www.historyofparliamentonline.org). To account for possible endogeneity, we exclude humanly modified sections of rivers (Blair, 2007; Bond, 2007; Rhodes, 2007). Information on Roman roads is collected from Hindle (1976). As for our two terrain controls, we compute an index of soil quality in a radius of 10 km around each borough, based on the suitability of growing low input level rain-fed cereals provided by the Food and Agriculture Organization (FAO). We also compute the terrain ruggedness for each borough, using the granular data provided by Nunn and Puga (2012).[27]

B.6 Commercial Importance of Boroughs

To assess a borough's commercial importance, we combine two measures into an index: First, Masschaele (1997) identifies 51 commercial centers in the mid-14th century. "This select group, ..., comprises the settlements that contemporaries repeatedly perceived as being economically distinct from all other settlements in the country and that had sufficient capital resources to influence commercial development within a regional environment" Masschaele (1997, p. 82).[28] Second, we gather information on whether a borough obtained a grant from the king that provided "freedom from tolls" throughout the realm. Those liberties were granted by the king to 85 royal and mesne boroughs by 1348; they allowed all merchants from a borough to move tradeable goods throughout the realm (including territories governed by mesne lords) without facing tolls.[29] Information on freedom from tolls is available from Ballard (1913), Ballard and Tait (1923), and Weinbaum (1943). Based on the two indicators we derive the index *Commercial Importance* as their first principal component.

B.7 Data on MP Elections in the 17th-19th Centuries

We use several measures for the openness of borough-level MP elections. The first two measures are based on Aidt and Franck (2015):

- *Broad Franchise*: This is a dummy variable that takes value 0 if the borough elected its MPs using a "burgage" or "corporation" franchise ("narrow franchise"), and takes value 1 otherwise. Under "burgage," the right to vote was attached to the tenancy of a house or

[27] For a straightforward interpretation of coefficients, we standardize both the soil quality and the ruggedness variable. For the former, *lower* values in the original FAO data correspond to better land for farming. We thus use the negative standardized variable.

[28] Masschaele's classification is based on a variety of criteria such as the presence of a merchant guild, the payment of lay subsidies on land and goods at the urban rate (as opposed to the rural rate) in 1294-1336, and the classification as an urban settlement in the *Nomina Villarum* military census of 1316.

[29] "Freedom from tolls" comprised all the market charges (transaction fees, right of displaying goods in markets, etc.) The exception were tolls collected by boroughs j that had obtained the "right to levy tolls on merchants" *before* borough i obtained its "freedom from tolls." Thus, in practice, more ancient grants were more valuable to their holders.

property designated as a burgage plot for parliamentary elections. Under "corporation," only mayor, aldermen and (sometimes) councilmen could vote for the MPs representing their borough.

- *Patronage Index*: This index captures both the extent to which a borough was subject to patronage and whether it was disenfranchised by the Great Reform Act of 1832. It ranges from 0 to 2. The index equals 0 (closed) for rotten boroughs *and* closed constituency (controlled by local patron); it equals 1 if the borough was either rotten *or* a closed constituency, and it takes on value 2 (open) if neither of the two apply. Note that we redefined the original coding in Aidt and Franck (2015) so that larger values reflect openness of MP elections.

Next, we define three additional indexes for openness of MP elections:

- *Contested Elections*: This index ranges from 0 to 4. It reflects the number of MP elections (altogether four between 1820-31) for which there were more local candidates than the borough's seats in Parliament (typically two). Data are from the History of Parliament (Fisher, 2009).

- *Openness Index/Dummy*: These measures capture the extent to which a borough's choice of its MPs was subject to the control of a patron (e.g., a local landed interest or the Treasury). It ranges from 1 to 3: The index equals 1 (closed) if both MPs were chosen by a patron, it equals 2 if only one MP was chosen by a patron, and 3 (open) if anyone could run for Parliament. Data are from the History of Parliament. We construct this index for different time periods:

  - *Openness 1820-1831*: This index takes value 3 if the borough is defined as "open" in Fisher (2009). It takes value 2 if the borough is reported as partially subject to patronage in the description of the constituency contained in Fisher (2009), and it takes value 1 if it is defined as "close" in the same source. Finally, we assign a value 1.5 to boroughs that are not listed as "open" in Fisher (2009), and for which we have been unable to fully establish the degree of patronage.

  - *Openness 1690-1715 / 1754-1790 / 1790-1820*: To construct the openness index for these earlier periods, we rely on the description of boroughs contained in Cruickshanks, Handley, and Hayton (2002), Namier and Brooke (1964), and Thorne (1986) respectively. We also make use of the more detailed boroughs' accounts available at http://www.historyofparliamentonline.org. Our coding criteria match those used for the index of openness 1820-1831. However, we adjust our coding because of the less clear-cut distinction between "open" vs. "closed" boroughs (especially for the period

1690-1715) made by our references.[30] We subtract 0.5 points from boroughs that are described as generally open, but in which "interests" (e.g., a landed gentlemen owning large properties in the borough) exerted some influence over the borough's elections of MPs. Similarly, we assign a value of 2 to boroughs that are not described as "closed" or "semi-closed," but whose parliamentary seats were subject to strong "interests."

  - *Openness dummies*: For each time period, we define a dummy that takes on value one if the borough is classified as "open" (i.e., if its openness index is strictly greater than 2).

- *Broad Franchise 1604-29 / 1660-90 / 1690-1715 / 1715-54 / 1754-90 / 1790-1820*: We apply the coding criteria described above for *Broad Franchise* in 1820-31 (following Aidt and Franck, 2015) to compute the same index for earlier periods.[31] We use the description of boroughs contained in Ferris and Thrush (2010), Henning (1983), Cruickshanks et al. (2002), Sedgwick (1970), Namier and Brooke (1964), and Thorne (1986).

B.8 The English Civil War: Background and Data

The English Civil Wars (1642-1646 and 1648-49) and the crises and switches in political regimes that followed ultimately strengthened the English Parliament. By the end of Oliver Cromwell's rule in 1659, Parliament had gained greater control over the king's revenues (e.g., customs, excises, and hearth tax). Following the Glorious Revolution of 1688 and the coronation of William in 1689, the Parliament could no longer be dissolved without its consent. It also took full control over military expenses and granted the king the minimum amount of revenues necessary to cover the costs of civil government (Miller, 1983).

Background. In the early 17th century, the summoning and dissolving of Parliament was still a royal prerogative. In line with his absolutist tendencies, Charles I did not summon Parliament for a period stretching 11 years (1629-40). As a result, he resorted to various unpopular means to raise extra-ordinary taxes (e.g., the levying of ship money in 1634). Charles also introduced highly controversial religious measures, which raised suspicions that he was reintroducing Catholicism. His attempt to apply religious reforms to Scotland led to a Scottish rebellion and the first Bishops' War (1639). The disastrous outcome of the conflict forced Charles to summon Parliament to raise revenues. The MPs voiced many complaints about his rule – e.g., appointment of bishops, monopolies on international trade, internal licenses, and the farming of customs – and they opposed his

[30] For the pre-Glorious Revolution period, the distinction between "open" and "closed" becomes even less precise. For consistency, we therefore start the construction of our *Openness* index in 1690.

[31] *Broad Franchise* is based on an objective measure (boroughs' franchise rules), for which we have data since 1604. In contrast, *Openness* is based on the accounts of boroughs' internal politics in the collection of books *History of Parliament*, which are less precise before 1690 (see footnote 30). We can thus extend the *Broad Franchise* measure further back in time than the above *Openness* measure.

plans to invade Scotland (Ashton, 1979; North and Weingast, 1989). The Parliament was dissolved after only a few weeks in May 1640, and Charles attacked Scotland again, suffering a humiliating defeat and prompting the invasion of northern England by the Scots in August 1640. Forced to pay tribute to the Scots, Charles summoned the Parliament again in November 1640 (Bennett, 1995). This Parliament would sit for the next 13 years.

Although a military conflict with the king – let alone its deposition – was unimaginable then, many MPs were hostile to Charles and successfully passed legislation that strengthened Parliament (e.g., the Act for Triennial Parliaments of 1641). When a rebellion broke out in Ireland in October 1641, both king and Parliament agreed that the creation of an army was necessary to suppress the uprising. However, neither side trusted the other with the control of these forces. The county militias – the only land forces available during peacetime – were under the control of the royal appointee lord-lieutenants, who supervised and trained them (Wedgwood, 1959). After the failure to secure control of the armed forces, in March 1642 Parliament issued the *Militia Ordinance* without royal approval to appoint its own lord-lieutenants. As a response, in June 1642 the king issued the *Commissions of Array* – a long obsolete tool to raise men in the shires. The choice whether to obey the *Militia Ordinance* or the *Commissions of Array* forced boroughs (i.e., their burgesses, local officials, or the governing lords) to pick a side.

In the months leading up to the outbreak of hostilities in August 1642, royalists and parliamentarians feared the other side's possible use of force, and preparations for military conflict began on both sides. The king recruited mostly from rural areas by relying on county-level officials (sheriffs and lords-lieutenants) and gentry. In contrast, the parliamentarians successfully recruited both in counties and boroughs, despite the fact that many boroughs attempted to remain neutral out of fear for their liberties (Howell, 1982). London provided over 6,000 men. The parliamentarians gathered volunteers by sending orders or logistical information to their appointed lord-lieutenants and to the lords sympathetic to their cause. Mayors were also contacted for recruitment in boroughs, and MPs dispatched to their constituencies to counteract the king's effort to enforce the *Commissions of Array*. One of Hull's MPs famously convinced John Hotham, Governor of Hull, to refuse the king's entry into the town (Bennett, 1995, p. 25). This led the king to move to Nottingham, where on August, 22nd 1642 he raised the Royal Standard. Soon thereafter, fighting broke out.

Both sides initially had over 15,000 men at their disposal, and battles were fought over large areas of the country for a period lasting three years. Although royalist forces initially had the upper hand, they were eventually defeated by the parliamentarian forces in 1645, and the king was captured a year later. In 1647, the king conspired with the Scots, and fighting broke out again in 1648. The forces loyal to the king were defeated in 1649, and Charles was tried and sentenced to death the same year. The monarchy was abolished in February 1649, and Oliver Cromwell ruled with the help of the Parliament until his death in 1659. Although the monarchy returned in 1660,

the Parliament had gained considerable power in the process, and the transition to a full-fledge constitutional monarchy would be complete by the end of the Glorious Revolution in 1689.

Data. We focus on the period immediately preceding the military conflict: January-August 1642. For each borough in our dataset, we record whether it raised volunteer troops to fight on the parliamentarian side.[32] We collect information on boroughs' raising of volunteer troops from the House of Lords Journal (1629-42 and 1642-43) and from the Private Journals of the Long Parliament (3 January to 5 March 1642, 7 March 1642 to 1 June 1642, and 2 June to 17 September 1642).[33] We complement these data with those provided in Russell (1990) and Daniell (2008). Altogether, the parliamentary records mention 31 boroughs that raised voluntary troops to support the parliamentarians. Out of these, 30 boroughs existed by 1348 and are thus in our dataset. We create the indicator variable *Volunteers* for these 30 boroughs.[34]

B.9 The Great Reform Act: Background

The rules governing Parliament and the composition of enfranchised constituencies were largely unchanged from the 17th century to the Reform Act of 1832 (Porritt, 1909). In essence, the Parliament was an institution inherited from Medieval times. In 1830, 383 constituencies were represented, including 203 English boroughs returning a total of 405 MPs, as well as 40 English counties returning 82 MPs (Fisher, 2009). In our empirical analysis, we focus exclusively on English boroughs that had obtained the borough status by 1348.

The beginning of the 19th century was marked by profound discontent with local governance and MP elections. The Industrial Revolution led some boroughs to experience rapid population growth, thereby straining the public provision of sanitation and law and order (see Lizzeri and Persico (2004) and references therein). Moreover, the parliamentary system was generally perceived as corrupt (Brock, 1973, pp. 25-8), and many rapidly growing boroughs were unrepresented (e.g., Manchester).

Within enfranchised boroughs, large portions of the population were excluded from participating in MP elections. The internal franchise rule varied greatly from borough to borough. In 1830, six franchise rules existed (*scot and lot*, *householder*, *freeholder*, *freeman*, *burgage*, and *corporation*). Two of these rules – *burgage* and *corporation* – consisted of particularly narrow franchises. For instance, only the members of the governing body were allowed to vote in corporate boroughs.

[32] We do not record recruitment after August 1642 because army movements across the territory render the "voluntary" nature of recruiting questionable. To the best of our knowledge, there exist no records of volunteer troops raised for the royalist side in the boroughs.

[33] These sources can be accessed online at the following links: http://www.british-history.ac.uk/lords-jrnl/vol4, http://www.british-history.ac.uk/lords-jrnl/vol5, and http://www.british-history.ac.uk/commons-jrnl/vol2.

[34] Information on the *number* of men raised by each borough is not available. However, the boroughs that raised men were explicitly discussed in Parliament (which underlies our data source). This suggests that the contributions of each of these boroughs must have been significant.

Further, MP elections were often subject to patronage.[35] In these cases, the borough "patron" – typically a large local landowner, and sometimes the Treasury – was effectively entitled to nominate some or all of the borough MPs. Patronage was particularly pervasive in the smaller "rotten" boroughs such as Gatton, which did not have any inhabitants left (Porritt, 1909, pp. 369-70).

Reforming the parliamentary franchise was a recurrent theme of British politics in the early 19th century (Brock, 1973). The chances for reform became tangible in the 1820s. By and large, Whigs and Radicals were in favor of reform, whereas Tories were against it.[36] Between 1822 and 1827, George Canning, the Tory Leader of the House of Commons, successfully appeased the "commercial men" and dampened their demand for a vast parliamentary reform by promoting liberal legislation (Brock, 1973). In 1828, besides the parliamentary reform, the Duke of Wellington's Tory government faced three other major issues: the currency crisis that followed the financial crash of 1825-6, the Catholic Emancipation, and the Corn Laws. The possibility for reform presented itself when, in November 1830, during a period of general economic distress, Lord Grey formed the first Whig Government since 1806. By then, part of the Tories had turned in favor of reform, largely because of the rotten boroughs' role in the Catholic Emancipation (Brock, 1973). However, MPs were chosen by their constituencies based not only on this possible reform, but also on other major issues such as Anti-Slavery, Corn Laws, and Free Trade (c.f. Fisher, 2009; Brock, 1973).

The first Bill was proposed in March 1831. The reform aimed at (i) harmonizing the franchise across boroughs, (ii) disenfranchising smaller boroughs, and (iii) enfranchising the newly industrialized ones. The reform undermined patrons' hold on boroughs both directly (by disenfranchising rotten boroughs) and indirectly (by making the electorate in enfranchised boroughs sufficiently large and uniform). Patrons of disenfranchised boroughs were partially compensated for the loss in the value of their property with an increase in the number of county seats.

The Bill of March 1831, although approved by the House of Commons by a narrow margin, was then rejected by the House of Lords. This event prompted the collapse of the Government and new MP elections. The general elections of April 1831 were effectively a referendum on the parliamentary reform. Two bills were proposed in June and September 1831 and, after some amendments and compromises, a new bill was voted in December 1831 and finally approved in March 1832. The reform resulted in 56 boroughs being entirely disenfranchised and 30 boroughs losing one seat. On the winning side, 43 boroughs were enfranchised, with 21 gaining one seat and the rest two seats. In each enfranchised borough, all males owning property with an annualized value of at least £10 gained voting rights. The net effect of the reform was to extend the franchise from 3% to 6-7% of the population.

[35] For a comprehensive description of each franchise rule we refer to Fisher (2009).

[36] Among the Tories, the majority of the Huskissonites and many ultra-Tories were, however, in favor of reform (Brock, 1973, p. 76).

C Empirical Appendix

This appendix section presents numerous robustness checks and extensions of the empirical results in the paper.

C.1 Predictive Power of Geography in Royal and Mesne Boroughs

This section examines the predictive power of trade geography in royal vs. mesne boroughs, complementing the analysis in Section 4.2 in the paper. Table A.1 shows that trade-favoring geography predicts economic activity in *both* royal and mesne territories. We use three different economic variables. Columns 1 and 2 show that navigable rivers and Roman roads positively predict taxable wealth in 1086, while results for boroughs by the sea coast are mixed.[37] In columns 3 and 4, we find that navigable rivers and sea coast are strong predictors of our measure for commercial importance in the 14th century. Finally, columns 5 and 6 use city population in the mid-17th century as dependent variable.[38] We find that city size is positively predicted by location on a navigable river and Roman roads in both subsamples. Importantly, the three geography variables are jointly highly significant in all specifications: p-values (shown in the bottom of Table A.1) are 0.01 or lower throughout.

C.2 Conservative Classification of Borough Ownership

Our result on the determinants of Farm Grants and enfranchisement hold also when we use a conservative classification of borough ownership. In the results presented in Table A.2, we classify as royal those boroughs that were owned by the king for more than 90% of the time period between their foundation and 1348. This leaves us with 86 royal boroughs. In addition, we include as mesne boroughs only those that belonged to mesne lords for more than 90% of the time – altogether 376. We exclude mixed boroughs (based on the 90% criterion) and those with incomplete ownership records (i.e., the 23 boroughs for which the scattered evidence on ownership points towards mesne lords – see Appendix B.2).

Columns 1-4 in Table A.2 examine the determinants of Farm Grants, replicating our results from columns 1-3 in Table 2, and from column 6 in Table 3 in the paper. Columns 5-7 in Table A.2 replicate our regressions for representation in Parliament from columns 1, 2, and 10 in Table 4 in the paper. We confirm all results from the paper.

[37] The negative coefficient on sea coast is likely driven by two facts: i) the Norman Conquest had left some of the boroughs on the Channel coast devastated, and ii) Danish attacks via the sea were still common until the consolidation of Norman control in the late 11th century. By the 12th century, locations by the sea had largely recovered from these negative shocks, so that we can use sea coast as a proxy for commercial activity in later periods.

[38] This is the first period for which population is available for a large number of boroughs. Data are from https://discover.ukdataservice.ac.uk/catalogue?sn=7154 and Langton (2000). City population has been widely used as a proxy for economic activity (DeLong and Shleifer, 1993; Acemoglu, Johnson, and Robinson, 2005; Dittmar, 2011; Squicciarini and Voigtländer, 2015).

Table A.1: Trade Geography and Economic Outcomes

Dependent variable: As indicated in table header

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	ln(Taxable Wealth 1086)		Commercial Importance 14C†		ln(population mid-17C)	
Boroughs included:	royal	mesne	royal	mesne	royal	mesne
Navigable River	1.188***	0.594***	1.063***	0.259**	0.914***	0.470***
	(0.340)	(0.208)	(0.259)	(0.119)	(0.247)	(0.134)
Sea Coast	0.256	-0.862***	0.845***	0.274***	-0.034	-0.116
	(0.371)	(0.239)	(0.274)	(0.103)	(0.285)	(0.119)
Roman Road	0.299	0.161	0.437*	-0.005	0.351*	0.218**
	(0.258)	(0.160)	(0.224)	(0.059)	(0.189)	(0.095)
p-value: joint significance River, Coast, Road	*[0.004]*	*[<0.001]*	*[<0.001]*	*[0.012]*	*[0.002]*	*[0.001]*
Mean Dep. Var.	1.88	1.62	0.79	-0.28	7.19	6.75
R^2	0.18	0.07	0.18	0.06	0.15	0.07
Observations	85	269	145	409	126	279

Notes: This table shows that trade-favoring geography predicts various economic outcomes in *both* royal and mesne boroughs. This supports our use of mesne boroughs as a valid 'placebo' – mesne boroughs were otherwise comparable to royal boroughs, but they did not receive Farm Grants. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. See footnote 37 for an explanation for the negative coefficient on sea coast in cols 1 and 2.

† First principle component of two indicators for commercial importance: "Freedom from tolls" (a grant of liberty that exempted a borough's burgesses from tolls throughout the realm) and an indicator variable for whether a borough was a commercial hub during the 14th century, based on Masschaele (1997). See Appendix B.6 for detail.

C.3 Location of Boroughs with Farm Grants by 1348

Figure A.2 shows the location of boroughs that had received Farm Grants by 1348. There is no apparent clustering – Farm Grant boroughs are spread relatively evenly across England.

C.4 Trade Geography and Taxable Wealth

In Table A.3 we relate trade-favoring geography to taxable wealth. In column 1, we find that both navigable rivers and Roman roads predict taxable wealth in 1086 (with rivers showing a particularly strong relationship). Boroughs by the sea coast, on the other hand, were significantly poorer in 1086. This is likely driven by i) the fact that the Norman Conquest had left some of the boroughs on the Channel coast devastated, and ii) by Danish attacks via the sea that were still common until the late 11th century. In the 12th century, locations by the sea had largely recovered from these negative shocks. For this reason, we do not use seacoast to predict Farm Grants in the remainder of Table A.3, but we do use it for subsequent analyses that exploit data after the 11th

Table A.2: Conservative Classification of Borough Ownership

Dependent variables: As indicated in table header

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. Var.:	Indicator for Farm Grant by 1348				Enfranchised by 1348		
Notes:					only royal (conservative)		2SLS‡
Farm Grant 1348					0.629***	0.474***	0.587***
					(0.085)	(0.127)	(0.214)
Royal (conservative)	0.504***	0.499***	0.499***	0.187**			0.088
	(0.055)	(0.054)	(0.055)	(0.082)			(0.126)
River x Royal				0.382***			
				(0.099)			
Sea coast x Royal				0.272**			
				(0.132)			
Roman Road x Royal				0.273***			
				(0.098)			
Navigable River				-0.016			-0.006
				(0.032)			(0.041)
Sea Coast				-0.034			-0.011
				(0.034)			(0.044)
Roman Road				-0.028			-0.011
				(0.021)			(0.035)
p-value: joint significance River, Coast, Road				*[0.466]*			*[0.981]*
County FE			✓	✓		✓	
Terrain Controls		✓				✓	
Mean Dep. Var.	0.14	0.14	0.14	0.14	0.52	0.52	0.21
R^2	0.33	0.33	0.40	0.47	0.39	0.67	
Observations	462	462	462	462	86	86	462

Note: This table verifies that our main results for Farm Grants and boroughs' representation in Parliament hold also for the conservative coding of royal borough ownership in Appendix C.2. Columns 1-3 replicate the regressions from columns 1-3 in Table 2, and column 4 replicates column 6 from Table 3 in the paper. Columns 5-7 replicate results on parliamentary franchise from columns 1, 2, and 10 in Table 4 in the paper. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Terrain controls include soil quality as well as ruggedness in a 10 km radius around each borough.

‡ Two-stage least square regression that uses the following variables to predict Farm Grants by 1348 in the first stage: the interaction of status as royal borough (conservative definition) with the location on the sea coast, on a navigable river, and on Roman roads The status as royal borough itself, and the three geo-variables are included as controls in both stages. The first-stage F-statistic is 10.5.

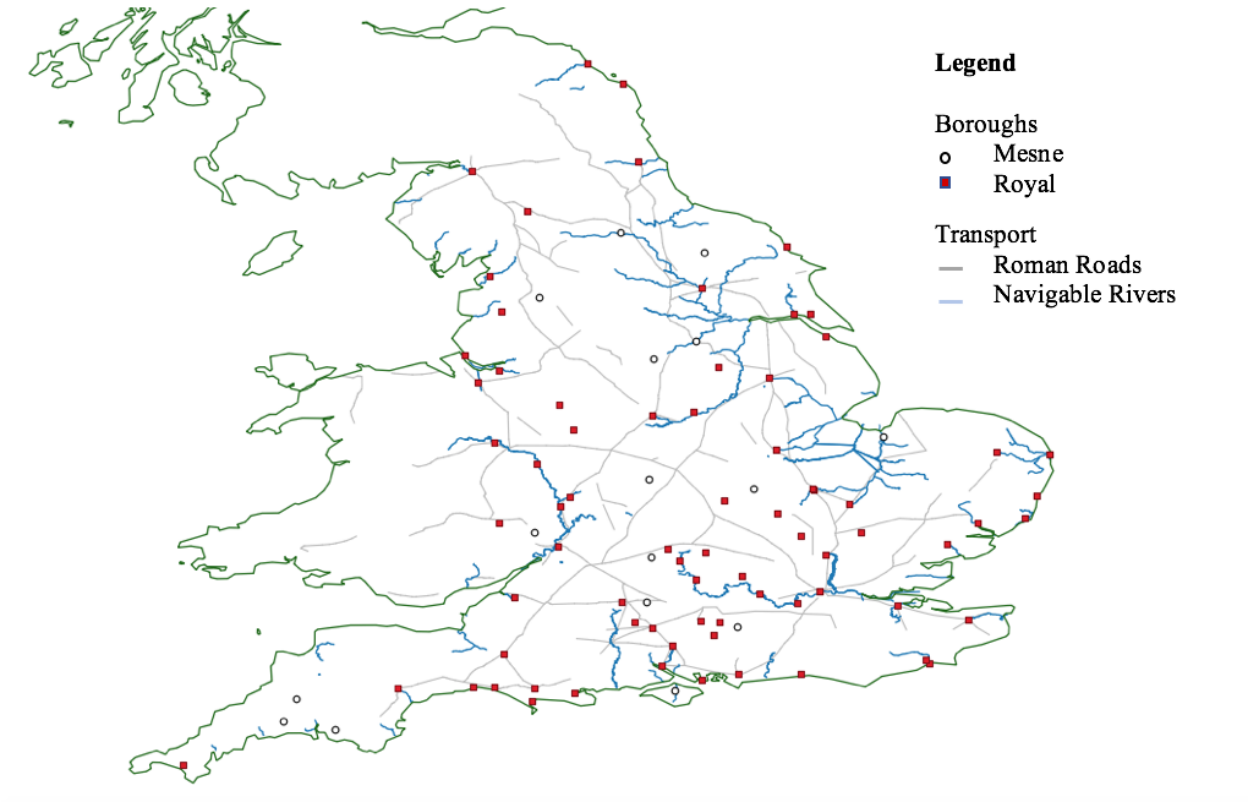

Figure A.2: Boroughs with Farm Grants, by Royal and Mesne

Note: This figure shows the location of the 90 boroughs in our dataset that had received Farm Grants by 1348. Solid squares indicate the 74 royal boroughs, and hollow dots, the 16 mesne boroughs (owned by local lords or by the Church). The figure also shows the location of navigable rivers and of Roman roads.

century.[39] Column 2 shows that the coefficients on rivers and Roman roads are very similar when we use only these two proxies for trade. At the same time, the dummy for royal boroughs is small and insignificant, confirming our results from Section 4.2 that there are no major differences in taxable wealth across royal and mesne boroughs.

Next, we turn to 2SLS results, using rivers and Roman roads as instruments for taxable wealth in 1086.[40] Column 3 in Table A.3 shows that we obtain a significant positive coefficient that is about twice as large as the coefficient on taxable wealth in the corresponding OLS specification (column 5 in Table 2 in the paper). This is likely due to measurement error: Taxable wealth in the Domesday Book was assessed largely based on the value of land and structures, which in turn was indirectly affected by population and, arguably, trade (Darby, 1977, p. 11).[41] Also, trade may

[39]The results that follow (columns 3 and 4) are very similar – and the first stage is stronger – when we exclude the 35 boroughs that were located on the sea coast (and for which data on taxable wealth in 1086 is also available).

[40]At the bottom of Table A.3 we report the first-stage F-statistics. Since these are below the rule-of-thumb of 10, the 2SLS results in this table have to be interpreted with caution.

[41]See also Faith (1999, p. 91), who points out that while *geld* (the Domesday taxable wealth) had historically

Table A.3: Farm Grants: Use Trade Geography to Predict Taxable Wealth

Dependent variable as indicated in table header

	(1)	(2)	(3)	(4)	(5)
Dependent variable:	ln(Taxable Wealth)		Indicator for Farm Grant by 1348		
Boroughs included:	all	all	all	royal	mesne
Notes:	OLS (1st stage)		2SLS for ln(Taxable wealth in 1086)		
Navigable River	0.764***	0.744***			
	(0.177)	(0.178)			
Roman Road	0.196	0.232*			
	(0.137)	(0.137)			
Sea Coast	-0.610***				
	(0.204)				
Royal borough	0.128	0.118	0.434***		
	(0.151)	(0.147)	(0.057)		
ln(Taxable wealth in 1086)†			0.103*	0.206**	-0.022
			(0.062)	(0.087)	(0.075)
Mean Dep. Var.	1.69	1.69	0.16	0.51	0.04
R^2	0.09	0.06			
Observations	354	354	354	85	269
First stage F-stat.:			9.9	7.2	4.0

Note: Columns 1 and 2 in the table show that boroughs on navigable rivers or Roman roads had higher taxable wealth in 1086; due to the devastation during the Norman Conquest and frequent raids by Danes during the 11th century, boroughs on the sea coast had lower wealth in 1086. Sea coast is thus not used as an instrument in the rest of the table. Columns 3-5 use 2SLS results to show that the effect of geography on Farm Grants worked at least in part through (taxable) wealth – but this holds only in royal boroughs. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

† Predicted using navigable river and Roman road as instruments.

have affected Farm Grants not only via taxable wealth, but also via the need for a more specialized administration (as discussed in Section 3). Thus, the exclusion restriction is unlikely to hold when we instrument for wealth – and correspondingly, we are reluctant to take the point estimate at face value. Next, in column 4 we restrict the sample to royal boroughs and obtain a large positive and significant coefficient on taxable wealth. This is in stark contrast to the small insignificant coefficient on wealth among mesne boroughs (column 5). Altogether, our results suggest that trade had a strong effect on the odds of receiving Farm Grants in royal boroughs, but not in mesne boroughs. In addition, this effect worked at least in part via taxable wealth – boroughs that were richer because of trade were also more likely to obtain Farm Grants.

C.5 Farm Grants and Commercial Importance

In what follows we present suggestive evidence that Farm Grant boroughs were commercially more important already in the mid-14th century. Importantly, we do not argue that Farm Grants *caused*

reflected land area, it evolved into a broader measure of taxable worth of a settlement by 1086.

commercial importance. Instead, the following results underline the close – possibly bi-directional – relationship between self-governance and economic development at the local level. In columns 1-3 of Table A.4 we use our first proxy for commercial importance described in Appendix B.6: an indicator variable for "Freedom from tolls" – a grant of liberty that exempted a borough's burgesses from tolls throughout the realm. This liberty was issued by the king against a fee paid by boroughs. Clearly, purchasing this liberty only made sense for burgesses from boroughs with a focus on trade. Column 1 shows that boroughs with a Farm Grant were 52 percentage points (p.p.) more likely to obtain "Freedom from tolls," relative to an average of about 15 percent of boroughs that purchased this liberty. In column 2, we add county fixed effects and terrain controls, and in column 3, we restrict the sample to royal boroughs. In both cases we confirm the strong positive association between Farm Grants and "Freedom from tolls" (with almost identical coefficient sizes).

Table A.4: More Evidence on Commercial Importance of Boroughs with Farm Grants

Dependent Variable: As indicated in table header

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	Freedom from Tolls by 1348†			Commercial Hub in 14C‡		
Boroughs included:	all	all	royal	all	all	royal
Farm Grant 1348	0.520***	0.544***	0.533***	0.381***	0.381***	0.417***
	(0.053)	(0.051)	(0.070)	(0.053)	(0.053)	(0.065)
County FE		✓			✓	
Terrain Controls		✓			✓	
Mean Dep. Var.	0.15	0.22	0.46	0.09	0.09	0.27
R^2	0.28	0.33	0.29	0.24	0.29	0.22
Observations	554	554	145	554	554	145

Note: The table shows that boroughs with Farm Grants were commercially more important in the 14th century, using the two indicators explained below. Section 4.1 provides more detail. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Terrain controls include soil quality as well as ruggedness in a 10 km radius around each borough.

† Indicator variable for "Freedom from tolls" – a grant of liberty that exempted a borough's burgesses from tolls (taxes on trade) throughout the realm. This liberty was issued by the king against a fee paid by boroughs, and it was available to both royal an mesne boroughs. See Appendix B.6 for detail.

‡ Indicator variable for whether a borough was a commercial hub during the 14th century, based on Masschaele (1997). Criteria include the presence of merchant guilds, the classification as "urban" in the 1340 Nonae Rolls tax records, and the total tax on tradable goods levied in 1334.

In columns 4-6 of Table A.4 we repeat the same specifications as in the first three columns, but now using as dependent variable our second proxy for commercial importance: an indicator variable for whether a borough was a commercial hub during the 14th century, based on Masschaele (1997). We confirm the previous results both in terms of magnitude and statistical significance: Boroughs with Farm Grants were much more likely to be commercial centers in the mid-14th century. We do not interpret these results causally. In fact, as by our argument, commercial centers

were more likely to obtain Farm Grants in the first place. Thus, the correlations in Table A.4 corroborate our historical evidence that commercial activity was *associated* with Farm Grants.

C.6 Strategic Enfranchisement

As shown in Figure 6 in the paper, between 1348 and 1700, an additional 73 boroughs became enfranchised. Unlike the boroughs that gained representation in Parliament before 1348, the vast majority of these boroughs did not enjoy early self-governance. As the House of Commons grew in political power in the 15th and 16th centuries, kings resorted to the enfranchisement of rural boroughs in an attempt to control the lower house. For instance, as Porritt (1909) puts it:

> "Nothing except the desire of the Crown [...] to control the House of Commons [...] could account for the enfranchisement of such Cornish boroughs as Newport, Saltash, Camelford, West Looe, Grampound, Bossiney and St. Michaels. Until the reign of Edward VI (1537-1553), Cornwall had not been over-represented. [...] it was in the reign of Edward VI that Cornwall first began to attain notoriety as a county of many boroughs. It owed this notoriety to the fact that it was a royal duchy, a county over which the Crown exercised more direct control than over most of the other counties of England." (Porritt, 1909, pp. 373-4)

Consistent with their limited commercial importance, and being under close control of the king's allies, these newly enfranchised boroughs were significantly more likely to be considered as "rotten" – i.e., small and subject to patronage – in the period leading up to the Great Reform Act. This is illustrated in Figure A.3. The left part of the figure examines boroughs that obtained seats in Parliament by 1348. It shows that the share of "rotten boroughs" was low among the boroughs with self-governance (Farm Grants), and high (almost one-third) among the other enfranchised boroughs. This suggests that strategic enfranchisement can potentially account for some of the non-commercial boroughs that gained representation in Parliament by 1348 (in addition to the factors discussed in Section 5.2 in the paper). The right part of Figure A.3 examines enfranchisement after 1700. Among the boroughs that were enfranchised later, there are much fewer boroughs with Farm Grants, and the share of rotten boroughs is even higher: Half of the boroughs without Farm Grants that were enfranchised between 1348 and 1700 became rotten, and almost all of the rotten boroughs were those without Farm Grants. Overall, these results are consistent with the strategic enfranchisement of commercially unimportant boroughs that were under close patronage of the king's allies – in an attempt to shift the balance in the House of Commons in the king's favor.

C.7 Enfranchisement of Boroughs: Additional Results

Table A.5 provides additional results for boroughs' representation in Parliament, complementing Table 4 in the paper. Columns 1 and 2 show that Farm Grant boroughs were also significantly more likely to be represented in the 'Model Parliament' of 1295. Again, the coefficient is very similar for the full sample (col 1) and for the subset of royal boroughs (col 2). Columns 3-7 return to our main period of interest – enfranchisement by 1348. Columns 3 and 4 add county fixed effects and terrain controls (soil quality and ruggedness) to our baseline specifications from Table

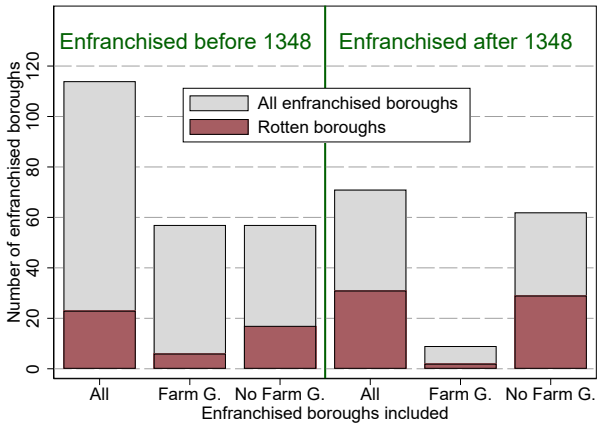

Figure A.3: Rotten boroughs: The role of Farm Grants and Timing of Enfranchisement

Note: The figure provides evidence for strategic enfranchisement: Among the boroughs without Farm Grants, the share of "rotten boroughs" was much larger, and this is particularly true for later enfranchisement (after 1348).

4 in the paper. The coefficients on Farm Grants are virtually unaffected. In column 5, we exploit the length of the time period during which boroughs held Farm Grants until 1348. We restrict the sample to the 90 boroughs that did receive these grants by 1348.[42] We find a strong positive coefficient: Doubling the years for which a borough held a Farm Grant increases the probability of being enfranchised by 9.9 p.p. (relative to a mean of 0.71 – most boroughs with Farm Grants were represented in Parliament). Next, columns 6 and 7 provide the regressions that correspond to Figure 7 in the paper: The coefficients are much larger for boroughs that also had constraints on sheriffs entering the borough (and thus restricted possibilities for central authorities to collect extra-ordinary taxes). Finally, column 8 repeats the full-sample regression for enfranchisement by 1700 and finds a strong positive coefficient on Farm Grants, which is very similar to the results for 1348, in both magnitude and significance.

Table A.6 provides a robustness check that uses an alternative, broader coding of the dummy for enfranchisement, related to the issue explained in footnote 33 in the paper: The results in the paper (Table 4) and in Table A.5 above coded as enfranchised only boroughs that retained their seats in Parliament until 1830 (and not counting those boroughs as enfranchised that let their franchise expire and were later denied re-enfranchisement). In contrast, Table A.6 codes as enfranchised *all* boroughs that were represented in Parliament at least once by the respective date (1295 / 1348), even if they later lost the franchise. This gives 24 and 32 additional enfranchised boroughs in 1295 and 1348, respectively. Columns 1 and 2 show that results are very similar for the 'Model Parliament' in 1295 (the comparison here are the specifications from cols 1 and 2 in Table A.5).

[42] In a few cases, Farm Grants were revoked for intermittent years and then re-granted (see footnote 22 in the paper). We exclude these years when coding the duration of Farm Grants.

Table A.5: Representation in Parliament by 1295, 1348, and 1700: Additional Results

Dependent variable: Indicator for borough enfranchised by 1295 / 1348 / 1700

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep.Var.: Enfranchised by	1295	1295	1348	1348	1348	1348	1348	1700
Boroughs included:	founded by 1295				Farm Grant			
	all	royal	all	royal	by 1348	all	royal	all
Farm Grant 1295	0.360***	0.422***						
	(0.068)	(0.077)						
Farm Grant 1348			0.447***	0.583***				0.416***
			(0.064)	(0.081)				(0.063)
ln(years grant 1066-1348)					0.099***			
					(0.037)			
Grant and constraint on sheriff						0.621***	0.640***	
						(0.070)	(0.076)	
Grant, no constraint on sheriff						0.368***	0.477***	
						(0.075)	(0.091)	
Royal borough	0.135***		0.160***		0.336**	0.137***		0.191***
	(0.050)		(0.049)		(0.139)	(0.049)		(0.057)
County FE			✓	✓				
Terrain Controls			✓	✓				
Mean Dep. Var.	0.21	0.42	0.23	0.51	0.71	0.23	0.51	0.35
R^2	0.19	0.18	0.36	0.57	0.21	0.28	0.33	0.20
Observations	460	136	554	145	90	554	145	550

Note: The table shows that boroughs with Farm Grants were also significantly more likely to be represented in the first Parliament in 1295 ('Model Parliament'). In addition, the earlier Farm Grants were obtained, the more likely was the borough to be represented in Parliament (col 5). Finally, coefficient sizes are much larger for boroughs that also had constraints on sheriffs entering the borough (and thus restricted possibilities for central authorities to collect extra-ordinary taxes – cols 6 and 7). All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. Terrain controls include soil quality as well as ruggedness in a 10 km radius around each borough.

† Constraints on sheriff is a dummy variable that takes on value one if a borough possessed additional liberties that prohibited royal officials from entering the borough in their judicial functions (*non-intromittat*), in financial functions (*direct access to the Exchequer*), or to enforce royal orders (*return of writs*).

Next, columns 3 and 4 in Table A.6 repeat the specifications from cols 1 and 3 in Table 4 in the paper. Again, results are very similar. Consequently, our results hold (both in terms of significance and magnitude) independent of how we code boroughs that lost their seats in Parliament by the early 19th century.

C.8 Farm Grants and Enfranchisement: Proxies for Organizational Capacity

Could our results be driven by (unobserved) organizational capacity of boroughs? In particular, better organized merchants may have been more successful at lobbying the king for both Farm Grants and representation in Parliament. In what follows, we address this issue using two proxies for the organizational capacity of boroughs. We first provide background on the history and data

Table A.6: Representation in Parliament: Include Boroughs that Later Lost Franchise

Dependent variable: Indicator for borough enfranchised by 1295 / 1348

	(1)	(2)	(3)	(4)
Dep.Var.: Enfranchised by	1295	1295	1348	1348
Boroughs included:	founded by 1295			
	all	royal	all	royal
Farm Grant 1295	0.320***	0.383***		
	(0.069)	(0.080)		
Farm Grant 1348			0.448***	0.500***
			(0.063)	(0.071)
Royal borough	0.194***		0.196***	
	(0.055)		(0.055)	
Mean Dep. Var.	0.26	0.50	0.29	0.59
R^2	0.17	0.15	0.25	0.26
Observations	460	136	554	145

Note: Columns 1 and 2 repeat the specifications from cols 1 and 2 Table A.5 in the appendix, and columns 3 and 4 repeat the specifications from cols 1 and 3 in Table 4 in the paper. Here, enfranchisement is defined more broadly: The previous results in Tables A.5 and 4 coded as enfranchised only boroughs that retained their seats in Parliament until 1830 (and not counting those boroughs as enfranchised that lost their franchise – see footnote 33 in the paper). The present table codes as enfranchised all boroughs that were represented in Parliament at least once by the respective date (1295 / 1348), even if they later lost the franchise. This gives 24 (32) additional enfranchised boroughs in cols 1 and 2 (3 and 4).

for each proxy, and then present our results.

Boroughs' Separate Rights to Elect Officials. Our first proxy for organizational capacity is whether boroughs obtained the right to elect officials, independent of Farm Grants. As explained in the main text, Farm Grants already included the right to elect local officials. Some boroughs without Farm Grants obtained separate election rights, i.e., the right to elect local officials, *without* self-administered tax collection. In particular, the election of coroners and mayors was not included in Farm Grants (since these were not essential for tax collection). For example, the royal town of Dover elected a mayor by the second half of the 13th century without ever obtaining a Farm Grant. Dover's mayor was not responsible for the collection of the farm (this responsibility fell on the king's bailiffs), but rather was the representative of the community of burgesses (Reynolds, 1977, pp. 108-110).[43] A similar example is provided by the mesne borough of New Salisbury, in which a mayor was elected since 1249, but whose authority was limited by the bishop's bailiff.[44]

[43]Over time, the mayor of Dover acquired prerogatives in the local administration of the borough. These prerogatives were, however, limited by the presence of royal officials. See the online version of the collection of volumes *History of Parliament* http://historyofparliamentonline.org/volume/1386-1421/constituencies/dover and http://historyofparliamentonline.org/volume/1509-1558/constituencies/dover.

[44]See http://historyofparliamentonline.org/volume/1386-1421/constituencies/salisbury and http://historyofparlia-

In order to obtain the right to elect local officials, a borough's burgesses had to organize collective action in bringing forward their petition to the crown or local lord. Thus, obtaining the right to elect officials is a proxy for organizational capacity. We code these liberties mainly from Ballard (1913) and Ballard and Tait (1923). We complement these datasets with information reported in the British History Online (https://www.british-history.ac.uk) and History of Parliament (http://www.historyofparliamentonline.org).

Overall in our dataset, 95 boroughs obtained separate rights to elect officials before 1348 (i.e., other than the election prerogatives included in Farm Grants). Among these, 50 boroughs also had Farm Grants – they typically obtained additional election rights such as mayor or coroner that were not crucial for tax collection. The remaining 45 boroughs got *only* rights to elect officials, but no Farm Grant by 1348. Another way to look at these numbers is via the composition of our main explanatory variable, "Farm Grant by 1348." Overall, 90 boroughs obtained Farm Grants by 1348. Among these, there are 40 boroughs that never got a separate right to elect officials (i.e., only had the election rights included in Farm Grants), and 50 boroughs that got Farm Grants and (separate) rights to elect officials.[45]

Boroughs' Rights to Collect Murage or Pavage. Our second proxy for organizational capacity is whether boroughs obtain the right to collect Murage or Pavage. In the Middle Ages, the burden to repair town walls and streets lay with the community of burgesses. Royal grants of Murage (walls) and Pavage (streets) consisted of the right for burgesses to impose taxes on themselves and/or goods entering the town in order to finance the repairs of walls and streets (Ballard and Tait, 1923, p. lxviii). As with our first proxy above, the request by townsmen for Murage or Pavage grants required organizational capacity. We code the information on grants of Murage and Pavage from the Patent Rolls of the reigns of Henry III, Edward I, Edward II and Edward III. Access to these sources is available at http://www.medievalgenealogy.org.uk/sources/rolls.shtml.

Overall, 104 boroughs obtained the right to collect Murage or Pavage before 1348. Among these, 49 boroughs also had Farm Grants, and 55 boroughs had the right to collect Murage/Pavage, but did not obtain a Farm Grant by 1348.[46] Consequently, among the overall 90 boroughs with Farm Grant by 1348, 49 also had Murage or Pavage rights, and 41 boroughs had Farm Grants only.

Empirical Results: Controlling for Organizational Capacity. For direct comparability with our previous results, we keep all boroughs with Farm Grants in a single category, whether or not the

mentonline.org/volume/1604-1629/constituencies/salisbury.

[45]The vast majority of boroughs (43 out of 50) with both election rights *and* Farm Grants first got Farm Grants and then *later* additional rights to elect officials. Only seven boroughs first got the right to elect officials and then received a Farm Grant. None of our results change when we exclude these seven boroughs.

[46]The vast majority of boroughs with Farm Grants and Murage/Pavage rights first obtained the former. Only five boroughs first got Murage/Pavage rights and then received a Farm Grant.

borough had additional election or Murage/Pavage rights.[47] For notational purposes, we label the variable "D_1: Farm Grant by 1348." We label the two proxies for organizational capacity as follows: "D_2: Right to elect officials / no Farm Grant" (a categorical variable that is comprised of the 45 boroughs mentioned above that obtained the right to elect officials but did not get a Farm Grant by 1348) and "D_3: Murage or Pavage / no Farm Grant" (a categorical variable for the 55 boroughs that obtained Murage/Pavage rights but did not get a Farm Grant by 1348).

Table A.7 presents our results. In columns 1 and 2, we use the two proxies to check whether our main results – the relationship between Farm Grants and enfranchisement – may be confounded by organizational capacity. We use the baseline regression from column 1 in Table 4 in the paper as a reference point (where the coefficient on Farm Grant is 0.466). Column 1 in Table A.7 reports results when we control for the right to elect officials.[48] Two findings stand out: First, the coefficient on D_1 is very similar to our main results in Table 4 in the paper. In other words, the relationship between Farm Grants and enfranchisement is virtually unchanged when we control for (separate) election rights. Second, the coefficient on D_2 is less than half in magnitude compared to D_1, and this difference is statistically highly significant with a p-value of 0.004. The second result suggests that the right to elect officials is also associated with representation in Parliament, but to a lesser degree than Farm Grants. Coherent with our argument, this suggests that the right to collect taxes in itself (i.e., not just other election rights that came with Farm Grants) significantly augmented the probability that a borough was enfranchised.

Column 2 in Table A.7 presents the full sample results for Murage/Pavage rights (D_3). The pattern is very similar to column 1: Adding D_3 as a control does not affect the relationship between Farm Grants and enfranchisement. Also, the coefficient on Murage/Pavage is itself statistically significant but much smaller than the coefficient on Farm Grants (with the difference in coefficients being significant with a p-value smaller than 0.001).

In column 3 of Table A.7 we restrict the sample to the 95 boroughs that obtained the right to elect officials, i.e., towns that had proved their organizational capacity independent of (or in addition to) Farm Grants. Among these, 50 boroughs had both Farm Grants and the right to elect officials; the remaining 45 had only the right to elect officials. Even within this subsample of boroughs with 'proven capacity to organize,' the boroughs that also had Farm Grants were much more likely to be enfranchised. In fact, the coefficient is almost as large as in our main sample. This further suggests that it is unlikely that organizational capacity confounds our results. Finally, column 4 restricts the sample to the 104 boroughs that obtained Murage/Pavage rights,

[47] For the right to elect officials, this choice is additionally motivated by the fact that Farm Grants already included important election rights.

[48] Interestingly, the right to elect officials is not related to trade geography: When running the regression from column 1 in Table 3 in the paper with D_2 as dependent variable, the three trade geography variables are individually close to zero and jointly far from statistical significance, with a p-value of 0.464.

Table A.7: Proxies for Organizational Capacity: Right to Elect Officials and Murage/Pavage

Dependent variable: Indicator for borough enfranchised by 1348

	(1)	(2)	(3)	(4)
Boroughs included:	all	all	only boroughs with separate rights to...	
			elect local officials	Murage/Pavage
D_1: Farm Grant 1348	0.492***	0.490***	0.425***	0.554***
	(0.063)	(0.064)	(0.135)	(0.126)
D_2: Right to elect officials / no Farm Grant	0.229***			
	(0.073)			
D_3: Murage or Pavage / no Farm Grant		0.158**		
		(0.066)		
p-value for difference between D_1 and D_2/D_3	*0.004*	*<0.001*		
Royal borough	0.147***	0.146***	0.176	-0.011
	(0.050)	(0.051)	(0.138)	(0.131)
Number of boroughs with $D_1 = 1$	90	90	50	49
Number of boroughs with $D_2/D_3 = 1$	45	55		
Mean Dep. Var.	0.23	0.23	0.64	0.55
R^2	0.28	0.27	0.34	0.30
Observations	554	554	95	104

Note: The table controls for two proxies for boroughs' organizational capacity: Whether they obtained the right to elect officials (independent of Farm Grants) and whether they obtained the right to collect Murage or Pavage taxes to repair town walls and/or roads. Columns 1 and 2 show that our main results (i.e., the coefficient on Farm Grant in col 1 in Table 4) do not change when controlling for these proxies. Columns 3 and 4 show that even when restricting the sample to boroughs that obtained the right to elect officials or Murage/Pavage (i.e., towns that had proved their organizational capacity), the coefficient on Farm Grants is very similar to the main result in Table 4. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

among which 49 also held Farm Grants. We find that Farm Grant boroughs were much more likely to be represented in Parliament – with a coefficient size that is even slightly larger than in the full sample. This complements our results above, suggesting that townsmen's ability to organize collective actions and obtain other liberties mattered, but that Farm Grants were a more powerful stepping stone towards parliamentary representation.

C.9 Farm Grants and Enfranchisement: Pre-Norman Towns

During the 10th century, the Anglo-Saxon kings summoned general assemblies (*witans*) to take counsel on matters such as customs, legislation, and warfare. These assemblies were typically composed of lay and religious power holders: earls, archbishops, bishops, abbots and *thegns* – militarily powerful men who exercised authority in rural and (some) urban localities (i.e., similar to Norman barons in the 11th century). The historical record includes no indication of direct representation of towns in *witans* (Loyn, 1984; Maddicott, 2010).[49] In one occasion (in ca. 965), historians suggests that *thegns* from the militarily powerful Anglo-Saxon *burhs* (fortified towns)

[49]Towns were directly represented in assemblies in Western Europe only after the 11th century (Marongiu and Woolf, 1968).

were explicitly summoned to attend the witan (Maddicott, 2010, pp. 5-11). While this does not constitute a *direct* representation of towns, it nevertheless could imply that important military centers had a history of representation before the Norman Conquest. This could confound our results if two conditions hold: i) there was a "legacy of representation," i.e., towns that were (indirectly) represented in assemblies before the Norman Conquest were also more likely to be summoned to Parliament after the 13th century; and ii) pre-Norman military centers were more likely to obtain Farm Grants after the 11th century.

To address this concern, we create an indicator for the 52 fortified pre-Norman towns (*burhs*) listed in Hill (1981, Figures 150 and 235). Table A.8 presents our main results on Farm Grants and representation in Parliament, controlling for pre-Norman towns. For direct comparison, column 1 replicates our baseline result (from column 1 in Table 4). Column 2 adds the control for pre-Norman fortified towns (*burhs*). We find that the coefficient on Farm Grants is essentially unchanged; the coefficient on *burhs* is also statistically significant, but smaller than the one for Farm Grants. In column 3, we use an alternative, broader, control for pre-Norman urban settlements – locations that were explicitly listed as 'boroughs' in the Domesday Book.[50] Domesday boroughs were important military and administrative centers of the time (e.g., shire courts would meet there) (Brooke, 1961, p. 127). The results are remarkably similar to those in column 2. Finally, in column 4 we restrict the sample to the 100 Domesday Boroughs, and in column 5, we exclude all Domesday Boroughs from our dataset. In both cases, the coefficient on Farm Grants is very similar. Thus, it is very unlikely that pre-Norman urban centers drive or confound our results.

Overall, the results in Table A.8 are in line with power holders being enfranchised in assemblies and parliaments (North, Wallis, and Weingast, 2009) – where "power holders" before the 11th century included predominantly military and religious authorities, while merchant towns (especially those with self-governance due to Farm Grants) ascended to parliaments in the late Medieval period.

C.10 MP Elections 1604-1831

This section complements our analysis of local MP elections from Section 6.2 in the paper. We extend the coding of two of our proxies for open elections to a longer time horizon (going back to the 17th century): *Openness* (the extent to which a borough's choice of MP candidates was subject to the control of a patron) and *Broad Franchise* (the breadth of the electorate that voted for MPs). Appendix B.7 describes the construction of these variables in detail. The number of observations varies across the different time periods, depending on the availability of the necessary information in the sources listed above.

Table A.9 uses a modification of the openness index that was defined for values 1 to 3 in Table

[50] These are listed in Ballard (1904). There are overall 100 Domesday Boroughs in our dataset. The vast majority of *burhs* (45 out of 52) became Domesday Boroughs.

Table A.8: Proxies for Pre-Norman Military and Administrative Towns

Dependent variable: Indicator for borough enfranchised by 1348

	(1)	(2)	(3)	(4)	(5)
Boroughs included:	all	all	all	only Domesday Boroughs	exclude Domesday Boroughs
Farm Grant 1348	0.466***	0.435***	0.432***	0.402***	0.418***
	(0.063)	(0.062)	(0.060)	(0.114)	(0.076)
pre-Norman Fortified Towns		0.313***			
		(0.066)			
Domesday Borough			0.300***		
			(0.051)		
Royal borough	0.154***	0.091*	0.075	0.245*	0.028
	(0.050)	(0.047)	(0.046)	(0.131)	(0.046)
Mean Dep. Var.	0.23	0.23	0.23	0.60	0.15
R^2	0.26	0.30	0.33	0.34	0.15
Observations	554	554	554	100	454

Note: The table controls for two proxies for pre-Norman towns: Fortified military towns (*burhs*) and Domesday Boroughs (i.e., settlements that were explicitly listed as 'boroughs' in the Domesday Book in 1086). Columns 2 and 3 show that our main result (i.e., the coefficient on Farm Grant in col 1) does not change when controlling for these indicator variables. Columns 4 and 5 show that even when restricting the sample to Domesday Boroughs, or when excluding Domesday Boroughs, the coefficient on Farm Grants is very similar. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

7. Here, we use dummies that take on value one if a borough's MP elections are classified as "open" (values strictly greater than 2 in the openness index).[51] Also, Table A.9 examines a longer time period, using the openness measure for five sub-periods between 1690 and 1831. To account for potential changes in regional socio-economic conditions over time, we include county fixed effects for each sub-period.[52] Column 1 shows that our results for the openness index for 1820-31 from Table 7 in the paper hold also when we use the dummy. The coefficient on Farm Grants is statistically highly significant, and its magnitude is large: Boroughs with Medieval Farm Grants (that were also represented in Parliament) were about 15 p.p. more likely to have open elections, relative to a sample mean of 0.15. Next, we repeat the analysis using the election openness dummy for the periods 1790-1820 (col 2), 1754-1790 (col 3), 1715-54 (col 4), and 1690-1715 (cols 5). We find coefficients on Farm Grants of very similar magnitude throughout.[53] Thus, our results imply

[51] This addresses concerns about the implicit linearity assumption when using the full index (as in column 1 of Table 7).

[52] The results are nearly identical when we exclude county fixed effecs.

[53] As the mean of the dependent variable shows, a larger fraction of boroughs had open elections in the earliest period that starts in 1690. A likely explanation is that in 1690 – following the Glorious Revolution – the old Charters of Incorporation where reestablished after the kings' attempt to change them in the 1640s and 1680s (in an attempt to manipulate the election of MPs): Both Charles I and James II had forced numerous incorporated boroughs to hand over

that boroughs with Medieval Farm Grants had significantly more open elections of their MPs over a long time span between 1690 and 1831.

Table A.9: Openness of MP Elections 1690-1831

Dependent variable: Indicator for Open MP elections

	(1)	(2)	(3)	(4)	(5)
Period considered	1820-31	1790-1820	1754-90	1715-54	1690-1715
Farm Grant 1348	0.149**	0.172**	0.188***	0.149*	0.248**
	(0.063)	(0.068)	(0.070)	(0.076)	(0.100)
County FE	✓	✓	✓	✓	✓
Mean Dep. Var.	0.15	0.20	0.23	0.25	0.37
R^2	0.30	0.34	0.31	0.33	0.29
Observations	185	184	185	185	161

Note: The table shows that boroughs with Medieval Farm Grants had more open elections of their MPs over the period 1690-1831. The construction of the dependent variables is described in Appendix B.7. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. The number of observations varies across the different time periods, depending on the availability of the necessary information in the sources listed in Appendix B.7.

Table A.10 extends our *Broad Franchise* measure from Table 7 for six additional time periods, reaching back to 1604.[54] On average, about 70% of boroughs had a broad franchise, and this fraction is stable between the early 17th and the 19th century. Across the various periods, boroughs with Farm Grants were about 20% more likely to have a broad franchise.[55] In combination, the results from Tables A.9 and A.10 imply that, between the 17th and 19th century, boroughs with Medieval Farm Grants were both significantly more open in terms of nominating candidates for MP seats, and had a broader electorate that voted for MP candidates.

C.11 Volunteer Troops During the Civil War

In Table A.11, we examine the reduced-form relationship between trade geography and *Volunteers* to support parliamentarians during the Civil War. Column 1 shows a strong relationship for bor-

their Charters of Incorporation. New charters were then issued with the objective of imposing mayors and aldermen sympathetic to the royal cause (Porritt, 1909; Howell, 1982; Miller, 1983). Following the Glorious Revolution in 1688, boroughs petitioned king and Parliament to have their old charters reestablished (Henning, 1983; Cruickshanks et al., 2002). This process resulted in fresh contests for city councils and, arguably, boroughs' parliamentary seats.

[54]Note that we can extend the *Broad Franchise* measure further back in time than the above *Openness* measure. *Broad Franchise* is based on an objective measure (boroughs' franchise rules), for which we have data since 1604. In contrast, *Openness* is based on the accounts of boroughs' internal politics, as reported in the collection of books *History of Parliament*. In this collection, there is a clearer distinction between "open" and "close" boroughs for the period 1690-1832 than for the pre-Glorious Revolution period. For consistency, we therefore start the construction of our *Openness* index in 1690.

[55]As in Table A.9, we present the results with county fixed effects to account for potential changes in regional socio-economic conditions over time. Results without fixed effects are almost identical and available upon request.

Table A.10: Franchise Rules in MP Elections 1604-1831

Dependent variable: Indicator for Broad Franchise over the indicated period

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Period considered	1820-31	1790-1820	1754-90	1715-54	1690-1715	1660-90	1604-29
Farm Grant 1348	0.143**	0.208***	0.200***	0.199***	0.237***	0.300***	0.147**
	(0.071)	(0.067)	(0.067)	(0.067)	(0.057)	(0.064)	(0.073)
County FE	✓	✓	✓	✓	✓	✓	✓
Mean Dep. Var.	0.69	0.71	0.72	0.73	0.76	0.71	0.70
R^2	0.28	0.32	0.32	0.30	0.32	0.38	0.33
Observations	185	185	184	186	185	184	176

Note: The table shows that boroughs with Medieval Farm Grants had a broader franchise electing their MPs over the period 1604-1831. The construction of the dependent variables is described in Appendix B.7. All regressions are run at the borough level. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01. The number of observations varies across the different time periods, depending on the availability of the necessary information in the sources listed in Appendix B.7.

oughs that were royal in Medieval times – with a p-value of 0.001 for the joint significance of the three geography variables. In contrast, there is no reduced-form relationship for our 'placebo' mesne boroughs (col 2), and this non-result is also obtained when using entropy weights (col 3). These results complement the findings in Table 8 in the paper, which show that merchant boroughs with Farm Grants were particularly likely to support parliamentarians during the Civil War. The placebo results presented here make it unlikely that this relationship is driven by unobservables that are correlated with trade geography, Farm Grants, and volunteer troops. In sum, our results thus suggest that Medieval self-governance had a long-term effect on the support for Parliament.

C.12 Obstructions to Trade

This section provides detailed information on our coding of trade obstructions and presents robustness checks of the results shown in Table 10 in the paper.

Background and Data Description. For each enfranchised borough with a Farm Grant by 1348, we collect information on the occurrence of persistent negative shocks to trade *after* the borough received its Farm Grant. We focus on two types of shocks to transportation infrastructure: First, natural disasters – the silting up or destruction of harbors located on the sea coast. Second, the obstructions of parts of navigable rivers due to water mills. Information about these events is recorded in the constituencies' descriptions for the period 1086-1832 available at http://www.historyofparliamentonline.org. Typically, such events were recorded because of petitions by burgesses asking for (i) a reduction of the yearly farm, (ii) subsidies for repairs, and (iii) exemptions from extra-ordinary taxation. For instance, Dunwich was submerged by the sea in

Table A.11: Farm Grants and Support for Parliamentarians during the Civil War: Reduced Form

Dep. Var.: Indicator for pro-Parliamentary volunteer troops raised by borough in 1642

	(1)	(2)	(3)
	— Reduced Form —		
Boroughs included:	royal	mesne	mesne
Note:			E-weights[§]
Navigable River	0.158**	0.014	0.012
	(0.069)	(0.027)	(0.026)
Sea Coast	0.059	0.027	0.051
	(0.067)	(0.026)	(0.039)
Roman Road	0.207***	0.006	-0.005
	(0.062)	(0.017)	(0.016)
p-value: joint significance River, Coast, Road	*[0.001]*	*[0.734]*	*[0.332]*
Mean Dep. Var.	0.14	0.02	0.03
R^2	0.13	0.01	0.02
Observations	144	406	406

Note: This table shows reduced-form results corresponding to the 2SLS results in column 6 of Table 8. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

[§]Entropy balancing reweighs the observations in mesne boroughs to match the mean and variance of navigable river, sea coast, and Roman road in royal boroughs. See Hainmueller and Xu (2013) for details.

1354 and had its harbor permanently obstructed as a result. Dunwich saw its farm reduced from £65 in 1357 to £12 under Henry VI. By 1832, "coastal erosion had reduced Dunwich to a small village."[56] Similarly, New Shoreham, located at the mouth of the river Adur, suffered both from the silting of the river and obstructions to its harbor in the 15th and 16th centuries. As a consequence of these shocks, the town was exempted from the payment of several taxes.[57]

Obstructions of river transport by watermills were also common, especially after the 14th century. Watermills were used for agricultural purposes and in the production of textiles. They required weirs (or milldams) across rivers, which had a significant negative impact on navigability (Langdon, 2000). Goods had to be unloaded and loaded again at every mill – a process known as "backing" (Jones, 2000). This slowed down water transport and made it more expensive, thus hampering trade for the affected upstream and downstream boroughs. Often, lords (including the king) made the decision whether to build a mill on their demesne. This decision was made in disregard of the negative externalities it generated on other boroughs located on the same river. For example, Huntingdon filed a petition in the 15th century because of the obstructions to the river Great Ouse caused by watermills between St. Neots and St. Ives. The petition led to a reduction of Hunting-

[56]See http://www.historyofparliamentonline.org/volume/1820-1832/constituencies/dunwich. For a similar example, see the entry for Lyme Regis.

[57]See http://www.historyofparliamentonline.org/volume/1509-1558/constituencies/new-shoreham.

don's annual farm by about 30%, while the obstruction by the watermills remained.[58] Information on obstructions of navigable rivers are taken from Jones (2000) and Langdon (2000).[59] By the 14th century, the obstructions caused by the numerous water mills prompted complaints by burgesses (often voiced in parliament). Starting with the Magna Carta, numerous legislations attempted to regulate the construction of weirs, but failed notoriously (Jones, 2000).[60] Special commissions (*de walliis et fossatis*) were also created to investigate and remove obstructions. However, they proved largely ineffective as explicitly stated in the Patent Rolls of 1328 for the case of the river Don and further suggested by the nine commissions that were set up between 1302 and 1377 for the navigability of the Thames between Oxford and Reading (Jones, 2000).

We code negative shocks to seaports and rivers of boroughs with Farm Grants between the 13th and 17th centuries – the variable *Trade Obstruction*. These shocks typically had a detrimental economic effect that lasted for centuries (Langdon, 2000). Among the 90 boroughs that had received Farm Grants by 1348, we count 17 boroughs (all royal) that filed petitions after suffering trade obstructions. All obstructions occurred *after* these boroughs had obtained their Farm Grants.

Additional Results on Trade Obstruction. Table A.12 replicates Table 10 in the paper, excluding the five boroughs where trade obstructions began before 1348 (but after these boroughs had received Farm Grants). For the plausibility check in the first four columns, the results are very similar to those in the paper.[61] The long-run outcomes in columns 5 and 6 are very similar for Farm Grant boroughs with and without trade obstruction. In column 7, the predictive power of Farm Grants is actually stronger for the 12 boroughs that experienced trade obstructions after 1348.

C.13 Clustering and Spatial Correlation

Table A.13 replicates our main results, accounting for possible spatial dependence of error terms. For direct comparison, Panel A shows our main results (OLS with robust standard errors), referring to each respective specification in the table header. Panel B uses clustering, allowing standard errors to be correlated within counties. This could arise, for example, if decisions about Farm Grants and outcome variables (such as enfranchisement) were affected by county characteristics. The standard errors in Panel B are very similar to those in Panel A. Next, Panel C allows for spatial correlation of error terms. This addresses the concern that unobserved local characteristics may be correlated with both Farm Grants and later institutional outcomes. The analysis in Panel C uses

[58] See http://www.historyofparliamentonline.org/volume/1509-1558/constituencies/huntingdon.

[59] Jones (2000) covers all rivers except those of the Humber system. To complement these data, we rely on the constituency descriptions contained in the History of Parliament, and we analyze the 14th century Patent Rolls that contain complaints by burgesses about obstructions, as well as information about the creation of royal commissions (see below).

[60] Moreover, no evidence survives to indicate the existence of a market for property rights; arguably because of the large number of stakeholders involved (individual boroughs and lords).

[61] If anything, boroughs that later had their trade obstructed started off with *higher* taxable wealth (col 1). Yet, they were significantly less commercial and had lower population sizes after the obstructions (cols 3 and 4).

Table A.12: Obstructions of Trade after Farm Grants

Dependent variable as indicated in table header

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Plausibility checks				Long-run institutional outcomes		
	Pre-1348 outcomes		Post-1348 outcomes				
Dependent variable:	ln(Taxable Wealth in 1086)	Commercial Importance 14C†	Trade employment share in 1831	Population in 17th century	Volunteer troops during Civil War	Openness of MP elections 1820-31‡	Vote share for Great Reform Act 1832
Farm Grant, no obstruction	0.592***	1.546***	0.086***	1.027***	0.230***	0.727***	0.251***
	(0.211)	(0.185)	(0.021)	(0.150)	(0.052)	(0.171)	(0.073)
Farm Grant, trade obstructed	1.420***	1.368***	0.009	0.209	0.230*	0.570**	0.431***
	(0.419)	(0.327)	(0.027)	(0.340)	(0.126)	(0.243)	(0.106)
p-value: test for equality of coefficients	*[0.072]*	*[0.634]*	*[0.013]*	*[0.026]*	*[1.000]*	*[0.565]*	*[0.109]*
Mean Dep. Var.	1.68	-0.02	0.39	6.89	0.06	-0.00	0.57
R^2	0.05	0.32	0.09	0.17	0.13	0.11	0.09
Observations	349	549	185	398	544	180	173

Note: The table replicates Table 10 from the paper, but it drops 5 boroughs where trade was obstructed already before 1348 (although after the respective borough had received a Farm Grant). Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

† First principle component of two indicators for commercial importance: "Freedom from tolls" (a grant of liberty that exempted a borough's burgesses from tolls throughout the realm) and an indicator variable for whether a borough was a commercial hub during the 14th century, based on Masschaele (1997). The variable has mean zero and standard deviation 1.

‡ First principle component of the four proxies for open MP elections used in Table 7 in the paper. The variable has mean zero and standard deviation 1.

a weighting matrix that is based on each borough's geographic location. We consider boroughs with less than 2 degrees distance (about 220km) as 'neighbors,' assigning them a non-zero spatial weight. Again, the standard errors are very similar to those in the baseline specifications (Panel A). Overall, the results in Table A.13 suggest that our baseline specification with robust standard errors is sufficient.

C.14 Controlling for Taxable Wealth in 1086

This appendix section shows that all our results hold when we control for taxable wealth in 1086 – despite the fact that this reduces the sample size. Taxable wealth was assessed by the Normans after their conquest of England, and summarized in the Domesday Book in 1086. Table A.14 extends our robustness checks for the results on enfranchisement (from Table 5 in the paper) to all other institutional outcomes from Tables 6-9.

Panel A in Table A.14 controls for log taxable wealth, using all boroughs with available data on taxable wealth. Panel B excludes boroughs with taxable wealth above 50, which corresponds to the 15 richest boroughs (see Figure 5 in the paper for the full distribution of wealth; Figure A.4 below illustrates the distribution for royal and mesne boroughs with taxable wealth smaller than 50). Panel C excludes the top-10 percentile of boroughs in terms of taxable wealth, as well as boroughs with population above 10,000 in 1290 (as compared to Panel A, this excludes 36

Table A.13: Main Results: Clustering and Spatial Correlation

Dependent variable as indicated in table header

	(1)	(2)	(3)	(4)	(5)
Dependent variable:	Seat in Parliament by 1348	Influence of king on local elections 15-17C	Openness of MP elections 1820-31‡	Volunteer troops during Civil War	Vote share for Great Reform Act 1832
Reg. in paper:	Table 4, col 1	Table 6, col 1	Table 7, col 5	Table 8, col 1	Table 9, col 2
Panel A: Main Results (OLS with robust standard errors)					
Farm Grant 1348	0.466***	-0.222**	0.671***	0.201***	0.165**
	(0.063)	(0.104)	(0.149)	(0.045)	(0.070)
R^2	0.26	0.03	0.10	0.12	0.16
Observations	554	158	185	550	176
Panel B: Clustered Standard Errors (at the county level)					
Farm Grant 1348	0.466***	-0.222**	0.671***	0.201***	0.165***
	(0.082)	(0.098)	(0.125)	(0.054)	(0.060)
R^2	0.26	0.03	0.10	0.12	0.16
Observations	554	158	185	550	176
Panel C: Accounting for Spatial Correlation					
Farm Grant 1348	0.466***	-0.222**	0.554***	0.201***	0.170**
	(0.051)	(0.101)	(0.135)	(0.030)	(0.070)
Observations	554	158	185	550	176

Note: The table replicates our main results (which are run by OLS with robust standard errors and reported in Panel A), clustering standard errors at the county level (Panel B) and accounting for spatial correlation (Panel C). For each column, the header lists the table in the paper that runs the same regression, and each regression includes the same controls as those used in the corresponding tables in the paper. The coefficients in Panel C are estimated by maximum likelihood, using each borough's geographic location to derive the weighting matrix. All boroughs with distance less than 2 degrees (220km) are considered spatially contiguous and are assigned a nonzero spatial weight. Standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

‡ First principle component of the four proxies for open MP elections used in Table 7 in the paper. The variable has mean zero and standard deviation 1.

boroughs, 11 royal and 25 mesne).[62] All coefficient estimates on Farm Grants confirm our main results (see Panel A of Table A.13 for comparison). In addition, the coefficients on log taxable wealth are quantitatively small throughout, and statistically insignificant in most regressions in Table A.14. This makes it unlikely that our results are confounded by the initial (taxable) wealth of boroughs.

[62]The maximum number of observations is 354 boroughs in Panel A, 339 in Panel B, and 318 in Panel C. These enter in the regression in column 1. In columns 2-5 the number of observations is lower due to data availability – only incorporated boroughs in col 2, and only enfranchised boroughs in cols 3 and 5 (in the latter, with available data on MP voting. Among the boroughs with population above 10,000, four royal boroughs do not have data on taxable wealth and are thus excluded from all regressions in Table A.14: London, Norwich, Bristol, and Southwark. London and Bristol were not surveyed in the Domesday Book. Southwark has a missing entry in our source (http://opendomesday.org). Finally, in the case of Norwich, the information reported by our source is incomplete (see Appendix B.4 for detail).

Table A.14: Main Results: Controlling for Taxable Wealth in 1086

Dependent variable as indicated in table header

	(1)	(2)	(3)	(4)	(5)
Dependent variable:	Seat in Parliament by 1348	Influence of king on local elections 15-17C	Openness of MP elections 1820-31‡	Volunteer troops during Civil War	Vote share for Great Reform Act 1832
Reg. in paper:	Table 4, col 1	Table 6, col 1	Table 7, col 5	Table 8, col 1	Table 9, col 2
Panel A: All boroughs with data on taxable wealth					
Farm Grant 1348	0.405***	-0.297**	0.487**	0.198***	0.153
	(0.082)	(0.120)	(0.191)	(0.059)	(0.097)
ln(Taxable wealth in 1086)	0.022	-0.072**	0.079	0.008	0.060
	(0.018)	(0.035)	(0.072)	(0.011)	(0.036)
R^2	0.25	0.11	0.08	0.13	0.16
Observations	354	94	104	354	100
Panel B: Taxable wealth in 1086 below 50					
Farm Grant 1348	0.430***	-0.283**	0.470**	0.200***	0.203**
	(0.084)	(0.123)	(0.205)	(0.062)	(0.102)
ln(Taxable wealth in 1086)	-0.002	-0.072*	0.062	0.001	0.055
	(0.018)	(0.042)	(0.090)	(0.010)	(0.045)
R^2	0.25	0.09	0.06	0.13	0.18
Observations	339	85	93	339	89
Panel C: Taxable wealth in 1086 < 90pctile & Pop^{1290}<10,000					
Farm Grant 1348	0.461***	-0.279**	0.379*	0.233***	0.220**
	(0.088)	(0.126)	(0.216)	(0.068)	(0.103)
ln(Taxable wealth in 1086)	-0.009	-0.049	0.039	0.001	0.091*
	(0.019)	(0.047)	(0.101)	(0.009)	(0.050)
R^2	0.26	0.08	0.04	0.17	0.24
Observations	318	79	85	318	82

Note: In Panel A, the table replicates our main results (see Panel A of Table A.13), controlling for each borough's taxable wealth from the Domesday Book in 1086. In addition, the table imposes the restrictions from Table 5, excluding wealthy and large Medieval boroughs: Panel B excludes boroughs with taxable wealth above (the 15 richest boroughs, 6 royal and 9 mesne – see Figure 5 in the paper for the distribution of wealth). Columns 5-8 exclude the top-10 percentile of boroughs in terms of taxable wealth or population in 1290 (where the 90th percentile is 10,000) – as compared to Panel A, this excludes 36 boroughs, 11 royal and 25 mesne. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

‡ First principle component of the four proxies for open MP elections used in Table 7 in the paper. The variable has mean zero and standard deviation 1.

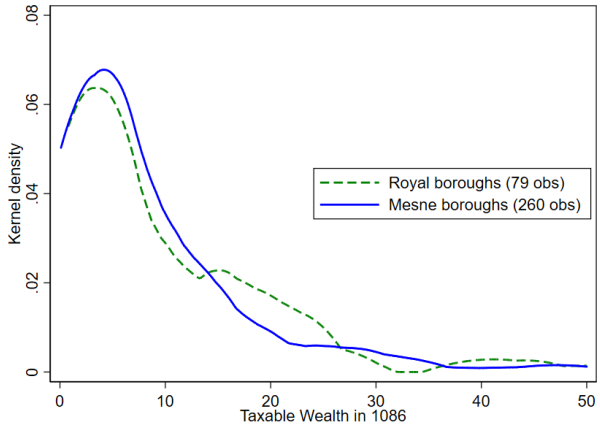

Figure A.4: Taxable Wealth in 1086 by Borough Ownership, Excluding the Richest Boroughs

Note: This figure complements the Kernel density of taxable wealth in 1086 shown in Figure 5 in the paper. Here, we exclude the 15 richest boroughs, restricting the sample to boroughs with taxable wealth below 50. The royal boroughs (dashed line) and mesne boroughs (solid line).

C.15 Matching Results

In Section 3 in the paper we discussed that Farm Grants were predominantly granted to royal territories. Since Farm Grants were largely absent in mesne boroughs, we used these to check the exclusion restriction for our geography instruments. This analysis is valid if mesne boroughs were otherwise comparable to royal boroughs. However, as discussed in Section 4.2, royal boroughs were more likely to be located on navigable rivers and Roman roads (although there were *overall* more mesne boroughs located on rivers and roads). We addressed this caveat by using entropy balancing to obtain the same trade geography – on average – in royal and mesne boroughs (see Table 1 in the paper). In what follows, we perform an additional analysis that renders mesne boroughs without Farm Grants comparable to royal boroughs with Farm Grants.

In Table A.15 we perform propensity score matching, where the 'treatment group' are royal boroughs with Farm Grants – altogether 74 in the full sample of 554 boroughs that existed by 1348. For each 'treated' borough, we use propensity score matching to identify two mesne boroughs that had exactly the same trade geography (for example, location on river and Roman road, but not on the sea coast).[63] The coefficient on *Farm Grant* in Table A.15 thus reflects the difference in the respective outcome variable between royal boroughs with Farm Grants and identical (in terms

[63]Note that this analysis excludes the 71 royal boroughs without Farm Grants, because we want to restrict attention to mesne boroughs as 'control group.' We also exclude the 16 mesne boroughs that received Farm Grants (but none of our results depend on this). This leaves a maximum of 467 (=554-71-16) observations, which include 393 mesne boroughs. This number is sufficiently large so that the matching algorithm finds at least two exact matches (in terms of the three trade geography variables) for each of the 74 'treated' royal boroughs (column 1). We also find two exact matches in the cases with fewer observations – i.e., where the dependent variable is only available for incorporated boroughs (col 2) or for enfranchised boroughs (cols 3 and 5).

of trade geography) mesne boroughs without Farm Grants. For representation in Parliament (col 1), openness of MP elections (col 3), and volunteer troops during the Civil War (col 4) we find very similar coefficients as in the paper. For influence of the king (col 2 – where the sample is the smallest) the coefficient is negative, as in Table 6, but quantitatively smaller and statistically insignificant. On the other hand, for votes during the Great Reform Act (col 5) we find a coefficient that is larger than in Table 9 in the paper. Overall, the results with (exact) matching confirm our main findings.

Table A.15: Matching Results

Dependent variable as indicated in table header

Dependent variable:	(1) Seat in Parliament by 1348	(2) Influence of king on local elections 15-17C	(3) Openness of MP elections 1820-31‡	(4) Volunteer troops during Civil War	(5) Vote share for Great Reform Act 1832
Farm Grant 1348	0.589***	-0.105	0.631***	0.165***	0.280***
	(0.074)	(0.108)	(0.194)	(0.049)	(0.088)
Observations	467	127	144	463	139
'Treated' obs. (royal boroughs with Farm Grant)	74	55	59	73	58
Mean of dep. var.:	0.231	0.378	0.092	0.058	0.597

Note: The table replicates our main results from Tables 4-9 in the paper, performing propensity score matching with two (exact) matches. The 'treatment group' are royal boroughs with Farm Grants; the 'control group' are mesne boroughs (without Farm Grants) with the same trade geography as each 'treated' borough. Robust standard errors in parentheses. * p<0.1, ** p<0.05, *** p<0.01.

‡ First principle component of the four proxies for open MP elections used in Table 7 in the paper. The variable has mean zero and standard deviation 1.

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