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## **Trade, Law and Order, and Political Liberties: Theory and Application to English Medieval Boroughs**

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# Trade, Law and Order, and Political Liberties: Theory and Application to English Medieval Boroughs\*

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## Abstract

We argue that trade opportunities, combined with the provision of law and order, may lead to local political liberties. In our model, a ruler chooses the size of an administration that *(i)* provides law and order for a merchant to use and *(ii)* collects taxes. Larger gains from trade increase the demand for law and order, which requires a larger administration. However, a larger administration is more difficult to monitor and allow local officials to expropriate merchants. When the resulting inefficiencies are significant, the ruler delegates control of the administration to the better-informed merchant, even though this makes tax evasion more tempting. We then analyze the emergence of local political liberties in post-Norman Conquest England (1066-1307) using data on taxation, commerce, and the behavior of local officials. This period marks the beginning of England's transition away from feudalism. We find that trade expansion coincides with widespread misbehavior by officials and, in line with the predictions of our model, an increasing willingness by the king to grant boroughs of high commercial value the right to elect local officials.

**Keywords:** Institutions, Law and Order, Bureaucracy, Trade, Medieval England.

**JEL Classification Numbers:** D02, D73, N43, P14, P16.

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*Sheriffs and reeves, whose office was justice and judgment, were more terrible than thieves and plunderers, and more savage than the most savage.*

Henry of Huntingdon (c. 1088-1154), in Bisson [2008], p. 178.

## 1 Introduction

What determines the existence and evolution of political liberties continues to receive much academic attention (Acemoglu and Robinson [2001], Lizzeri and Persico [2004], and Engerman and Sokoloff [2005]). A strand of the literature focuses on the emergence of local political liberties in autocracies, and argues that empowering citizens with the right to elect local officials leads to a more efficient provision of public goods. An idea shared by many of these studies is that citizens – because of their superior information – are better able than distant policy-makers to control the local administration (Bardhan [2002] and Martinez-Bravo et al. [2014]).<sup>1</sup> In this paper, we build on this logic to incorporate the essential role played by trade opportunities. We focus on a specific task performed by officials, that of providing law and order, and show how the singular nature of that task, when combined with high gains from trade, may lead to local political liberties. We use our framework to analyze the case of post-Norman Conquest England (1066-1307), for which we present detailed data on taxation, commercial importance, and political liberties across boroughs. This period is of interest because it marks the beginning of England’s transition away from feudalism. We find that trade expansion coincides with widespread misbehavior by officials and, in line with the predictions of our model, an increasing willingness by the king to grant boroughs of high commercial value the right to elect local officials.

We develop a framework based on the following inter-related observations. First,

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<sup>1</sup>See Banerjee, Hanna, and Mullainathan [2012] on the relation between the lack of control over local officials and their misbehavior.

the higher the gains to be had from trade, the greater the demand for law and order. Second, for a local administration to be capable of supplying law and order, it must be capable of coercion. Third, a local administration capable of coercion may be tempted to expropriate the surplus created by trade. We argue that when a relatively large administration is necessary to reap the benefits from trade (e.g., because of the need for contract enforcement), local political liberties are granted to better control officials.<sup>2</sup>

Our period of interest is characterized by a transition from a rural economy to one increasingly reliant on trade.<sup>3</sup> Existing boroughs more than double, over 1,000 new licensed marketplaces are recorded, and about 150 international fairs are established. The king or other territorial lords appoint borough officials to provide justice, enforce commercial contracts, regulate markets, and collect taxes. Often, officials (e.g., sheriffs) bid for the right to collect a borough's taxes and court fees. Under this system – known as *tax farming* – officials retain the difference between the taxes they collect and their bid. As the evidence we present indicates, officials engage in widespread predatory behavior. This is of concern to the king, who launches numerous investigations into complaints, and introduces many administrative reforms limiting officials' power. For instance, attempts are made at ending the tax farming system by appointing officials as *custodians* entitled to a salary and meant to transfer all collected taxes. Eventually, the king delegates the control of the local administration to burgesses in many of his commercially most important boroughs. Often, burgesses also obtain that royal officials be banned from entering their borough.

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<sup>2</sup>On the link between market supporting institutions (e.g., courts and police) and political institutions see Greif [2005], Acemoglu and Robinson [2006], Cervellati, Fortunato, and Sunde [2008], and North, Wallis, and Weingast [2009].

<sup>3</sup>Several factors point to an environment increasingly favorable to trade starting in the tenth century, including population growth (North and Thomas [1973]), regained access to Mediterranean trade (Pirenne [1925]), and a stable society following the Norman Conquest (Tait [1936], p. 136). Also, significant technological progress is under way in agriculture, such as horse traction for hauling and windmills (Langdon and Masschaele [2006]). See also Lopez [1971], Britnell [1995], and Masschaele [1997].

We build a model in which a revenue-maximizing ruler chooses the size of the administration required to (i) provide law and order for a representative merchant to use as an input and (ii) collect taxes. Their interaction is repeated and leads to an agreed-upon level of taxation. The cost of controlling the administration is especially high when it is so large that it could expropriate the merchant against the ruler's wishes.<sup>4</sup> To reduce this cost, the ruler downsizes the administration. In a rural economy, where demand for law and order is low, controlling the administration through its size involves no production inefficiencies. Conversely, downsizing the local administration involves production inefficiencies when the demand for law and order is high, which occurs when the gains from trade are high. To escape the trade-off that arises in a trade economy, the ruler may grant control over the local administration to the merchant, even though this makes tax evasion more tempting. Because the merchant is better informed about the officials' behavior, he invests in an efficient size of the local administration at a relatively low cost.

In addition to the documented abuses by local officials, the data we collect are coherent with our model in several other ways. First, using original documents (e.g., Charter Rolls, Fine Rolls), we find that over half of the royal boroughs that obtain political liberties make an upfront payment and/or pay higher yearly taxes upon (and explicitly in exchange of) the grant. Decreases in taxes are never observed immediately following the first grant. Second, we distinguish between boroughs for which the ultimate recipient of tax proceeds is the king (*royal* boroughs), and those for which the ultimate recipient is a local lord (*mesne* boroughs).<sup>5</sup> We find that mesne lords, who control smaller territories than the king and, thus, are arguably better able to monitor

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<sup>4</sup>We define expropriation as the coercive appropriation of an amount of output higher than the agreed upon tax. Formally, we treat the administration as a costly technology rather than a player. In the Online Appendix, we extend the model to treat officials as players whose decision to expropriate the merchant is unobservable to the ruler. The Online Appendix is available at <https://sites.google.com/site/simonemeragliawebpage/research>.

<sup>5</sup>The ultimate recipient of the tax also controls the local administration.

officials, do not delegate nearly as much control over the local administration to their boroughs. Finally, the proportion of royal boroughs that are granted political liberties increases with commercial importance.

Undeniably, factors other than gains from trade may have contributed to the spread of local political liberties. Wars, for instance, or more generally the need to raise revenues, can have periodically increased the rulers' willingness to grant liberties. In fact, our data includes several grants occurring either immediately before or after major wars. Rebellions, or their threat, may also have played a role.<sup>6</sup> These explanations, however, do not contradict our approach. In either case, the fact that boroughs would negotiate the right to control the local administration highlights how much of a concern the issue of local officials' misbehavior was. Moreover, in times of wars, the king's absence from the realm weakens his ability to monitor officials, as evidenced by the numerous enquiries launched upon his returns to England.<sup>7</sup> Finally, the fact that the king receives higher payments from boroughs upon the grant of liberties suggests that, if rebellions have played a role, these must have often been directed against the local administration.

**Related Literature.** Our paper continues a stream of literature on the relationship between local political liberties and the issue of controlling the bureaucracy.<sup>8</sup> Bardhan [2002] and Bardhan and Mookherjee [2006] investigate this issue in the presence of corruptible officials. A premise of this research is that communication between citizens

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<sup>6</sup>Rebellions seem crucial in other parts of Western Europe, such as France and Northern Italy, where citizens organize themselves into communes (Thierry [1867]). In the case of England, only three attempts at rebelling against the king are recorded (i.e., London (1191), Gloucester (1169-70), and York (1176)), and all three fail. On the London commune, see Tait [1936].

<sup>7</sup>The particular issue of officials' misbehavior during the king's absence is made clear by royal documents such as the *Enquiry into offences by royal officials during the king's absence 1286-9* (1289). See Douglas and Rothwell [2004], p. 460.

<sup>8</sup>Ghandi and Lust-Okar [2009] present a survey of the political science literature on elections in authoritarian regimes. De Lara, Greif, and Jha [2008] point out how administrative power is an important determinant of self-enforcing representative systems. See also Gellner [1992].

and rulers is costly.<sup>9</sup> Besley and Burgess [2002] and Egorov, Guriev, and Sonin [2009] analyze the role of free media in alleviating the problem of communication. Dessí and Piccolo [2009] look at medieval merchant guilds as a solution to the problem created by the bureaucracy. We depart from these theories in that we stress the bureaucracy’s role in providing law and order in the presence of high gains from trade, which we argue is key to understanding the institutional changes occurring in England after the Norman Conquest. As in Lane [1958] and Tilly [1985], we highlight the singular nature of the provision of law and order – namely, that it involves coercion.<sup>10</sup>

A strand of the literature explains autocrats’ handover of power to citizens by arguing that their enfranchisement makes expropriation less tempting to rulers (North and Weingast [1989], Greif, Milgrom, and Weingast [1994], Barzel and Kiser [1997], Levi [1999], Greif [2005], Myerson [2008]). In the same vein, North and Thomas [1973] and De Long and Shleifer [1993] highlight the link between the rise of trade and the arrival of more open forms of political institutions in Western Europe (c. 1000-1800), whereas Bates and Lien [1985] focus on the role played by the rulers’ need to wage wars in shaping political institutions in fourteenth century England and France.<sup>11</sup>

Horowitz [1993] and Acemoglu and Robinson [2000, 2001] analyze the path of economic and political reforms in the presence of a threat of social unrest. In Horowitz [1993], land is dynamically transferred among agents to avoid revolts. In Acemoglu and Robinson [2000, 2001], when a rich elite is in power, it chooses taxation to prevent the poor from taking over. However, the inability to commit to redistribute wealth may cause a rebellion to occur, leading to a shift in political power. Lizzeri and Persico [2004] show that an expansion of the franchise may occur in the absence of the threat of

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<sup>9</sup>See also Sng and Moriguchi [2013].

<sup>10</sup>More recently, Besley and Persson [2009], Besley and Robinson [2010], and Konrad and Skaperdas [2012] have analyzed the link between coercion and the provision of law and order. See also Olson [1993], McGuire and Olson [1996], and Moselle and Polak [2001]. In Acemoglu [2005] – as one of our results also suggests – a politically weak ruler providing law enforcement may extract high taxes.

<sup>11</sup>On the role played by wars, see also Stasavage [2011] and Gennaioli and Voth [2012].

a revolt. When the need for public goods is sufficiently high, the majority of the enfranchised elite may prefer to extend the franchise to curb politicians' incentives to engage in *ad personam* redistribution. Finally, in Engerman and Sokoloff [2005], enfranchisement is driven by factor endowments. Productive systems that exploit slavery tend to have more unequal societies in which political power rests in the hands of a rich elite.

The paper proceeds as follows. Section 2 introduces the model setting. Section 3 studies the finitely repeated game, while Section 4 solves the infinitely repeated version of the model. Section 5 provides quantitative and qualitative data on trade, taxation, and the spread of local political liberties in post-Norman Conquest England (1066-1307). Section 6 concludes.

## 2 The Model Setting

We consider the interaction between a ruler  $R$  (e.g., the king or a local lord) and a representative merchant  $M$  (e.g., burgess). Both players are risk-neutral. For simplicity, we treat the local administration as a costly technology. In the Online Appendix, we extend the model to treat it as a player.

Let  $t \in \mathbb{R}_+$  denote the lump-sum tax paid by  $M$  to  $R$ , and  $q \in \mathbb{R}_+$  the size of/investment in the local administration. The local administration provides law and order, which is an input in the production technology  $y(q)$  owned by  $M$ . The higher the number of local officials, the greater their ability to enforce contracts or protect trade routes, and thus the higher the output potentially produced.<sup>12</sup> The size of the local administration also determines an appropriation function  $f(q)$ , which represents

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<sup>12</sup>One can micro-found  $y(q)$  by modeling a simple economy in which multiple agents engage in production and trade.



the maximum amount of output that can be appropriated coercively from  $M$ .<sup>13</sup> We assume  $y(q)$  and  $f(q)$  are both non-decreasing and concave, with  $f(0) = 0$ .

Players interact dynamically and, possibly, repeatedly. At the beginning of each period,  $R$  decides whether to grant  $M$  the right to choose  $(t, q)$ . Letting  $M$  choose the investment  $q$  amounts to granting him the right to appoint local officials. For any given allocation of decision rights and  $q$ ,  $M$  decides whether to produce  $y(q)$  or exit the economy. If production occurs, players share the output through either taxation  $t$  or coercive appropriation equal to  $\min[f(q), y(q)]$ .

We now present  $R$  and  $M$ 's action spaces and payoffs, and the timing of the game.

**Ruler:**  $R$  chooses  $I \in \{R, M\}$ , where  $I$  denotes the player with decision-rights over  $(t, q)$ . The other elements in  $R$ 's action space  $\Omega_R$  depend on  $I$ :

$$\Omega_R(I) = \begin{cases} \{q, t, e\} & \text{if } I = R, \\ \emptyset & \text{if } I = M. \end{cases}$$

If  $I = R$ ,  $R$  decides whether to coercively appropriate output ( $e = 1$ ) or not ( $e = 0$ ). If  $I = M$ ,  $e = 0$  by default. In words, when  $R$  grants  $M$  the right to control the local administration (i.e., to choose  $q$ ), she loses the ability to expropriate  $M$ .  $R$ 's payoff is given by:

$$V_I(t, q) = T_I(t, q) - C_I(t, q), \tag{1}$$

where  $T_I(t, q)$  represents the amount of output accruing to  $R$ , and  $C_I(t, q)$  is the cost to  $R$  of the local administration. Anticipating the description of  $M$ 's action space,  $T_R(t, q)$  is either equal to (i) the tax  $t$  or (ii) the minimum between  $f(q)$  and  $y(q)$ , while  $T_M(t, q)$  is either equal to the tax  $t$  or zero. We set  $R$ 's reservation utility to zero.

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<sup>13</sup>Notice that we do not distinguish between the officials providing law and order and those collecting taxes. This is in line with the historical facts we present in Section 5. A version of the model in which the two tasks are separated leads to qualitatively identical results as long as one believes coercive power is needed to provide law and order.

For a given tax  $t$ , the cost of the local administration when  $I = R$  is given by:

$$C_R(t, q) = \begin{cases} \underline{c}q & \text{if } e = 1, \\ \underline{c}q & \text{if } e = 0 \text{ and } t \geq f(q), \\ \underline{c}q + \Delta c(q - \tilde{q}(t)) & \text{if } e = 0 \text{ and } t < f(q), \end{cases} \quad (2)$$

where  $\Delta c = \bar{c} - \underline{c} > 0$  and where  $\tilde{q}(t)$  denotes the value of  $q$  such that  $t = f(q)$ . When  $I = M$ ,  $C_M(t, q) = 0$ ; that is,  $M$  bears the cost of investing in the local administration.

When  $I = R$ , the cost to  $R$  of the local administration is higher when she does not expropriate  $M$  (i.e.,  $e = 0$ ), even though  $q$  is high enough that an amount greater than  $t$  could be coercively appropriated (i.e.,  $q > \tilde{q}(t)$ ). This cost specification captures – in a reduced form – the idea that *controlling the local administration* is more costly when local officials could unobservably expropriate  $M$ , transfer  $t$  to  $R$ , and pocket the difference (i.e., pocket  $\min[f(q), y(q)] - t$ ). The term  $\Delta c(q - \tilde{q}(t))$  can be interpreted as the rent that  $R$  must give up to the local officials and/or the cost of monitoring them in order to prevent expropriation. The misalignment of incentives between  $R$  and her administration comes from the fact that each official fails to fully internalize the consequences of its behavior on  $R$ 's territory.<sup>14</sup> Intuitively, the larger the local administration is, the higher the cost of controlling it.<sup>15</sup> When  $q \leq \tilde{q}(t)$ , the cost of investing

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<sup>14</sup>Because some trade involves transactions across different markets on  $R$ 's territory, officials do not fully internalize the consequences of their expropriation on the sum of all markets' revenues.

<sup>15</sup>The Online Appendix micro-founds the cost function by treating the local officials as players. As we explain in Section 5, the issue of controlling local officials' behavior is central in eleventh to thirteenth century England. In this period, the king experiments with two contractual arrangements with his local officials. In the first arrangement, local officials act as tax farmers. The king fixes a reservation price and potential tax farmers bid for the right to collect a borough's taxes. Tax farmers can retain the amount of money collected in excess of their bid, although they are subject to caps and procedures. Through the choice of the reservation price and the caps, the king de facto determines a rent received by the tax farmer. In the second arrangement, officials are appointed as custodians entitled to a salary and meant to transfer all collected taxes to the king. Also, as we document in Section 5, the king customarily launches costly investigations into local officials' behavior.

The model in the Online Appendix is close in spirit to the custodian arrangement, but also captures the main trade-offs arising under tax farming.

in the local administration is low to capture the idea that officials have no incentive to use coercion, because they can appropriate more by collecting  $t$ . Finally, when  $e = 1$ , the cost is again low because incentives between  $R$  and the local administration are aligned, so that no rents or monitoring are necessary.

**Merchant:**  $M$ 's action space  $\Omega_M$  as a function of  $I \in \{R, M\}$  is given by:

$$\Omega_M(I) = \begin{cases} \{Y, a\} & \text{if } I = R, \\ \{Y, a, t, q\} & \text{if } I = M, \end{cases}$$

where  $a \in \{0, 1\}$  represents  $M$ 's choice to pay ( $a = 1$ ) or not pay ( $a = 0$ ) the tax  $t$ , and  $Y(q) \in \{0, y(q)\}$  denotes  $M$ 's decision to produce ( $Y = y(q)$ ) or not ( $Y = 0$ ).  $M$ 's payoff is given by:

$$U_I(t, q) = \begin{cases} y(q) - T_R(t, q) & \text{if } I = R, \\ y(q) - T_M(t, q) - \underline{c}q & \text{if } I = M. \end{cases} \quad (3)$$

When  $I = M$ , the cost of controlling the administration is borne by  $M$  and is equal to  $\underline{c}q$ . Building on our interpretation of the cost function (2), the assumption that  $M$ 's cost is (weakly) lower than  $R$ 's captures the idea that  $M$  is better able to monitor and keep local officials in check.<sup>16</sup> Finally, let  $\underline{u}_M > 0$  denote  $M$ 's reservation utility.<sup>17</sup>

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<sup>16</sup>As we explain in Section 5, burgesses are granted the right to appoint and fire local officials. Typically, burgesses gather and elect fellow burgesses (sometimes merchants) as borough officials. Intuitively, the monitoring of local officials' behavior is more effective when done by tax payers directly. In addition, burgesses are capable of effectively firing officials when necessary. First, officials are selected among fellow burgesses and are no longer backed by the lord, so that punishing them is not an offence. Second, the right to assemble presumably fosters coordination among burgesses. Finally, historical evidence suggests the turnover of borough officials is significant (see, for instance, Reynolds [1972]).

<sup>17</sup>We require  $\underline{u}_M > 0$  for  $M$ 's participation – and therefore expropriation – to be a concern. For instance,  $\underline{u}_M$  can be interpreted as either the minimum level of output that guarantees subsistence to  $M$ , or his payoff when moving somewhere else.

**Timing:** The game is infinitely repeated in discrete time  $\tau = 0, 1, \dots$ . Let  $\beta_M, \beta_R \in [0, 1)$  represent the players' discount factors. The equilibrium concept is subgame perfection. In every period  $\tau$ , the timing of the stage game is the following:

1. **Grant Stage:**  $R$  chooses  $I_\tau \in \{R, M\}$ ;
2. **Investment Stage:** Player  $I_\tau$  chooses  $(t_\tau, q_\tau)$ ;
3. **Production Stage:**  $M$  chooses  $Y_\tau \in \{0, y(q_\tau)\}$ . If  $Y_\tau = 0$ , players enjoy their reservation utilities, and the period ends;
4. **Transfer Stage:**
  - (a)  $M$  chooses  $a_\tau$ : if  $a_\tau = 1$ ,  $t_\tau$  is transferred from  $M$  to  $R$ ;
  - (b) Provided  $I_\tau = R$ ,  $R$  chooses  $e_\tau$ .
5. Payoffs materialize.

The choice of  $I_\tau$  is made at the beginning of every period  $\tau$ , implying that the revocation of decision-rights is possible. Revocations are costless to  $R$  and, as we show in Section 5, not uncommon in our period of interest. Also, stage 4.(b) is empty if  $I_\tau = M$ . This captures  $R$ 's loss of control when granting decision-rights to  $M$ . Finally, we assume the highest possible amount of output that can be coercively appropriated from  $M$  is always equal to  $f(q)$ , including when  $M$  has paid a tax  $t$ . Formally, when  $a = 1$  and  $e = 1$ ,  $R$  collects at most  $\max[t, f(q)]$  (**A1**).<sup>18</sup>

We consider equilibria in which  $R$  either retains decision-rights over  $(t, q)$  or grants them to  $M$ . In the first case, we seek the equilibrium that guarantees the highest possible payoff to  $R$ . In the second case, we seek the equilibrium that guarantees the highest

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<sup>18</sup>This modeling choice simplifies our analysis. As will become clear from Proposition 2 and its interpretation, this assumption does not affect the main results.

possible payoff to  $M$ , subject to  $R$  being better-off granting decision-rights. Focusing on these equilibria is conservative in so far as the associated necessary conditions for a grant to occur are the most difficult to meet.

**Manorial and Trade Economies.** We define a trade (manorial) economy as one in which *gains from trade* are high (low). In the manorial economy, the output is independent of  $q$  and equal to  $\underline{y}$ , where we assume  $\underline{y} > \underline{u}_M$ . In the trade economy, the produced output is given by  $y(q)$ , where  $y(0) = \underline{y}$ .<sup>19</sup> This distinction captures in a stark way the fact that gains from trade make the production of output more responsive to the provision of law and order (e.g., because of the need for contract enforcement).<sup>20</sup> To ease exposition, we use the term merchant in both the manorial and the trade economy.

**Technical Assumptions.** For the case of the trade economy, we define:

$$g(q, \underline{u}_M) := y(q) - f(q) - \underline{u}_M,$$

and assume  $g(q, \underline{u}_M)$  is inversely U-shaped in  $q$  (**A2**). According to **A2**, when the initial size of the local administration is small, hiring more officials leads to a higher increase in the produced output than that in the coercively appropriable output. The reverse holds when the initial size of the local administration is large. Also, we let  $q^*(\underline{c})$  denote the size of the local administration  $q$  that maximizes the surplus  $S(q, \underline{c}) := [y(q) - \underline{c}q]$ , and assume  $g(q^*, \underline{u}_M) < 0$  (**A3**); that is, if the efficient size of the local administration is chosen and output is appropriated coercively,  $M$  decides not to produce.<sup>21</sup>

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<sup>19</sup>We restrict our attention to the case in which  $y(0) = \underline{y} > \underline{u}_M$  for expositional clarity only. Relaxing any of these two assumptions does not affect our results.

<sup>20</sup>On this topic, see Greif [1993] and Dixit [2003]. An alternative version of our model in which we parametrize the responsiveness of output to law and order is available upon request. The results are qualitatively identical.

<sup>21</sup>Assumption **A3** allows us to focus on the most interesting case in which  $R$  may wish to grant decision-rights. If **A3** is violated,  $R$  never grants decision-rights to  $M$  because expropriation is not enough of a concern. A treatment of this case is available upon request.

**Example.** Consider  $y(q) = \underline{y} + \theta\sqrt{q}$  and  $f(q) = \gamma q$ , where  $\gamma > \underline{c}$ . The manorial economy is one in which  $\theta = 0$ , whereas the trade economy is one in which  $\theta$  is sufficiently high (**A2** holds). A sufficiently high value of  $\gamma$  ensures **A3** also holds.

### 3 The One-Period Game

Suppose  $R$  and  $M$  interact for one period only. We denote by  $t^s$  and  $q^s$  the equilibrium tax and size of the local administration, respectively. Similarly,  $I^s$  denotes  $R$ 's equilibrium choice to grant  $M$  decision-rights over  $(t, q)$ .

We solve the game by backward induction. Suppose  $I = R$ . Given  $R$ 's choice of  $q$  in stage 2, we necessarily have  $t = f(q)$ , because  $R$  would not find it profitable to request  $t < f(q)$ , and  $M$  would not agree to pay  $t > f(q)$ .<sup>22</sup>

In the trade economy, absent the grant of decision rights,  $T_R(q) = \min[f(q), y(q)]$ . Given (2),  $T_R(q) = \min[f(q), y(q)]$  implies  $C_R(q) = \underline{c}q$ .  $R$  solves the following problem:

$$\begin{aligned} & \max_{\{q\}} [f(q) - \underline{c}q] \\ & \text{s.t. } y(q) - f(q) \geq \underline{u}_M, \end{aligned} \tag{4}$$

where (4) is  $M$ 's participation constraint (**PC**).

In the manorial economy,  $R$ 's problem is identical, except  $y(q) = \underline{y}$  for all  $q$ .

**Proposition 1** *In the one-period game, (i) the tax  $t^s$  is equal to the output that can be coercively appropriated  $f(q^s)$  and (ii)  $R$  retains decision-rights (i.e.,  $I^s = R$ ).*

*The trade economy is characterized by an inefficiently small size of the local administration (i.e.,  $q^s < q^*$ ), and conversely for the manorial economy.*

**Proof.** See Appendix 2. ■

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<sup>22</sup>Given **A1**, when  $t = f(q)$ ,  $R$  and  $M$  are indifferent between peaceful and coercive transfer of output. We interpret an equilibrium in which  $t = f(q)$  as one in which coercion occurs.

In the manorial economy, the efficient size of the local administration is small because of the low need for contract enforcement. However, because  $M$  cannot credibly commit to paying a tax greater than what can be coercively appropriated,  $R$  chooses an inefficiently large size of the local administration to maximize her revenues.

In the trade economy, the efficient size of the local administration is relatively large. However,  $R$ 's lack of commitment not to expropriate  $M$  implies a smaller than efficient size of the local administration to ensure  $M$ 's participation.<sup>23</sup>

In either type of economy, if  $R$  were to grant decision-rights,  $M$  would choose the efficient size of the local administration. Despite this efficiency gain, in either case,  $R$  does not grant  $M$  control of the local administration, because she anticipates  $M$  would ultimately escape taxation.

## 4 Infinitely Repeated Game

In the infinitely repeated setting, we define the history of a game:

$$h^\tau = (I^\tau, q^\tau, Y^\tau, t^\tau, a^\tau, e^\tau),$$

as the collection of sequences of past actions taken by players from period 0 until  $\tau - 1$ .

A subgame perfect equilibrium (**SPE**) is given by  $R$ 's choice of  $I_\tau^E$  given history  $h^\tau$ ,  $q_\tau^E$  given  $\{h^\tau, I_\tau\}$ ,  $M$ 's output production  $Y_\tau^E$  given  $\{h^\tau, I_\tau, q_\tau\}$ , a proposal  $t_\tau^E$  given  $\{h^\tau, I_\tau, q_\tau, Y_\tau\}$ , a choice  $a_\tau^E$  given  $\{h^\tau, I_\tau, q_\tau, Y_\tau, t_\tau\}$ , and finally the coercive appropriation choice  $e_\tau^E$  as a function of the history  $\{h^\tau, I_\tau, q_\tau, Y_\tau, t_\tau, a_\tau\}$ .

$R$  and  $M$  play stationary trigger strategies in which each player threatens to revert to the one-period stage game forever after a deviation from the equilibrium  $(t^E, q^E)$  is

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<sup>23</sup>The equilibria in the manorial and the trade economy are reminiscent of the distinction between *weak* and *strong* states in Acemoglu [2005]. Also, observe that distortions in the size of the local administration arise despite taxation being lump-sum.

detected at any stage in period  $\tau$  or in any previous period  $\tau' = 0, \dots, \tau - 1$ . Specifically, if the *cooperation phase* involves the grant of decision-rights to  $M$ , the *punishment phase* is such that  $R$  revokes them in all subsequent periods.

Players' deviations from  $(t^E, q^E)$  depends on  $I^E$ . If  $I^E = R$ ,  $R$  can deviate at both the investment and transfer stages, and  $M$  can deviate at both the production and transfer stages. The temptation to deviate at the transfer stage occurs because of the difference between  $t^E$  and  $f(q_\tau)$ . If the former is greater than the latter, the temptation to deviate rests on  $M$ , and vice versa. Finally, if  $I^E = M$ ,  $R$  cannot deviate at any stage, whereas  $M$  can deviate at both the investment and transfer stages.

We characterize both players' relevant constraints in the case of the trade economy. The constraints of the manorial economy turn out to be the same ones, where  $y(q) = \underline{y}$ .

Consider some pair  $(t^E, q^E)$ . First,  $M$ 's Participation Constraint (**PC**) is given by inequality (4), substituting in  $t^E$  for  $f(q)$ . When  $I_\tau = R$ ,  $\forall \tau$ ,  $M$ 's Incentive Compatibility Constraint (**ICC**( $M$ )) at the transfer stage is given by:

$$\frac{y(q^E) - t^E}{1 - \beta_M} \geq [y(q^E) - T_R(q^E)] + \frac{\beta_M}{1 - \beta_M} U^s,$$

where  $U^s$  is  $M$ 's utility in the one-period stage game as defined in Proposition 1. Observe that when  $M$  is tempted to deviate at the transfer stage (i.e., when  $t^E > f(q^E)$ ), he nevertheless produces  $y(q^E)$ .<sup>24</sup> By deviating at the transfer stage,  $M$  triggers coercive appropriation  $T_R(q^E) = f(q^E)$ .<sup>25</sup> **ICC**( $M$ ) is rewritten as:

$$\beta_M \geq \frac{t^E - f(q^E)}{[y(q^E) - f(q^E)] - U^s}. \quad (5)$$

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<sup>24</sup>In equilibrium,  $t^E$  must be low enough to ensure  $M$ 's participation. If  $t^E > f(q^E)$ , it is rational for  $M$  to participate and produce  $y(q^E)$  even when he deviates.

<sup>25</sup>Formally, we have  $T_R(q^E) = \min[y(q^E), f(q^E)]$ . However, when  $t^E > f(q^E)$ , because **PC** holds, it must be that  $\min[y(q^E), f(q^E)] = f(q^E)$ .



We now analyze  $R$ 's incentive to deviate from  $(t^E, q^E)$ , given  $I_\tau = R, \forall \tau$ . The difference between  $t^E$  and  $T_R(q^E)$  affects the temptation to deviate at both the investment and the transfer stage. If a deviation occurs in stage 2,  $M$  anticipates coercive appropriation, and thus  $R$  chooses the investment of the one-period game.  $R$ 's Incentive Compatibility Constraint at the investment stage (**Inv-ICC**( $R$ )) is given by:

$$\frac{t^E - \underline{c}q^E}{1 - \beta_R} \geq [f(q^s) - \underline{c}q^s] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s],$$

where **Inv-ICC**( $R$ ) is independent of  $\beta_R$ , and where the marginal cost of investing in the local administration is equal to  $\underline{c}$ .<sup>26</sup> **Inv-ICC**( $R$ ) simplifies to:

$$t^E - \underline{c}q^E \geq f(q^s) - \underline{c}q^s = V^s. \quad (6)$$

Consider a deviation in stage 4. Such a deviation is relevant only if  $t^E < f(q^E)$ .  $R$ 's Incentive Compatibility Constraint at the transfer stage (**Trans-ICC**( $R$ )) is given by:

$$\frac{t^E - C(q^E)}{1 - \beta_R} \geq \{\min[y(q^E), f(q^E)] - \underline{c}q^E\} + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s]. \quad (7)$$

Given (2), the first term on the right-hand-side (RHS) is such that the marginal cost to  $R$  of investing in the local administration is equal to  $\underline{c}$  when she expropriates  $M$ . **Trans-ICC**( $R$ ) can be rewritten as:

$$\beta_R \geq \frac{\{\min[y(q^E), f(q^E)] - \underline{c}q^E\} - [t^E - C(q^E)]}{\{\min[y(q^E), f(q^E)] - \underline{c}q^E\} - [f(q^s) - \underline{c}q^s]}. \quad (8)$$

The following Lemma shows that either (6) implies (7), or vice versa:

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<sup>26</sup>We here anticipate the result in Lemma 1. A deviation in stage 2 may occur if  $t^E > f(q^E)$  only, which implies  $C_R(t^E, q^E) = \underline{c}q^E$  independently of  $I_\tau$ .

**Lemma 1** *Suppose  $I_\tau = R, \forall \tau$ . When  $t^E > f(q^E)$ ,  $R$ 's temptation to deviate occurs at the investment stage only. When  $t^E \leq f(q^E)$  instead,  $R$ 's temptation to deviate occurs at the transfer stage only.*

**Proof.** See Appendix 2. ■

Suppose now that  $I_\tau = M, \forall \tau$ , and consider some pair  $(t^E, q^E)$ . Recall that when  $I_\tau = M$ ,  $M$  bears the cost of the local administration. Accordingly, **ICC**( $M$ ) is given by:

$$\frac{y(q^E) - t^E - \underline{c}q^E}{1 - \beta_M} \geq [y(q^E) - \underline{c}q^E] + \frac{\beta_M}{1 - \beta_M} U^s,$$

which we rewrite as:

$$\beta_M \geq \frac{t^E}{[y(q^E) - \underline{c}q^E] - U^s}. \quad (9)$$

Also, because  $T_M = 0$ , a deviation by  $M$  at the investment stage is irrelevant.

We proceed by first characterizing the pair  $(t^R, q^R)$ , which guarantees the highest payoff to  $R$  in the subgame in which she retains decision-rights over  $(t, q)$ . We then characterize the pair  $(t^M, q^M)$ , which guarantees the highest payoff to  $M$  in the subgame in which he has decision-rights, subject to  $R$  being better-off making a grant. Finally, we compute the conditions under which a grant occurs.

## 4.1 The Ruler Retains Decision-Rights

Suppose  $I_\tau = R, \forall \tau$ . In each period  $\tau$ ,  $R$  solves the following problem:

$$\max_{\{t, q\}} [t - C(t, q)]$$

$$\text{s.t. } \mathbf{PC}, \mathbf{ICC}(M), \mathbf{Inv-ICC}(R), \mathbf{Trans-ICC}(R).$$

We divide the analysis between the manorial economy and the trade economy cases.

#### 4.1.1 The Manorial Economy

Consider some pair  $(t^R, q^R)$ .  $R$ 's main concern is  $M$ 's possible deviation at the transfer stage. Therefore, in solving  $R$ 's problem, we anticipate that only **ICC**( $M$ ) binds. In each period  $\tau$ ,  $R$  solves:

$$\max_{\{q\}} \beta_M \{[\underline{y} - f(q)] - \max[\underline{y} - f(q^s), \underline{u}_M]\} + f(q) - \underline{c}q.$$

The associated first-order condition is:

$$(1 - \beta_M) \frac{df(q^R)}{dq} = \underline{c}, \quad (10)$$

where the marginal cost of the local administration is equal to  $\underline{c}$  because  $t^R > f(q^R)$ .

**Lemma 2** *Suppose  $I_\tau = R$ ,  $\forall \tau$ . In the manorial economy, the equilibrium investment  $q^R(\underline{c}, \beta_M)$  lies between the efficient level  $q^*(\underline{c}) = 0$  and the “one-period-game” level  $q^s(\underline{c})$ , and is independent of  $R$ 's shortsightedness. The administration is therefore inefficiently large. Also, in equilibrium,  $t^R > f(q^R)$ . All else equal, the less shortsighted  $M$  is, the closer the economy is to efficiency.*

**Proof.** See Appendix 2. ■

In the manorial economy, demand for law and order is low. If  $R$  were to choose the efficient size of the administration  $q^*(\underline{c}) = 0$ ,  $M$  would pay taxes only if sufficiently longsighted. If  $M$  is shortsighted,  $R$  has no choice but to invest in the administration to collect taxes under the threat of coercion. Because, in equilibrium,  $t^R > f(q^R)$ , expropriating  $M$  is not tempting and the cost of the administration is low.

### 4.1.2 The Trade Economy

Consider some pair  $(t^R, q^R)$ .  $R$ 's main concern is now her temptation to deviate at the transfer stage and expropriate  $M$ . Therefore, in solving  $R$ 's problem, we anticipate that **PC** and **Trans-ICC**( $R$ ) bind. As a consequence, in each period  $\tau$ ,  $R$  solves:

$$\begin{aligned} \max_{\{q\}} [y(q) - \underline{u}_M - C_R(t, q)] \\ \text{s.t. } \mathbf{Trans-ICC}(R), \end{aligned}$$

Given (2), we let  $q^\circ$  denote the constrained efficient investment; that is,  $q^\circ(\underline{c}, \bar{c}) = \arg \max_q [y(q) - \underline{c}q - \Delta c(q - \tilde{q})]$ . In words,  $q^\circ(\underline{c}, \bar{c})$  is the size of the local administration that maximizes surplus when expropriation is an issue.

**Lemma 3** *Suppose  $I_\tau = R$ ,  $\forall \tau$ . In the trade economy, the investment  $q^R(\underline{c}, \bar{c}, \beta_R)$  lies between the “one-period-game” level  $q^s(\underline{c})$  and the constrained efficient level  $q^\circ(\underline{c}, \bar{c}) < q^*(\underline{c})$ , and is independent of  $M$ 's shortsightedness. Also, in equilibrium,  $t^R < f(q^R)$ . The administration is therefore inefficiently small. All else equal, the less shortsighted  $R$  is, the closer the economy is to constrained efficiency.*

**Proof.** See Appendix 2. ■

In the trade economy, demand for law and order is relatively high. However, choosing the efficient level of investment  $q^*(\underline{c})$  makes expropriating  $M$  tempting. The reason for this temptation is twofold. First,  $R$ 's proceeds from coercive appropriation are higher than those from taxation. Second, by expropriating  $M$ ,  $R$  saves on the cost of controlling the local administration.<sup>27</sup> The high cost of keeping in check local officials alone implies an inefficiently small size of the administration (i.e.,  $q^\circ(\underline{c}, \bar{c}) < q^*(\underline{c})$ ).

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<sup>27</sup>Recall that the cost function, as specified in (2), captures in a reduced form the cost of keeping local officials in check when expropriation is tempting. As we explain in detail in Section 5, this cost amounts to higher rents/salaries for the local officials, and investigations into their behavior.

Moreover, if  $R$  is unable to commit to the constrained efficient investment  $q^\circ(\underline{c}, \bar{c})$  (i.e., if  $\beta_R$  is low), she is forced to distort it downward even further.<sup>28</sup>

## 4.2 The Ruler Grants Decision-Rights

Granting  $M$  decision-rights affects the equilibrium size of the local administration in several ways. First,  $M$  bears the cost of controlling the local administration. Second, by assumption, this cost is lower than the cost that  $R$  bears, because of  $M$ 's superior ability to monitor local officials. Finally, a grant exacerbates  $M$ 's temptation to escape taxation because it gives him control over local tax collectors.

We now state the main result of the model.

**Proposition 2** *The ruler always retains decision-rights over the local administration in the manorial economy.*

*In the trade economy, all else equal, the ruler grants decision-rights if and only if the merchant's temptation to escape taxation is not too strong, that is, if and only if the merchant is sufficiently longsighted.*

*Also, the stronger the ruler's temptation to expropriate the merchant when in control of the local administration – that is, the more shortsighted the ruler – the more likely a grant is to occur.*

*When a grant occurs, the size of the local administration is efficient ( $q^E = q^*(\underline{c})$ ).*

**Proof.** See Appendix 2. ■

In the manorial economy, the efficient size of the local administration is small. As a consequence, expropriation is not a concern and the cost of controlling the local administration is low when at its efficient size (e.g., monitoring is not needed). However,

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<sup>28</sup>One can also show that higher values of  $\underline{u}_M$  imply, all else equal, a higher temptation for  $R$  to deviate. If  $\underline{u}_M = 0$ ,  $R$  can choose the efficient investment ( $q^*(\underline{c})$ ) and extract the entire surplus.

because of  $M$ 's temptation to escape taxation,  $R$  retains decision-rights and invests in an inefficiently large local administration whose sole purpose is to collect taxes. Indeed, even though granting control of the local administration to  $M$  would lead to an efficient investment, it would ultimately strengthen his ability to escape taxation.

In the trade economy, the efficient size of the local administration is relatively large. Unlike in the manorial economy, expropriation is a concern and implies a high cost to  $R$  of controlling the local officials. As a consequence, the associated investment in the local administration is inefficiently small. In addition, the more shortsighted  $R$  is, the more tempted she may be to let expropriation occur, pocket the proceeds, and save on this high cost. To avoid this scenario,  $R$  has no choice but to further distort downward the size of the local administration. If  $R$  grants decision rights, this double inefficiency disappears because  $M$  is able to control the local administration at a low cost. Therefore, in the trade economy, a grant occurs whenever  $M$  is sufficiently patient not to escape taxation once endowed with decision rights.<sup>29</sup>

Inefficiencies in the provision of law and order as a response to local officials' misbehavior are pervasive in our period of interest. For instance, the following quotation from Roger of Howden – a cleric close to Henry II – illustrates some of the main trade-offs our model highlights:

“Staying in England, the lord-king questioned the justices he had appointed in England whether they had treated the people of the realm with decent restraint.” And when he learned that the people were “overly oppressed” by an excessive “multitude” of justices, the king took “counsel with competent men” and decided to reduce the number of justices from eight to five,

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<sup>29</sup>One can show that, all else equal, the higher  $\underline{u}_M$  is, the higher the temptation to expropriate, and therefore the more likely a grant is to occur.

“namely, two clerics and three laymen, all chosen from his private entourage [familia]” [...].<sup>30</sup>

As we explain in the next section, the consequences of delegating control of the local administration to  $M$  seems to also affect the frequency of court sittings. Presumably as a response to the numerous complains regarding the functioning of royal courts, the king imposes limitations on the maximum number of their sittings. In contrast, the frequency with which courts administered by burgesses assemble increases.

## 5 Trade, Administration, and Charters of Liberties

We describe the organization of the local administration in England between the eleventh and the thirteenth centuries. We also provide quantitative and qualitative data on trade, taxation, officials’ misbehavior, and the spread of local political liberties. Table 5 in the Appendix presents a chronology of this period’s main events.

**Administration.** England under William the Conqueror is divided into shires/counties, which are divided into hundreds/wapentakes.<sup>31</sup> Each hundred is composed of manors within which rural and urban settlements (either villages or boroughs) coexist.<sup>32</sup> The rural component of the manor comprises the manorial lord’s household, surrounded by agricultural land and the peasants’ houses.

The presence of a market and a trading community characterizes urban settlements. Boroughs and villages differ in their size and the nature of land tenure. Unlike villagers, burgesses can alienate their land property, move, and pay a cash rent to the manorial

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<sup>30</sup>Bisson [2008], pp. 378-380.

<sup>31</sup>Cam [1963], pp. 9-10. Hundreds number 628 under Edward I (Cam [1963], p. 137-39).

<sup>32</sup>Even though, in general, a manor is part of only one hundred, some overlap exists. Similarly, an urban settlement can lie at the intersection of different manors.

lord (*geld*) rather than provide labor services.<sup>33</sup> Boroughs are typically larger than villages, but their size varies greatly. Around 400 out of approximately 500 boroughs have less than 1,000 inhabitants. Because of their much greater importance, we focus on boroughs in what follows.

The person with the highest authority over an area is its owner: either the king or a local (*mesne*) lord. Following the Norman Conquest, barons involved in the expedition and the church are allocated lands. According to the Domesday Book, approximately 20% of the land belongs to the king, 55% to lay lords, and 25% to ecclesiastical lords. In what follows, we do not distinguish between lay and ecclesiastical lords, and refer to them as *mesne* lords.

Although mesne lords are tied to the king by feudal obligations, they are entitled to receive almost the entirety of their land's profits. The king and mesne lords appoint the officials needed to enforce the law and collect taxes in their respective territories. By and large, mesne lords have complete discretion over the administration of their land.<sup>34</sup>

The range of officials in charge of administering the royal demesne follows its territorial subdivision. The king appoints sheriffs at the shire level, and either the sheriff or the king appoints bailiffs at the hundred level. Similarly, reeves – sometimes also known as praepositi or bailiffs – are appointed in boroughs and villages (Tait [1936], p. 225). Officials have juridical and fiscal authority within their jurisdiction, and each responds to the officials with wider jurisdiction.<sup>35</sup>

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<sup>33</sup>Ballard [1904] (pp. 55-58) and Goddard [2010]. Burgesses can move as part of their trading activity. However, acquiring the status of burgess in a borough other than that determined by birth is very difficult in practice. On burgage tenure, see also Merewether [1835] (p. 166) and Ballard [1913] (p. xliv and lxxviii-lxxxix).

<sup>34</sup>Some areas are subject to the joint lordship of the king and an earl. One-third of the profits (*third penny*) then belongs to the earl, and two-thirds to the king. Officials are appointed by either the king or both lords. This arrangement, along with the power of the earls, tends to vanish in the course of the twelfth century (Maitland [1897], pp. 217-19; Ballard [1904], pp. 37-42; and Tait [1927]).

<sup>35</sup>A thorough analysis of the administrative system in the period of interest can be found in Ballard [1904], Stubbs [1905], Ballard [1913], and Green [1986]. Other officials also exist, such as shire justiciars, itinerant justices, justices in eyre, coroners, under-sheriffs, itinerant serjeants, serjeants of the hundreds, clerks, bedels, sub-bedels, cacherels, summoners, messengers, and toll collectors (Cam [1963], pp. 132-



The range of officials on the mesne lords' territories is almost identical to that on the royal demesne. Sheriffs are not appointed, presumably because mesne lords fulfill their functions (Tait [1936], p. 191).

Lords' officials provide law and order. On the royal demesne, the sheriff presides over the shire court, whereas the bailiff and the reeve preside over, respectively, the hundred and the borough courts. These officials also enforce courts' decisions. The shire court deals with trespassing, contracts, and debts (Cam [1963], p. 115). The hundred court deals with smaller civil pleas, debts, and also registers verbal contracts (Cam [1963], p. 18 and pp. 181-3). Numerous commercial disputes are handled by the borough court directly. *Piepowdrous* courts, also dealing with pleas between merchants, come into existence by the middle of the thirteenth century.<sup>36</sup> During his periodical *tourns*, the sheriff deals with various offences, monitors the local police system (the franck-pledge tithings), and receives payments collected by the bailiffs.<sup>37</sup> Identical courts are found on mesne territories, except for those run by the royal sheriff.

**Fiscal Matters and Tax Farming.** Court fees, tolls, and market licence fees are significant sources of profits for the king and mesne lords.<sup>38</sup> Other permanent sources include a land tax (*geld*), proceeds from the lord's demesne houses (*gablum*), and receipts from mints (Ballard [1904], pp. 63-64).<sup>39</sup>

The contractual arrangement between the king and his officials is known as *tax farming*. The *farm* of a territory is a fixed amount of money representing the sum of all

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33, 153-56; Hollister and Baldwin [1978]).

<sup>36</sup>According to the Ipswich Dom-Boc (1291), this court is held in the borough court, and pleas are made before the borough's bailiff. See also Merewether [1835] (pp. 513-19), Powicke [1962] (p. 625), and Gross [1906].

<sup>37</sup>Cam [1963], pp. 70, 89, and 120-23. Pleas related to market transactions can also be made in the sheriff's tourn.

<sup>38</sup>See Ballard [1904] (pp. 90-91) and Masschaele [1997].

<sup>39</sup>At times, extra-ordinary taxes are also collected, such as the *aides* and *tallages*. Henry III introduces occasional taxes on movables. Edward I introduces the lay subsidies on land and goods.

the king's revenues on that territory. The king auctions off to potential officials the right to collect the *farm*. The winning official retains any revenue in excess of his bid, and the king enjoys an *increment* whenever this bid is higher than the farm.<sup>40,41</sup> The farmer's profit mostly stems from the handling of court disputes.<sup>42</sup> However, caps and limits are imposed on the admissible fees and the frequency with which courts are to be held. To us, holding auctions – as opposed to other possible arrangements – is a convenient way for the king to learn about local economic conditions. If this interpretation is correct, allowing burgesses to collect their own taxes (possibly) in perpetuity involves an informational loss to the king.<sup>43</sup>

The sheriff is responsible for the farm of the shire, and lower-level officials are accountable to him for the hundreds and boroughs' revenues. In fact, often the sheriff auctions off the farms of hundreds and boroughs to bailiffs and reeves.

In 1204, John dismisses many existing sheriffs and appoints new ones as *custodes* rather than farmers. Custodians are meant to transfer all revenues to the Exchequer – minus allowed expenses – and become paid officials entitled to a salary. This system, discontinued during the times of the Magna Charta, is (partially) reimposed in the periods 1223-24 and 1236-41, and in 1258-59 (Powicke [1962], p. 62; Harris [1964]; Carpenter [1976]).

The farming system is also common within mesne lords' territories. However, we are unsure whether auctions are held.

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<sup>40</sup>According to Green [1986] (p. 201), the market for the sheriff's office is fairly competitive under Henry I. It also seems to be competitive under Richard I (see Carpenter [1976], Poole [1955], p. 388; and Heiser [1997]).

<sup>41</sup>Farms are customarily fixed and invariant after the Domesday survey. However, presumably because of the booming economic activity, the king temporarily imposes *increments* in the thirteenth century (Cam [1963], p. 94; Carpenter [1976]; Heiser [1997]).

<sup>42</sup>See Round [1892] (p. 91), Stubbs [1905] (chapter XI), Ballard [1914] (p. 20), and Morris [1968] (pp. 98-99).

<sup>43</sup>For simplicity, we do not have neither auctions nor this type of asymmetric information in the model. However, we capture the cost related to this information loss through our allocation of bargaining power between the ruler and the merchant following a grant.

We conclude with two remarks. First, criteria other than the bids matter when deciding which official to appoint, such as family ties, loyalty, hereditary concerns, and politics. Second, as we discuss below, boroughs can also bid to collect their own farm. They eventually succeed, and also receive the right to elect borough officials.

**Boroughs, Markets, and Trade.** The period under consideration is one of booming economic activity. We briefly discuss the available evidence, without distinguishing between royal and mesne territories.<sup>44</sup>

The number of recorded urban settlements increases drastically. Boroughs go from 112 in 1086 to approximately 500 by 1307. New ports are established, especially on the eastern and southern coasts of England (Britnell [1995]). Richard I introduces the first national customs tariff. In 1203-4, a total of £4,958 are collected in customs duties from 35 ports, a sum equal to the total value of all mesne lords' lands as recorded in the Domesday Book (Langdon and Masschaele [2006]). Coinage in circulation increases both in nominal terms – from £25,000 to £900,000 – and per capita during our period (Mayhew [1995]). The number of recorded markets and fairs increases sharply. For instance, 150 fairs are established by the end of the twelfth century (Langdon and Masschaele [2006]).<sup>45</sup> Also, more than 1,000 newly licensed marketplaces are recorded between 1200 and 1349.<sup>46</sup> Trade is local, domestic, and international. Traded goods include agricultural produce, prepared food, rural industrial products (cloth), and manufactures.

By and large, beginning in about 1160, the king licenses all English borough markets in exchange of an up-front fee. A license gives the right to the market holder to (i) build the necessary infrastructure, (ii) hold the market on a given day of the week,

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<sup>44</sup>Below, we discuss the commercial importance of boroughs in royal and mesne territories.

<sup>45</sup>In 1189, the proceeds of the fair of St. Giles – still in existence – amount to £146 8s. 7d., a sum comparable to the yearly profits the king receives from his wealthiest boroughs (Poole [1955], p. 77).

<sup>46</sup>Britnell [1981], Britnell [1995], Britnell [1996], and Masschaele [1997].

and (iii) collect various tolls. The king imposes limitations on the rates of tolls and charges to be levied from traders (Salzman [1928], Britnell [1978], and Masschaele [1997]). Market holders appoint market officials to monitor exchanges, whereas clerks of the market – officials of the king’s household – monitor the enforcement of market regulations (Merewether [1835], p. 515, and Britnell [1996]).

License holders are often local (e.g., manorial) lords. The community of burgesses, by means of a charter, can also be granted the right to hold a market, the proceeds of which become part of the borough’s farm (Powicke [1962], pp. 628-29; and Masschaele [1997]). During the thirteenth century, concessions of minor jurisdiction to license holders over market disputes occur (Salzman [1928], Britnell [1978], Britnell [1996], and Masschaele [1997]).

Several facts suggest a growing local administration dealing with market regulation and contract enforcement. First, each of the some one thousand newly licensed markets requires several officials, such as toll collectors, weighers and measurers, ale tasters, bread weighers, viewers of the market, etc. These officials are appointed by the sheriff or the bailiff on the royal demesne, and by the mesne lords/license holders in mesne territories. In addition, new offices are created, for instance clerks of the market and keepers of the peace (in charge of protecting trade routes). Toll collectors proliferate.<sup>47</sup> According to Cam [1963] (pp. 6-7), from Henry II’s reign onward, the sheriff’s men grow significantly more numerous. Finally, many statutes address the need for more speedy dispute resolution by allowing more frequent sittings of existing courts and establishing new ones (Statute of Burnell (1283), Statute of Merchants (1285), Statute of Westminster II (1285, c. 18), and Carta Mercatoria (1303)).<sup>48</sup>

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<sup>47</sup>See Masschaele [1997].

<sup>48</sup>See Maitland [1897] (p. 194, pp. 210-11), Ballard and Tait [1923] (p. lxix), Tait [1936], Poole [1955] (p. 392), Powicke [1962] (p. 623), Cam [1963] (pp. 145-46), and Britnell [1996].

**Officials' Misbehavior.** A large number of surviving royal documents – starting with the Domesday Book – record complaints and inquiries into officials' misbehavior.<sup>49</sup> These include numerous royal statutes issued in the second half of the thirteenth century. However, except for the records of the inquiries of 1258-60 and the Hundred Rolls, no such documents seem to exist regarding the behavior of mesne lords' officials.

The Peterborough Chronicle records many exactions committed by sheriffs during the civil war (Stephen's reign). In 1170, Henry II – following his prolonged absence from England – launches the Inquest of the Sheriffs to look into complaints about sheriffs' exactions. This inquest leads to the removal of the majority of the sheriffs.<sup>50</sup> Sheriffs abuse the shire courts and their tourns by, for instance, summoning many burgesses to act as jurors at inconvenient times and places, and fining those unable to attend (Cam [1963], p. 6). In 1213-15 – immediately preceding the Magna Carta – John launches local inquiries into sheriffs' malpractices and removes the unpopular ones (Harris [1964]). In about 1232-36, the memoranda rolls of the Exchequer record several complaints about and investigations of officials' behavior (Powicke [1962], pp. 62-63). In 1254, the king's subjects are invited to report misdoings, and royal justices are instructed to investigate the holding of the shire courts and hundred courts.<sup>51</sup> In 1258-60, jurors are appointed to hear complaints against the king's and mesne lords' bailiffs (Powicke [1962], pp. 151-52). The records of this inquiry and the Ordinance of the Sheriffs (1258) contain reports of bribery, distrains of plough-beasts, judicial partiality, appointment of corrupt subordinates, and so on. Accounts of sheriffs raising at pleasure customary payments and making more tourns than the allowed ones are

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<sup>49</sup>The Domesday Book tells us of Picot – the sheriff of Cambridgeshire from 1071 to 1095 – who oppresses burgesses and villagers to extract payments (Cam [1963], p. 2).

<sup>50</sup>Poole [1955] (pp. 388-89) and Cam [1963] (pp. 4-5). Some of the recorded complaints tell us of episodes affecting trade. For instance, the burgesses of Gloucester complain that the reeve takes unauthorized customs from their ships.

<sup>51</sup>Cam [1963] (p. 23). The justices also inquire whether the sheriffs obey the ordinance of 1220, which forbids the compulsory carousals known as *scotale*. This extortionary practice, along with the *Year's gift*, is known since the reign of Henry II (Ballard [1914], p. 20).

also provided (Cam [1963], pp. 121-22, and Maddicott [1984]).

In 1274-75 – following his return to England from a crusade – Edward I inquires into the behavior of royal and mesne lords’ officials. These investigations are known as the Hundred Rolls Inquiries and contain records of vast amounts of complaints concerning the local administration, involving some 1,000 officials (Cam [1963], p. 229). Sheriffs impose oppressive amercements, make arrests without any formal accusation, exact payments at their tourn, refuse to give proper receipts for payments in order to collect debt payments twice, and take unauthorized tolls.<sup>52</sup> Twenty of the 40 articles constituting the Hundred Rolls expressly refer to the sheriffs. Bailiffs, reeves, coroners, and constables are also the object of numerous complaints. Finally, some articles contain explicit complaints regarding the excessive multitude of local officials (Cam [1963], pp. 97-98, 125, 130-34, and 154-57).

Other investigations take place in 1279, 1284 (the Exchequer’s inquest), and 1285 (the Kirby’s Quest). The inquiry of 1290-93 (State Trials) immediately follows Edward’s return to England and leads to numerous officials being convicted of extortion and perversion of justice (Powicke [1962], pp. 361-63; and Cam [1963], pp. 241-43).

Complaints and inquiries prompt several administrative measures. During the twelfth century, the sheriff’s judicial prerogatives are diminished when local justices, justices in eyre, and coroners are introduced to handle pleas of the crown (Carpenter [1976]). The Exchequer – instituted around 1110 – tightens control over the sheriffs’ financial accounts by establishing new accounting procedures.<sup>53</sup> Because of the excessive summoning of burgesses, the frequency of the sheriff’s tourns and the local court’s sittings is a major concern. The Magna Carta (1215-17) forbids the shire court from meeting more than once a month, and the sheriff from making more than two tourns

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<sup>52</sup>Cam [1963] (pp. 72-73, 94-96, 117-18, 125, 218) and Masschaele [1997].

<sup>53</sup>Hollister and Baldwin [1978], Cam [1963] (pp. 3-4), and Powicke [1962] (p. 65).

per year.<sup>54</sup> This type of measures – in a time of growing demand for contract enforcement – strikes us as strongly indicative of the high cost incurred by the king in order to control sheriffs’ behavior.

As mentioned earlier, in the thirteenth century, the king experiments with an alternative to tax farming by appointing sheriffs as *custodians*. Presumably, forbidding officials from retaining revenues above the pre-specified salary is a response to the population’s grievances. Further, from 1258 onward, each shire is to elect four *knights of the shire* whose role is to look into complaints.<sup>55</sup> Finally, Edward I addresses the offences reported in the Hundred Rolls with numerous statutes.<sup>56</sup> Interestingly, in the Statute of Merchants, the king explicitly states that (i) speedy justice is needed to support trade, (ii) the sheriffs meant to provide it abused their position, and that (iii) justice to merchants is now the responsibility of mayors elected by burgesses.

Clearly, the issue of preventing local officials’ disruptive expropriation of burgesses appears to be of great importance to the king. Presumably, royal officials – in charge of only a fraction of the king’s territory – fail to fully internalize the consequences of expropriation on trade. Investigations and administrative measures – for example, limitations on the frequency of court sittings – are both costly and curb the provision of law and order.

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<sup>54</sup>In fact, as early as 1204, John grants a charter to the men of Devon whereby the sheriff is forbidden from (i) making more than one tourn of the hundred courts during the year and (ii) making private profits from this tourn. For this and other examples, see Holt [1992].

<sup>55</sup>See Powicke [1962] (pp. 142-44, 218). Also, the Provisions of Oxford and Westminster, the Ordinance of Sheriffs, the Petitions of the Barons, the Ordinances of the Magnates, and the Eyres of the 1258-60, all address the population’s complaints by reordering the administration of counties and of private estates (Maddicott [1984]).

<sup>56</sup>The Statute of Westminster I provides that toll franchises may be revoked were excessive tolls to be charged (Masschaele [1997]). The Statute of the Exchequer (1275) deals with the collection of debts by sheriffs. The Statute of Rhuddlan (1284), the Statute of Acton Burnell (1283), and the Statute of Merchants (1285) prescribe means of checking sheriffs’ behavior. (Powicke [1962], pp. 356, 625; and Cam [1963], pp. 226-27). Finally, the Statute of Exeter (1286) deals with inquiries into the offences of coroners (Powicke [1962], pp. 358-59).

**Charters of Liberties.** Starting with Henry I, an alternative response to the issue of controlling local officials is the grant to burgesses of the right and obligation to collect the agreed-upon borough farm. Importantly, this grant also implies the right to elect all the officials in charge of the financial and judicial administration of the borough, such as reeves, coroners, and market officials.<sup>57</sup> In addition to these prerogatives, burgesses often obtain (i) the right to have all disputes pleaded in the borough court exclusively and (ii) that the sheriff be forbidden from entering the borough (*non-intromittat clause*).<sup>58</sup> Following Henry II's reign, grants often become perpetual (*fee-farm*), although subject to revocation in case burgesses fail to transfer the farm to the Exchequer.<sup>59</sup>

In practice, burgesses assemble in the borough's main square or in the borough court to elect officials for fixed periods of time.<sup>60</sup> The ability to assemble, that of choosing a fellow burgess, combined with the fact that officials are no longer backed by the king, allows boroughs to replace officials when necessary. Such a wide and far-reaching delegation of control over the local administration by lords to burgesses constitutes a major institutional evolution in Western European history.

Formally, the grant of these or other liberties (e.g., the right to hold a market, the right to have a merchant guild, exemption from tolls, exemption from litigation in hundred and shire courts, etc.) are contained in official documents known as Charters of Liberty. Boroughs typically receive more than one Charter at different points in time, with earlier Charters including the most basic liberties (e.g., the right to hold a

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<sup>57</sup>Gross [1906] (p. 239), Ballard [1913] (pp. lxxxvi-lxxxvii), and Tait [1936] (p. 186). Because borough officials also collect taxes on merchants coming from different boroughs, burgesses – once in control of the local administration – may be tempted to extract high taxes from those merchants. However, this practice is forbidden by the king, who imposes and enforces limits to taxes on trade.

<sup>58</sup>See Ballard [1913] and Ballard and Tait [1923] (p. lxi).

<sup>59</sup>For instance, such failure to transfer the farm happens in Cambridge (1189) and York (1190). Other reasons can explain the revocation of liberties. Henry II withdraws London's prerogatives in 1154, possibly because of its failure to back Henry's mother during the civil war. Gloucester has its liberties revoked in 1169-70 after having attempted to form a *commune* (Tait [1936], pp. 176-77).

<sup>60</sup>For instance, see the Charter granted by John to Ipswich in 1200, and reported in Ballard [1913]. As suggested by, for instance, the list of officials elected in London and Exeter, there seems to be significant turnover (Jenkins [1841] and Reynolds [1972]).



Table 1: **Number of Boroughs: England, 1066-1307**

Period	Nr. Royal Boroughs	Nr. Mesne Boroughs	Nr. Unclassified Boroughs	Total
1066-1216	103	149	14	251*
1217-1307	133	368	29	498*

*Sources:* Beresford and Finberg [1973], Letters et al. [2003].

*Notes:* (\*) The total number of boroughs does not exactly match the sum of royal, mesne, and unclassified boroughs because ownership changes.

market and to have a borough court).

We collect data on the number of English boroughs, the nature of their ownership (royal vs. mesne), taxation, and the control of the borough administration between 1066 and 1307. This information mostly comes from the digitized version of original medieval royal documents (e.g., Charters and letter patents collected in the Pipe Rolls, Charter Rolls, Fine Rolls, Patent Rolls). To obtain the number of boroughs, we make an extensive use of the primary data collected by Beresford and Finberg [1973] and Letters et al. [2003]. Finally, for borough Charters, we rely on the data collected by Ballard [1913], Ballard and Tait [1923], and those contained in the Victoria County History and the British History Online records (and references therein).

We know of 498 boroughs as of 1307. Among these, 144 (368) are under royal (mesne) control for the entire period or a part of it. Also, 47 boroughs change hands at least once during the period, and we are unable to attribute ownership to 29 boroughs for the entire period or a part of it. Table 1 provides the number of royal, mesne, and unclassified boroughs recorded in England in the periods 1066-1216 and 1217-1307. As the table shows, the number of boroughs increases significantly from one period to the other.

Table 2 presents the number of grants to burgesses of the right to collect their own farm in royal, mesne, and unclassified boroughs in the two periods. The king makes

grants to royal boroughs, whereas mesne lords make grants to mesne boroughs. To focus on the spread of these grants, we do not take into account confirmations of older ones.<sup>61</sup> As Table 2 shows, royal grants are more numerous and occur earlier than grants to mesne boroughs.<sup>62</sup> These distinct patterns can be explained by our model if one believes that mesne lords, being geographically close to their officials, are better able than the king to monitor their behavior, and therefore less willing to grant liberties to their burgesses. Indeed, even though some mesne lords control large areas (i.e., earls and great barons), at least half of the mesne boroughs belong to lords owning small territories (e.g., ecclesiastical lords).<sup>63,64</sup> Also, coherent with this rationale, our data include instances (no instances) in which liberties are immediately revoked (granted) when boroughs pass from royal to mesne hands. Similarly, we observe instances (no instances) in which liberties are immediately granted (revoked) when boroughs pass from mesne to royal hands.<sup>65</sup>

When mesne lords grant liberties, they tend to do that to a much lesser extent than the king. We document 37 instances in which lords grant burgesses the right to elect single officials, while retaining the right to appoint the farmers and all remaining officials. Among these 37 grants, 6 are made to royal boroughs, and 31 to mesne boroughs.<sup>66</sup>

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<sup>61</sup>Customarily, new kings confirm previously granted Charters. Counting them as new grants would overestimate the phenomenon of interest. A full data set is available from the authors upon request.

<sup>62</sup>London – a royal borough – obtains liberties as early as 1131.

<sup>63</sup>For the same reason, mesne lords' territories include fewer markets than the king's territory. As a consequence, mesne lords may not internalize as much the consequences of their officials' misbehavior.

<sup>64</sup>Interestingly, we observe that many of the grants to mesne boroughs recorded in Table 2 can be attributed to these large mesne landowners. Moreover, our data, along with surviving historical anecdotes, suggest ecclesiastical lords – who own 133 boroughs in total by 1307 – are the least prone to grant political liberties to burgesses. See, for instance, the case of St. Albans.

<sup>65</sup>Liverpool and Newcastle under Lyme lose their liberties when becoming mesne boroughs in about 1266 and 1292, respectively (Ballard and Tait [1923], p. lvi). By contrast, Chester becomes royal in around 1237 and is granted liberties in 1239.

<sup>66</sup>Among these officials are the mayors, who appear by the beginning of the thirteenth century. Boroughs that elect mayors have some discretion in imposing taxes on themselves for municipal purposes (Tait [1936]).

Table 2: Number of Boroughs Farmed by Burgesses: 1066-1307

Period	Nr. Royal Grants	Nr. Mesne Grants	Nr. Unclassified Grants	Total
1066-1216	38	2	0	40
1217-1307	24	13*	0	37*
Total	62	15*	0	77*

*Sources:* Au et al. (Fine Rolls Henry III) [2009], Calendar of the Charter Rolls Preserved in the Public Record Office (Calendar of the Charter Rolls Henry III - Edward I) [1908], Calendar of Patent Rolls 1216-1307, Ballard [1913], Ballard and Tait [1923], Tait [1936], Victoria County History, British History Online.

*Notes:* In some cases we have a period, rather than a certain date, within which a charter is granted. We select the mid-point of the period as the date of the charter.

(\*): Helston is granted at farm to burgesses by the king in 1201, and by a mesne lord in 1260. We treat Helston as receiving two separate grants.

We interpret the non-observance of a grant in a given borough as evidence of the absence of a grant. This approach could be a concern in case of missing data. However, we are confident about our findings for at least three reasons. First, many collections of official documents have survived to this day, especially royal ones (e.g., Pipe Rolls, Quo Warranto records). Second, grants are repeatedly confirmed by successive lords, thereby reducing the probability of missing them. Finally, concerning grants to mesne boroughs, the king is often notified of these grants and acknowledges them.<sup>67</sup>

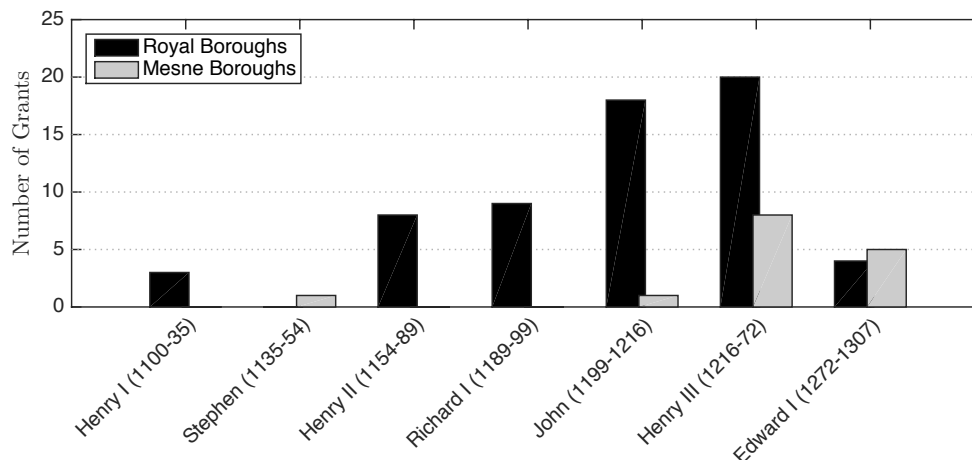
Figure 1 presents the timing of royal and mesne grants under the successive kings (no grant is recorded before 1106). John and Henry III stand out as the most active grantors of liberties to boroughs.<sup>68</sup> Interestingly, other major events mark both reigns: a war against the French king, attempts to establish *custodian* sheriffs, and large concessions to barons and burgesses contained in the Magna Carta and the statutes of 1258-60. Moreover, Henry III's grants to boroughs in the years preceding the concessions of 1258-60 often include the *non-intromittat clause*, the right to return royal writs, and the right to communicate directly with the Exchequer as new prerogatives.<sup>69</sup>

<sup>67</sup>Anecdotally, annually celebrating the grant of these liberties and publicly displaying the original Charter of Liberty is not uncommon for boroughs today.

<sup>68</sup>Henry III is also the king who revokes liberties the most. For instance, London has its liberties revoked several times during this reign. As a further example, Norwich loses its prerogatives in 1281 because it fails to pay its farm (Merewether [1835], pp. 527-28).

<sup>69</sup>The *non-intromittat clause* is granted to 35 royal boroughs and 11 mesne boroughs. The return of

Figure 1: **Timing of Grants: England, 1066-1307.**



*Sources:* Au et al. (Fine Rolls Henry III) [2009], Calendar of the Charter Rolls Preserved in the Public Record Office (Calendar of the Charter Rolls Henry III - Edward I) [1908], Calendar of Patent Rolls 1216-1307, Ballard [1913], Ballard and Tait [1923], Tait [1936], Victoria County History, British History Online.

*Notes:* In some cases we have a period, rather than a certain date, within which a charter is granted. We select the mid-point of the period as the date of the charter.

The exact timing of grants reveals other relevant information.<sup>70</sup> Richard I and John both make a significant number of grants at the very beginning of their reigns in the years immediately preceding the Third Crusade and the war in France, respectively. Also, Richard makes a significant number of grants immediately following his return from the crusade.

Boroughs pay their lord in exchange of liberties. Payments can take two forms: (i) a one-time lump-sum payment, known as a *fine*, and (ii) an *increment* on their farm. We document 32 instances in which royal boroughs pay a fine and/or an increment (out of 62 royal grants), and 1 instance among mesne boroughs (out of 15 mesne grants).<sup>71</sup>

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writs and the direct relation with the Exchequer is granted to 22 royal boroughs and 1 mesne borough. According to Ballard and Tait [1923] (pp. lxii-lxiii), boroughs are especially anxious to obtain the right to enact the Exchequer writs themselves.

<sup>70</sup>Data regarding the timing of grants to royal and mesne boroughs is available upon request from the authors.

<sup>71</sup>We know of the presence or absence of increments because they are typically specified in the Charters of Liberties. Regarding the fines, we are confident about the reliability of data concerning royal grants because they are recorded in the Pipe Rolls, the Fine Rolls, and the Book of Fines. However, because of limited access to the Pipe Rolls and the Book of Fines, we may miss data on 13 out of 62 royal grants. Missing data, especially regarding fines, are a bigger concern for mesne boroughs.

Table 3: **Fines and Increments**

	Royal Boroughs	Mesne Boroughs
Number of Fines	23	0
Number of Increments	14	1
Number of Fines and/or Increments	32	1

*Sources:* Au et al. (Fine Rolls Henry III) [2009], Calendar of the Charter Rolls Preserved in the Public Record Office (Calendar of the Charter Rolls Henry III - Edward I) [1908], Calendar of Patent Rolls 1216-1307, Ballard [1913], Ballard and Tait [1923], Tait [1936], Victoria County History, British History Online.

Table 3 shows the breakdown between fines and increments. We find no evidence of a decrease in the farm at the date of the first grant to burgesses of the right to collect it.

More than one-third of royal boroughs pay an upfront fine to be granted liberties. The payment of the fine is explicitly made to obtain the Charter of Liberties, and constitutes a gain to the king. Also, one-fifth of royal boroughs pay an increment. Increments over the farm could reflect other factors, such as improved local economic conditions. However, the Charter of Andover (1205) makes it clear that increments can directly be related to the obtention of political liberties:

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 [...].

Much like the fine, the increment seems to constitute a gain to the king. Specifically, the grant to burgesses of the right to collect their own farm implies for the king (*i*) a revenue equal to the farm and the increment and (*ii*) a loss equal to the sum the previous farmer – for example, the sheriff – would have paid for the right to farm the

borough. All cases for which such detailed information survives suggest a gain to the king.<sup>72</sup> For instance, in Lincoln, burgesses pay £180 to the king, and the sheriff's farm of the entire shire is reduced by £140, implying a gain of £40 to the king. Finally, the king also gains from no longer having to pay salaries to officials acting as custodians.

To summarize, it seems clear that the king collects more money from boroughs when granting them local liberties (at least in the short-run). However, whether boroughs effectively pay more or less taxes following a grant is unclear without information regarding the sums actually extracted by royal officials. Regardless, if burgesses are willing to pay the king to obtain these liberties, it must be that they are better-off, either because of efficiency gains in the provision of law and order and/or a lower cost of the local administration. In a period of booming trade activity, the issue of local officials' disruptive behavior can only have created favorable conditions for such grants of liberties.

Our theory predicts that gains from trade are an important determinant of local political liberties, because of the need to sustain and control a large local administration. We present data on the correlation between boroughs' commercial and political importance and the grant of burgesses' right to collect their own farm. To define a borough's relevance, we use the five criteria defined by Masschaele [1997] (Chapter 4): (i) the presence of a merchant guild, (ii) representation in Parliament under Edward I, (iii) the payment of the lay subsidies on land and goods (1294-1336) at the urban rate (as opposed to the rural rate), (iv) the status of an urban community in the *Nonae Rolls* tax records (1340), and (v) the classification as a city or borough in the *Nomina Villarum* military census (1316). Finally, Masschaele [1997] identifies boroughs that pay a lay subsidy in excess of £120. Table 4 divides boroughs into three categories. Category A contains 51 boroughs that satisfy at least 4 of the 5 listed criteria, and pay

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<sup>72</sup>See, for instance, Maitland [1897] (p. 205) and Ballard [1913] (pp. lxxvi-lxxvii). Other examples are available upon request.

Table 4: **Grants of Boroughs at Farm to Burgesses: 1066-1307**

Category	Nr. Royal Boroughs	Nr. Royal Grants	Nr. Mesne Boroughs	Nr. Mesne Grants
A Boroughs	41	33 (80.48%)	17*	1 (5.88%)
B Boroughs	59	43 (72.88%)	36*	6** (16.66%)
C Boroughs	72	49 (68.05%)	63*	8** (12.69%)
All Boroughs	144	62 (43.05%)	369*	15** (4.06%)

*Sources:* Au et al. (Fine Rolls Henry III) [2009], Calendar of the Charter Rolls Preserved in the Public Record Office (Calendar of the Charter Rolls Henry III - Edward I) [1908], Calendar of Patent Rolls 1216-1307, Ballard [1913], Ballard and Tait [1923], Tait [1936], Victoria County History, British History Online, Masschaele [1997].

*Notes:* (\*) Some boroughs change hand within the period. We count them as both royal and mesne.

(\*\*): Helston is granted at farm to burgesses by the king in 1201, and by a mesne lord in 1260. We treat Helston as receiving two separate grants.

at least £120 in the lay subsidy of 1334. Category B contains 83 boroughs that satisfy at least 4 criteria.<sup>73</sup> Category C contains 120 boroughs that satisfy at least 3 criteria. We also consider the whole sample of boroughs, and we distinguish between royal and mesne boroughs. From Table 4, in accordance with our prediction, the proportion of royal boroughs farmed by burgesses increases with commercial relevance.<sup>74</sup> No such pattern seems to hold for mesne boroughs.

At times, the inhabitants of rural villages and manors (those without a borough) are also granted the right to collect their own farm. However, we document only about 13 such grants – all made under Henry III (Cassidy [2012]) – despite the fact that rural settlements should be as numerous as urban ones, if not more.<sup>75</sup>

Undoubtedly, rebellions or their threat play a role in the granting of liberties. However, rebellions against the king – as opposed to rebellions against the local administration – seem hard to fully reconcile with the evidence we presented. First, the king seems to be able to extract more money from a borough when granting it liberties, suggesting that burgesses do not obtain these prerogatives under the threat of unrest. Second, it is

<sup>73</sup>In Category C boroughs, we disregard two boroughs whose ownership is unknown. Neither of them is farmed by burgesses.

<sup>74</sup>From Table 4, note that the most commercially developed boroughs tend to be royal. The categorization relies on information dating from around 1272-1340. Similar but less refined rankings using earlier data exist for the most important boroughs (see Stephenson [1933]). The ranking of the boroughs appears to be relatively stable.

<sup>75</sup>Recall that, by and large, each manor is composed of an urban and a rural settlement.

not uncommon for the king to revoke liberties. Finally, most of the recorded complaints and uprisings are directed at the local administration, rather than directly at the king. The need to wage war is also an important determinant because it may induce the king to accept a loss of control in exchange for money.<sup>76</sup> As we explained earlier, times of war often coincide with a high propensity by the king to grant liberties to boroughs. In addition, the king's absence from the realm during wars can only worsen the issue of officials' misbehavior, as evidenced by the numerous investigations launched immediately following his return to England. To us, regardless of whether in times of war or through rebellions, the fact that burgesses would negotiate the right to handle the local administration themselves strongly suggests that misbehavior by royal officials is first-order in explaining the spread of liberties.

## 6 Concluding Remarks

We propose a novel theory that links increases in the potential gains from trade to the evolution of political liberties at the local level.

In our model, a ruler creates an administration required to both provide law and order and collect taxes. The cost of controlling the administration is high when it is so large that it can coercively expropriate burgesses against the ruler's wishes. To reduce this cost, the ruler downsizes the administration. When potential gains from trade are high – i.e., when the demand for law and order is high – controlling the administration through its size involves a production inefficiency. To escape this trade-off, the ruler grants control over the local administration to burgesses in spite of their subsequent higher ability to escape taxation. Because burgesses are better informed about the officials' behavior, they invest in an efficient size of the local administration

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<sup>76</sup>Our model captures the effect of wars through the ruler's discount factor. As stated in Proposition 2, a lower discount factor makes a grant more likely.



at a relatively low cost.

We then analyze the case of post-Norman Conquest England (1066-1307). In this period, a booming trade activity – as measured, for instance, by the number of licensed markets and fairs – goes hand in hand with numerous complaints against the local officials’ behavior. We present data on boroughs’ taxation, commercial importance, and political liberties. We distinguish between royal boroughs – which belong to the king – and mesne boroughs, which instead belong to a local lord. We find that the king grants to many of his boroughs the right to elect the officials in charge of providing law and order and collecting taxes. Local lords, who are presumably better able than the king to control their officials, are significantly less prone to grant these prerogatives.

As the gradual and concomitant spread of markets and political liberties suggests, the relation between trade opportunities and liberties is circular. Potential gains from trade are an important determinant of the grant of liberties to burgesses. These liberties, in turn, allow for more of these gains from trade to be realized.

Undoubtedly, factors other than gains from trade play a role in the granting of liberties. Rebellions, for instance, seem to be an important determinant. However, the evidence we present give more support to episodes of unrest by burgesses against royal officials rather than directly against the king. Our data also show that times of war often coincide with a high propensity for the king to grant liberties to boroughs. Regardless of whether in times of war or through rebellions, the fact that burgesses would negotiate the right to handle the local administration themselves strongly suggests that misbehavior by royal officials is significant in explaining the spread of local political liberties.

The period we consider is important because it marks the beginning of England’s transition away from feudalism. The grant of the right to elect local officials is an early and essential step towards the subsequent institutional evolution of England. Soon,

boroughs also elect representatives to be sent to the Parliament to negotiate taxation at the national level.

# Appendix 1

Table 5: Major Events: England, 1066-1307.

Year	Event
1066	Norman Conquest - William the Conqueror
1087	William II
1100	Henry I
1139 - 54	Stephen of Blois and Civil War
1154	Henry II
1170 - 74	Inquest of the Sheriffs and Feudal Revolt
1189	Richard I - Third Crusade
1192 - 94	End of the Crusade - Return of Richard to England - Iter of 1194
1199	John
1202	War with France breaks out
1213 - 17	Local inquiries - First Barons' War - Magna Charta
1216	Henry III
1242 - 43	Expedition to Poitou
1253 - 54	Expedition to Gascony
1258 - 60	Inquiries (Eyres)
1258 - 59	Provisions of Oxford and Westminster - Ordinance of Sheriffs - Petition of the Barons - Ordinances of the Magnates
1263 - 67	Second Barons' War and Statute of Marlborough
1272	Edward I
1274 - 75	Edward returns to England - Hundred Rolls Inquiries
1275	First Parliament - Statute of Westminster I
1277	First Welsh War
1278	Inquiries (Eyres)
1282 - 83	Second Welsh War
1283 - 86	Statutes of Acton Burnell - Rhuddlan - Merchants - Westminster II - Winchester - Kirby's Quest - Statute of Exeter
1286 -9	Edward's stay in Gascony
1294 - 96	War with France and First War of Scottish Independence break out
1298	Edward's return to England - Inquiry into grievances

## Appendix 2

We present the implications of assumption **A2** and all the proofs.

**Technical Assumption:** Given **A2**, in the trade economy, we have that,  $\forall \underline{u}_M \in (0, \underline{y})$ ,  $\exists \widehat{q}(\underline{u}_M) : y(q) \leq f(q) + \underline{u}_M$ , for  $q \geq \widehat{q}(\underline{u}_M)$ . Therefore,  $\widehat{q}(\underline{u}_M)$  is non-increasing in  $\underline{u}_M$ . Unless needed, we suppress the argument  $\underline{u}_M$  when referring to  $\widehat{q}(\underline{u}_M)$ .

Also, from **A2** and **A3**,  $\frac{df(q^*)}{dq} > \underline{c}$  in the trade economy.

**Proof of Proposition 1.** Consider  $I = R$ . The efficient investment  $q^*(\underline{c})$  is given by the first-order condition (FOC):<sup>77</sup>

$$y_q(q^*) = \underline{c}. \quad (11)$$

Define now:

$$q^{max} = \arg \max_{\{q \in \mathbb{R}_+\}} y(q) - f(q),$$

as the quantity that maximizes  $U$  when  $T_R(q) = f(q)$ . Given **A2**, a unique  $q^{max}$  exists.

In the manorial economy, we have  $q^* = q^{max} = 0$ .

Consider first the manorial economy.  $R$  solves:

$$\max_{\{q \in \mathbb{R}_+\}} f(q) - \underline{c}q,$$

$$\text{s.t. } \underline{y} - f(q) \geq \underline{u}_M,$$

where we define the solution to this problem as  $q^s(\underline{c})$ . It is straightforward to show that  $q^s(\underline{c}) > q^* = 0$ .

Consider now the trade economy.  $R$  solves a similar problem, where  $y(q)$  is substi-

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<sup>77</sup>When referring to the functions  $y(q)$  and  $f(q)$ , subscripts indicate the derivative with respect to the argument of the function.

tuted for  $\underline{y}$  in the constraint. The solution – still defined as  $q^s(\underline{c})$  – is such that the constraint binds because of **A2** and **A3**, where  $q^s(\underline{c}) = \widehat{q} < q^*(\underline{c})$ .

To summarize, we have:

- $q^s(\underline{c}) \geq q^* = 0$  in the manorial economy;
- $q^s(\underline{c}) \leq q^*(\underline{c})$  in the trade economy.

Finally, consider the choice of  $I \in \{R, M\}$ . Because  $t = f(q)$ , from (2), the marginal cost of investing in  $q$  is the same whether  $I = M$  or  $I = R$ . Also,  $I = M$  implies  $t = 0$  in Stage 4, independently of the type of economy considered. Hence,  $R$  sets  $I^s = R$ . ■

**Proof of Lemma 1.** Consider a pair  $(t^E, q^E)$  and suppose first  $t^E > f(q^E)$ . This inequality implies  $q^E < \tilde{q}(t^E)$ , and the marginal cost of investing in  $q$  is equal to  $\underline{c}$ . We need to investigate the case in which  $\min[y(q^E), f(q^E)] = f(q^E)$  only. Because  $t^E > f(q^E)$ , we have:

$$[f(q^E) - \underline{c}q^E] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s] < [t^E - \underline{c}q^E] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s].$$

Moreover, from **Inv-ICC**( $R$ ), we also have:

$$[t^E - \underline{c}q^E] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s] \leq \frac{[t^E - \underline{c}q^E]}{1 - \beta_R}.$$

By combining the last two inequalities we obtain:

$$[f(q^E) - \underline{c}q^E] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s] < \frac{[t^E - \underline{c}q^E]}{1 - \beta_R};$$

that is, we recover **Trans-ICC**( $R$ ).

Suppose now that  $t^E \leq f(q^E)$ . Consider the case in which  $\min[y(q^E), f(q^E)] = f(q^E)$ . When **Trans-ICC**( $R$ ) holds, we have:

$$\frac{[t^E - C_R(t^E, q^E)]}{1 - \beta_R} \geq [f(q^E) - \underline{c}q^E] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s] \geq [t^E - \underline{c}q^E] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s],$$

where:

$$[t^E - \underline{c}q^E] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s] \geq [t^E - C_R(t^E, q^E)] + \frac{\beta_R}{1 - \beta_R}[f(q^s) - \underline{c}q^s].$$

These two chains of inequalities give:

$$t^E - C_R(t^E, q^E) \geq f(q^s) - \underline{c}q^s;$$

that is, we recover **Inv-ICC**( $R$ ). When  $\min[y(q^E), f(q^E)] = y(q^E)$ , it is straightforward to show the inequalities also hold. Finally, the same reasoning holds in the manorial economy, namely, when  $y(q^E) = \underline{y}$ . ■

**Proof of Lemma 2.** We denote the solution to (10) as  $\{t^r, q^r\}$ . Also, we define  $\check{q}(\underline{c})$  as the solution to  $R$ 's one-period problem when **PC** is disregarded:

$$\check{q}(\underline{c}) = \arg \max_{\{q \in \mathbb{R}_+\}} f(q) - \underline{c}q. \quad (12)$$

From (10) and (12), we have:

- $q^r \in [0, \check{q}(\underline{c})]$  and
- $t^r = \beta_M[\underline{y} - U^s] + (1 - \beta_M)f(q^r)$ ,

where  $U^s$  is  $M$ 's utility in the one-period game.

We now derive the solution  $\{t^R, q^R\}$  to  $R$ 's constrained problem. First, consider the pair  $\{t^r, q^r\}$ . This pair verifies **Inv-ICC**( $R$ ): because  $R$  can choose  $q = q^s$ , if  $q^r \neq q^s$ , it

must be that  $R$  obtains a higher payoff. Moreover, because  $t^r \geq f(q^r)$ , **Trans-ICC**( $R$ ) holds by Lemma 1.

We now turn to **PC**. Depending on the value of  $\underline{c}$ , we can have (i)  $\check{q}(\underline{c}) \leq \hat{q}$  or (ii)  $\check{q}(\underline{c}) > \hat{q}$ . In case (i), we have  $q^s(\underline{c}) = \check{q}(\underline{c})$ , and **PC** is rewritten as:

$$(1 - \beta_M)[\underline{y} - f(q^r)] \geq \underline{u}_M - \beta_M U^s.$$

Because  $q^r(\underline{c}, \beta_M) \in [0, \check{q}(\underline{c})]$ , we can easily check that **PC** holds, because the RHS in the previous inequality is weakly lower than  $(1 - \beta_M)\underline{u}_M$ .

In case (ii), we have  $q^s = \hat{q}$ , and **PC** is rewritten as:

$$(1 - \beta_M)[\underline{y} - f(q)] \geq (1 - \beta_M)\underline{u}_M,$$

which implies **PC** holds if and only if  $q \leq \hat{q}$ . Two subcases can arise:

(ii.1)  $q^r(\underline{c}, \beta_M) \leq \hat{q}$ , which gives  $q^R = q^r(\underline{c}, \beta_M)$ ;

(ii.2)  $q^r(\underline{c}, \beta_M) > \hat{q}$ , which gives  $q^R = \hat{q}$  to satisfy **PC**.

In the second case, all the constraints hold as equalities. This establishes that  $q^R(\underline{c}, \beta_M) \in [0, q^s(\underline{c})]$ .

Finally, we have:

$$\frac{\partial q^r}{\partial \beta_M} = \frac{\frac{df(q^r)}{dq}}{\text{SOD}} < 0,$$

where SOD is the derivative of the left-hand side of the equality (10) with respect to  $q$ , which is negative because the second-order-condition holds. The higher  $\beta_M$  is, the closer  $q^r(\cdot)$  to efficiency. ■

**Proof of Lemma 3.** When disregarding **ICC**( $R$ ), the unconstrained solution to  $R$ 's problem is defined as  $q^\circ(\underline{c}, \bar{c})$ .

From **PC**, we have  $t = y(q) - \underline{u}_M$ , which implies  $q_1(t) = q^s = \widehat{q}$ .

From (2), the cost function has a kink at  $q = \widehat{q} < q^*(\underline{c})$  (see Proposition 1). Given (2), we have that  $q^\circ(\underline{c}, \bar{c}) < q^*(\underline{c})$ , where  $q^\circ(\underline{c}, \bar{c})$  maximizes the surplus when the cost of investing in the bureaucracy is given by (2). We have two main cases:

(i)  $q^\circ(\underline{c}, \bar{c}) > \widehat{q}$ ;

(ii)  $q^\circ(\underline{c}, \bar{c}) = \widehat{q}$ .

Consider case (i).  $R$  is interested in moving the investment away from  $q^s = \widehat{q}$  toward  $q^\circ(\underline{c}, \bar{c})$ . Let us define  $\bar{q}$  as the value of  $q$  such that:

$$y(q) = f(q),$$

where  $\bar{q} = \widehat{q}(\underline{u}_M)$  when  $\underline{u}_M = 0$ . Two subcases can occur:

(i.1)  $\bar{q} > q^\circ(\underline{c}, \bar{c})$ ,

(i.2)  $\bar{q} \leq q^\circ(\underline{c}, \bar{c})$ .

In case (i.1), we have  $\min[y(q), f(q)] = f(q)$ , for  $q = \{\widehat{q}, q^\circ\}$ . Then, when  $q = q^\circ$ , from (2) and the RHS in (8), we get:

$$\bar{\beta}_R = \frac{\underline{u}_M - [y(q^\circ) - f(q^\circ)] + [\bar{c} - \underline{c}](q^\circ - q^s)}{[f(q^\circ) - \underline{c}q^\circ] - [f(q^s) - \underline{c}q^s]}. \quad (13)$$

If  $\beta_R \geq \bar{\beta}_R$ ,  $R$  binds **PC**, and the solution  $q^R = q^\circ(\underline{c}, \bar{c})$  verifies **ICC**( $R$ ). We then have  $t^R = [y(q^\circ) - \underline{u}_M]$ .

When  $\beta_R < \bar{\beta}_R$ , **ICC**( $R$ ) binds. We write **ICC**( $R$ ) as:

$$y(q) - \underline{u}_M - \underline{c}q^s - \bar{c}(q - q^s) \geq (1 - \beta_R)[f(q) - \underline{c}q] + \beta_R[f(q^s) - \underline{c}q^s]. \quad (14)$$

Recall that  $y_q(q) < f_q(q)$  for  $q \geq q^{max}$ , where  $q^{max}$  is defined in the proof of Proposition 1, and where  $q^{max} \leq \widehat{q}$  (from **A2-A3**). Also, the solution to  $R$ 's problem is not



greater than  $q^\circ(\underline{c}, \bar{c})$  and not lower than  $\hat{q}$  (because at  $\hat{q}$ , all the constraints trivially hold).

Hence, as we move  $q$  downward, *ceteris paribus* the difference between the LHS and the RHS in (14) increases until verifying **ICC**( $R$ ). When **ICC**( $R$ ) binds, we have  $q^R(\underline{c}, \bar{c}, \underline{u}_M, \beta_R) \in [\hat{q}, q^\circ(\underline{c}, \bar{c})]$ , which (from (14)) is non-decreasing in  $\beta_R$ .

When considering case **(i.2)**, it is straightforward to show the same procedure holds. The only difference consists in the fact that, when **ICC**( $R$ ) is violated,  $q$  has to be sufficiently lowered so that the area in which  $\min[y(q), f(q)] = f(q)$  is reached.

For these outcomes to be the solution to the subgame without a grant of decision rights, we verify if the disregarded constraints hold. We first check for **ICC**( $M$ ). By binding **PC**, **ICC**( $M$ ) is given by:

$$y(q) - \underline{u}_M \leq \beta_M \{[y(q) - f(q)] - \underline{u}_M\} + f(q),$$

that is written as:

$$y(q) - f(q) \leq \underline{u}_M,$$

which holds for  $q \geq \hat{q}$ . Because  $q^R$  lies within the interval  $[\hat{q}, q^\circ(\underline{c}, \bar{c})]$ , **ICC**( $M$ ) holds.

Also,  $\forall q \in [\hat{q}, q^\circ(\underline{c}, \bar{c})]$  we have  $t = y(q) - \underline{u}_M \leq f(q)$ . Therefore, by Lemma 1, **PC**( $R$ ) also holds.

Finally, in case **(ii)**, the solution is trivially given by  $q^R = \hat{q}$ . ■

**Proof of Proposition 2.** Let us start with the analysis of the manorial economy; that is, consider  $y(q) = \underline{y}$ . When  $I_\tau = R$ ,  $R$  incurs a cost  $\underline{c}$  for hiring each single officer.

We define  $q^M$  as the investment  $q$   $M$  undertakes in period  $\tau$  when  $I_\tau = M$ . Recall that, if  $I_\tau = M$ ,  $R$  cannot regain control over  $q$  until the beginning of period  $\tau + 1$ . We show  $M$  cannot commit to repay a (per-period) sum such that  $R$  is indifferent between

$I_\tau = M$  and  $I_\tau = R$ . To this end, we first show that any movement toward efficiency generates a lower utility for  $R$  when  $I_\tau = M$  rather than  $I_\tau = R$ .

Consider the following two-phase strategy played by  $R$ . *Cooperation phase*: play  $I_\tau = M$ ,  $\forall \tau$ . *Punishment phase*: play the equilibrium of the finitely repeated stage game.  $R$  starts with the cooperation phase in period  $\tau$ , and switches forever after to the punishment phase whenever  $M$  transfers her a sum  $t_\tau < t^E$ , for  $t^E$  to be defined.<sup>78</sup>  $M$  sets  $q^M = q^*(\underline{c})$  and transfers  $t^M = t^E$  in any period  $\tau$  in which  $I_\tau = M$ , and switches to the one-period equilibrium otherwise.

Consider then  $I_\tau = M$ . For  $R$  to weakly prefer the cooperation phase to the punishment one,  $M$  must transfer the following sum to  $R$ :

$$t^M(\underline{c}) \geq \underline{V}_R(\underline{c}) = t^R - \underline{c}q^R \equiv t^E,$$

where  $\underline{V}_R(\underline{c})$  is  $R$ 's per-period payoff when  $R$  does not delegate decision rights to  $M$ , and where the pair  $(t^R, q^R)$  is defined in Lemma 2.

$M$  incurs the cost  $\underline{c}q^M$  of investing in  $q^M$  when  $I_\tau = M$ . To prove that granting decision rights to  $M$  is not a profitable choice for  $R$ , we show the strategy-pair described above cannot induce  $M$  to pay a transfer  $t_\tau \geq \underline{V}_R(\underline{c})$  to  $R$  in any period  $\tau$ .

When  $I_\tau = M$ ,  $R$  cannot deviate at any stage in period  $\tau$ . Given the above-mentioned strategies, if  $M$  were to deviate and transfer some  $t_\tau < \underline{V}_R(\underline{c})$  to  $R$ , he would invest  $q^M = q^* = 0$ . Hence, for  $M$  not to deviate, the following **ICC**( $M$ ) has to hold:

$$\frac{\underline{y} - \underline{V}_R(\underline{c})}{1 - \beta_M} \geq \underline{y} + \frac{\beta_M}{1 - \beta_M} U^s,$$

We now show that, for every  $q^M \in [0, q^R]$ , this constraint does not hold. Compare  $R$ 's strategy mentioned above to the one  $R$  plays in Lemma 2 absent the grant of decision rights. In Lemma 2 also, when not receiving an adequate transfer,  $R$  punishes

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<sup>78</sup>Notice that the equilibrium in the one-period game gives  $M$ 's *minmax* payoff.

$M$  by reverting to the equilibrium of the finitely repeated game. The two subgames only differ in that  $M$  gets a higher *deviation payoff* when  $I_\tau = M$ , because  $R$  cannot employ coercion ( $f(q)$ ). Hence, we conclude that **ICC**( $M$ ) is violated  $\forall q^M \in [q^*, q^R]$  provided  $t^M \geq \underline{V}_R(\underline{c})$ .<sup>79</sup>

To summarize, in the manorial economy, a grant of decision rights does not occur, that is,  $I_\tau^E = R$  and the equilibrium pair  $(t^E, q^E)_\tau$  is given by  $(t^R, q^R)$  as defined in Lemma 2,  $\forall \tau$ .

Consider now the case of the trade economy. If  $I_\tau = R$ , as in the previous case, for  $R$  to weakly prefer  $I_\tau = R$  to  $I_\tau = M$ ,  $M$  has to commit to:

$$t^M(\bar{c}, \beta_R) \geq \bar{V}_R(\bar{c}, \beta_R) \equiv t^R - C(q^R),$$

where  $\bar{V}_R(\bar{c}, \beta_R)$  is  $R$ 's per-period payoff in the trade economy absent the grant of decision rights to  $M$ , and where  $\{t^R, q^R\}$  is defined in Lemma 3.

When  $I_\tau = M$ ,  $M$  sustains the cost  $\underline{c}q^M$  of investing in  $q$ , and the temptation to deviate rests on him. Given the two-phase strategy described above, we first compute  $M$ 's payoff when not deviating on the transfer to be made to  $R$ . In each period  $\tau$ ,  $M$  solves:

$$\max_{\{t, q\}} y(q) - \underline{c}q - t \tag{15}$$

$$t \geq \bar{V}_R(\bar{c}, \beta_R).$$

The constraint ensures  $R$  is willing to delegate decision rights over  $q$  in each period  $\tau$ .

From the program in (15), it is easily seen that  $M$  optimally invests  $q^M = q^*(\underline{c})$ .

The grant of decision rights – i.e.,  $I_\tau = M$  in every period  $\tau$  – is an equilibrium if

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<sup>79</sup>Any movement toward efficiency violates **ICC**( $M$ ). Assume it does not. Then  $M$  is weakly better-off when playing  $q^M \in [q^*, q^R]$  and transferring  $t^M = t^R - \underline{c}q^R$  rather than reneging and transferring zero. Then, we should have  $q^R = q^M$ , that is, from Lemma 2,  $R$  could have induced this more efficient investment even absent the grant of decision rights. This constitutes a contradiction.

$M$  does not find it profitable to deviate, that is, if:

$$y(q^*) - \underline{c}q^* - \overline{V}_R(\bar{c}, \beta_R) \geq (1 - \beta_M)[y(q^*) - \underline{c}q^*] + \beta_M \underline{u}_M,$$

where  $(\mathbf{ICC}(M))$  takes into that  $M$  also optimally sets  $q^*(\underline{c})$  when deviating.<sup>80</sup>  $(\mathbf{ICC}(M))$  is written as:

$$\beta_M[y(q^*) - \underline{c}q^* - \underline{u}_M] \geq \overline{V}_R(\bar{c}, \beta_R). \quad (16)$$

From (16), the grant of decision rights is a subgame perfect equilibrium only if  $M$  is sufficiently longsighted. Also, all else equal, the more shortsighted  $R$  is and the higher  $\bar{c}$  is, the lower  $\overline{V}_R(\bar{c}, \beta_R)$  is, and, therefore, the more likely a grant of decision rights is to occur. ■

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<sup>80</sup>The optimal investment is derived by assuming  $M$ 's marginal cost of investing in  $q$  is  $\underline{c}$  even when deviating on the transfer paid to  $R$ . In light of our analysis in the Online Appendix, this may not be true: because  $M$  loses decision rights in future periods, officials may be tempted to keep a higher amount of tax proceeds. This effect does not affect our results in any major way.

## References

- Acemoglu, Daron, “Politics and Economics in Weak and Strong States,” *Journal of Monetary Economics*, 52 (2005), 1199-1226.
- Acemoglu, Daron, and James A. Robinson, “Why Did the West Extend the Franchise? Democracy, Inequality, and Growth in Historical Perspective,” *The Quarterly Journal of Economics*, 115 (2000), 1167-1199.
- Acemoglu, Daron, and James A. Robinson, “A Theory of Political Transition,” *The American Economic Review*, 91 (2001), 938-963.
- Acemoglu, Daron, and James A. Robinson, *Economic Origins of Dictatorship and Democracy*, Cambridge University Press, 2006.
- Au Zaneta, Arianna Ciula, Harold Short, Paul Spence, Paul Vetch, and Jose M. Vieira, *Henry III Fine Rolls Project* (<http://www.finerollshenry3.org.uk/home.html>).
- Ballard, Adolphus, *The Domesday Boroughs*, Clarendon Press, 1904.
- Ballard, Adolphus, *British Borough Charters, 1042-1216*, Cambridge University Press, 1913.
- Ballard, Adolphus, and James Tait, *British Borough Charters, 1216-1307*, Cambridge University Press, 1923.
- Banerjee, Abhijit, Rema Hanna, and Sendhil Mullainathan, “Corruption,” in *Handbook of Organizational Economics*, Gibbons Robert, and John Roberts, ed. (Princeton, NJ: Princeton University Press, 2012).
- Bardhan, Pranab, “Decentralization of Governance and Development,” *The Journal of Economic Perspectives*, 16 (2002), 185-205.
- Bardhan, Pranab, and Dilip Mookherjee, “Decentralisation and Accountability in Infrastructure Delivery in Developing Countries,” *The Economic Journal*, 116 (2006), 101-127.

Barzel, Yoram, and Edgar Kiser, "The Development and Decline of Medieval Voting Institutions: a Comparison of England and France," *Economic Inquiry*, 35 (1997), 244-260.

Bates, Robert, and Da-Hsiang D. Lien, "A Note on Taxation, Development and Representative Government," *Politics & Society*, 14 (1985), 53-70.

Beresford, Warwick M., and Herbert P. R. Finberg, *English Medieval Boroughs: a Handlist*, Totowa, NJ: Rowman and Littlefield, 1973.

Besley, Timothy, and Robin Burgess, "The Political Economy of Government Responsiveness: Theory and Evidence from India," *The Quarterly Journal of Economics*, 117 (2002), 1415-1451.

Besley, Timothy, and Torsten Persson, "The Origins of State Capacity: Property Rights, Taxation and Policy," *The American Economic Review*, 99 (2009), 1218-1244.

Besley, Timothy, and James A. Robinson, "Quis Custodet Ipsos Custodes? Civilian Control over the Military," *Journal of the European Economic Association*, 8 (2010), 655-663.

Bisson, Thomas M., *The Crisis of the Twelfth Century: Power, Lordship, and the Origins of European Government*, Princeton University Press. Princeton, NJ, 2008.

*British History Online* (<http://www.british-history.ac.uk>).

Britnell, Richard H., "English Markets and Royal Administration before 1200," *The Economic History Review*, 31 (1978), 183-196.

Britnell, Richard H., *The Commercialisation of English Society, 1000-1500*, Manchester University Press, 1996.

Britnell, Richard H., "Commercialisation and Economic Development in England, 1000-1300," in *A Commercialising Economy: England 1086 to c. 1300*, Britnell, Richard H., and Bruce M. S. Campbell, ed. (Manchester: Manchester University Press, 1995).

*Calendar of Patent Rolls: 1216-1307* (<http://sdr.lib.uiowa.edu/patentrolls/search.html>).

- Cam, Helen M., *Liberties & Communities in Medieval England: Collected Studies in Local Administration and Topography*, London: Merlin Press, 1963.
- Carpenter, David A., "The Decline of the Curial Sheriff in England 1194-1258," *English Historical Review*, (1976), 1-32.
- Cassidy, Richard, *The 1259 Pipe Roll*, Dissertation, King's College London (University of London), 2012.
- Cervellati, Matteo, Piergiuseppe Fortunato, and Uwe Sunde, "Hobbes to Rousseau: Inequality, Institutions and Development," *The Economic Journal*, 118 (2008), 1354-1384.
- De Lara, Yadira G., Avner Greif, and Saumitra Jha. "The Administrative Foundations of Self-enforcing Constitutions," *The American Economic Review: Papers & Proceedings*, 98 (2008), 105-109.
- De Long, J. Bradford, and Andrei Shleifer. "Princes and Merchants: European City Growth before the Industrial Revolution," *Journal of Law and Economics* 36 (1993), 671-702.
- Dessí, Roberta, and Salvatore Piccolo, "Two is a Company, N is a Crowd? Merchant Guilds and Social Capital," CEPR Discussion Paper n. 7374, 2009.
- Dixit, Avinash, "Trade Expansion and Contract Enforcement," *Journal of Political Economy*, 111 (2003), 1293-1317.
- Douglas, David C., and Harry Rothwell, *English Historical Documents, 1189-1327*, Vol. 3. Taylor & Francis e-Library, 2004.
- Egorov, Georgy, Sergei Guriev, and Konstantin Sonin, "Why Resource-poor Dictators Allow Freer Media: A Theory and Evidence from Panel Data," *American Political Science Review*, 103 (2009), 645-668.
- Engerman, Stanley L., and Kenneth L. Sokoloff, "The Evolution of Suffrage Institutions in the New World," *The Journal of Economic History*, 65 (2005), 891-921.

Gandhi, Jennifer, and Ellen Lust-Okar, "Elections under Authoritarianism," *Annual Review of Political Science*, 12 (2009), 403-422.

Gellner, Ernest, *Plough, Sword, and Book: The Structure of Human History*, University of Chicago Press, 1992.

Gennaioli, Nicola, and Hans J. Voth, "State Capacity and Military Conflict," Mimeo Pompeu Fabra University, 2012.

Goddard, Richard, "Small Boroughs and the Manorial Economy: Enterprise Zones or Urban Failures?" *Past & Present*, 210 (2010), 3-31.

Great Britain Public Record Office, H. C. Maxwell Lyte, Alfred Edward Stamp, *Calendar of the Charter Rolls Preserved in the Public Record Office*, 1908.

Green, Judith A., *The Government of England under Henry I*, Cambridge University Press, 1986.

Greif, Avner, "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition," *The American Economic Review*, 83 (1993), 525-548.

Greif, Avner, "Commitment, Coercion, and Markets: The Nature and Dynamics of Institutions Supporting Exchange," in *Handbook of New Institutional Economics*, Ménard, Claude, and Maty M. Shirley, ed. (Dordrecht: Springer, 2005).

Greif, Avner, Paul Milgrom and Barry R. Weingast, "Commitment, and Enforcement: The Case of the Merchant Guild", *Journal of Political Economy*, 102 (1994), 745-776.

Gross, Charles, "The Court of Piepowder," *The Quarterly Journal of Economics*, 20 (1906), 231-249.

Harris, Brian E., "King John and the Sheriff's Farms," *English Historical Review*, (1964), 532-542.

Heiser, Richard R., "Richard I and His Appointments to English Shrievalties," *English His-*



*torical Review*, (1997), 1-19.

Hollister, Warren C., and John W. Baldwin, "The Rise of Administrative Kingship: Henry I and Philip Augustus," *The American Historical Review*, 83 (1978), 867-905.

Holt, James C., *Magna Carta*, Cambridge University Press, 1992.

Horowitz, Andrew W., "Time Paths of Land Reform: A Theoretical Model of Reform Dynamics," *The American Economic Review*, 83 (1993), 1003-1010.

Jenkins, Alexander, *Civil and Ecclesiastical History of the City of Exeter and its Environs: from the Time of the Romans to the Year 1806*, W. Norton, 1841.

Konrad, Kai A., and Stergios Skaperdas, "The Market for Protection and the Origin of the State," *Economic Theory*, 50 (2012), 417-443.

Lane, Frederic C., "Economic Consequences of Organized Violence," *The Journal of Economic History*, 18 (1958), 401-417.

Langdon, John, and James Masschaele, "Commercial Activity and Population Growth in Medieval England," *Past & Present*, 190 (2006), 35-81.

Letters, Samantha, Mario Fernandes, Derek Keene, and Olwen Myhill, "Gazetteer of Markets and Fairs in England and Wales to 1516," *List and Index Society*, 2003.

Levi, Margaret, "Death and Taxes: Extractive Equality and the Development of Democratic Institutions," in *Democracy's Value*, Shapiro, Ian, and Casiano Hacker-Cordon, ed., (Cambridge: Cambridge University Press, 1999).

Lizzeri, Alessandro, and Nicola Persico, "Why Did the Elite Extend the Suffrage? Democracy and the Scope of Government, with an Application to Britain's "Age of Reforms"," *The Quarterly Journal of Economics*, 119 (2004), 707-765.

Lopez, Robert S., *The Commercial Revolution of the Middle Ages, 950-1350*, Prentice Hall, 1971.

- Maddicott, John R., "Magna Carta and the Local Community 1215-1259," *Past & Present*, 102 (1984), 25-65.
- Maitland, Frederic W., *Domesday Book and Beyond: Three Essays in the Early History of England*, Cambridge University Press, 1897.
- Martinez Bravo, Monica, Gerard Padro i Miquel, Nancy Quian and Yang Yao, "Elections in China," Mimeo Yale University, 2014.
- Masschaele, James, *Peasants, Merchants, and Markets. Inland Trade in Medieval England, 1150-1350*, St Martin's Press, New York, 1997.
- Mayhew, Nicholas, "Modelling Medieval Monetisation," in *A Commercialising Economy: England 1086 to c. 1300*, Britnell, Richard H., and Bruce M. S. Campbell, ed. (Manchester: Manchester University Press, 1995).
- McGuire, Martin C., and Mancur L. Olson, "The Economics of Autocracy and Majority Rule: The Invisible Hand and the Use of Force," *Journal of Economic Literature*, 34 (1996), 72-96.
- Merewether, Henry A., *The History of the Boroughs and Municipal Corporations of the United Kingdom, from the Earliest to the Present Time: with an Examination of Records, Charters, and other Documents*, Vol. 1, Stevens and sons, London, 1835.
- Morris, William A., *The Medieval English Sheriff to 1300*, Manchester University Press, 1968.
- Moselle, Boaz and Benjamin Polak, "A Model of a Predatory State," *Journal of Law, Economics and Organization*, 17 (2001), 1-33.
- Myerson, Roger B., "The Autocrat's Credibility Problem and Foundations of the Constitutional State," *American Political Science Review*, 102 (2008), 125-139.
- North, Douglass C. and Robert P. Thomas, *The Rise of the Western World: A New Economic History*, Cambridge University Press, 1973.
- North, Douglass C., John J. Wallis and Barry W. Weingast, *Violence and Social Orders:*

*A Conceptual Framework for Interpreting Recorded Human History*, Cambridge University Press, 2009.

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

Olson, Mancur L., "Dictatorship, Democracy and Development," *American Political Science Review*, 87 (1993), 567-576.

Pirenne, Henri, *Medieval Cities. Their Origins and the Revival of Trade*, Princeton University Press, Princeton, 1925.

Poole, Austin L., *From Domesday Book to Magna Carta, 1087-1216*, Vol. 3. Oxford University Press, 1955.

Powicke, Frederick M., *The Thirteenth Century, 1216-1307*, Clarendon Press, 1962.

Reynolds, Susan, "The Rulers of London in the Twelfth Century," *History*, 57 (1972), 337-357.

Round, John H., *Geoffrey de Mandeville: a Study of the Anarchy*, London, Longmans, 1892.

Salzman, Louis F., "The Legal Status of Markets," *Cambridge Historical Journal*, 2 (1928), 205-212.

Sng, Tuan-Hwee, and Chiaki Moriguchi, "Taxation and Public Goods Provision in China and Japan before 1850," PRIMCED Discussion Paper Series 35, Institute of Economic Research, Hitotsubashi University, 2013.

Stasavage, David, *States of Credit: Size, Power, and the Development of European Politics*, Princeton, NJ: Princeton University Press, 2011.

Stephenson, Carl, *Borough and Town: a Study of Urban Origins in England*, Mediaeval Academy of America, 1933.

Stubbs, William, *Select Charters and Other Illustrations of English Constitutional History from the Earliest Times to the Reign of Edward the First*, Clarendon Press, 1905.

Tait, James, "The Firma Burgi and the Commune in England, 1066-1191," *English Historical Review* (1927), 321-360.

Tait, James, *The Medieval English Borough; Studies on its Origins and Constitutional History*, Manchester University Press, 1936.

Thierry, Augustin, *Lettres sur l'Histoire de France, Vol. 1*, Garnier, 1867.

Tilly, Charles, "War Making and State Making as Organized Crime," in *Bringing the State Back In*, Evans, Peter, Dietrich Rueschemeyer, and Theda Skocpol, ed., (Cambridge: Cambridge University Press, 1985).

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