Why Did the Elites Extend the Suffrage? Democracy and the Scope of Government, With an Application to Britain’s ‘Age of Reform.’

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Abstract

A new rationale is presented for why an elite may wish to expand the franchise even in the absence of serious threats to the established order. In our model, expanding the franchise can turn politicians away from particularistic politics based on ad-personam redistribution within the elite, and foster competition based on provision of public programs with diffuse beneﬁts. We show that if the value of public goods is particularly high, a majority of the elite votes in favor of an extension of the franchise despite the absence of any threat from the disenfranchised.

We argue that several features of the evolution of public spending in 19th century Britain are consistent with our model. We suggest that the extension of the franchise may have been precipitated by the failure of old institutions in dealing with the needs generated by major increases in the size of cities, and that in turn, the ‘municipal revolution’ can be attributed to the change in the franchise.

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1 Introduction

This paper deals with peaceful extensions of the right to vote. We are interested in the question of whether, or to what extent, the change was forced onto the elites. Our motivating example is 19th century Britain, when the franchise was extended without massive social unrest or revolutions. We use Britain as a “case study” to inform our modeling choices. We provide a theoretical model in which sometimes it is in the interest of the elites to extend the franchise. In our model this happens when a majority within the elite is dissatisfied with the functioning of current political institutions because of the inadequate provision of public goods and excessive pork-barrel spending. We offer evidence that, consistent with our model, the franchise expansions in 19th century Britain were accompanied by a surge in spending on local public goods and by a retrenchment of policies driven by special interest.

In 19th century Britain, franchise expansions were relatively peaceful—they entailed little overt violence. “It is the peculiar pride of England that [the record of social and political reform] is to be found on the statute book, not in the annals of revolution.”1 Peaceful expansion are hard to rationalize within the benchmark political-economic models. In those models, enlarging the franchise dilutes the elite’s power to influence policy and results in a loss for the elite.2 If the interests of the elite and of the disenfranchised are in sharp contrast on the issue of suffrage, and given that the elite controlled the levers of power, why did the British elite allow democratization?3

The question of peaceful expansions of the franchise has recently been revived by Acemoglu and Robinson (2000, 2001), and Conley and Temimi (2001). These papers introduce the threat of revolution. In these models, the disenfranchised group gains the right to vote by effectively threatening the social order, and hence the position of the enfranchised group. According to this view, franchise expansions are voluntary only in appearance; indeed, they are implemented under the threat of subversion of the existing order.

While we do not dispute that the latent threat of violence helped bring about the extension of

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1Cited from Cheyney (1931), page vii.
2In the median-voter model, for instance, expanding the franchise generally changes the identity of the decisive median voter, which guarantees that more than 50 percent of the elite would oppose the expansion (Meltzer and Richard 1981). Similarly, in models of redistributive politics (Lindbeck Weibull 1987, Myerson 1993) the elite would resist an expansion of the franchise since it would result in an increase in the number of individuals claiming a share of a pie of given size. Standard models, therefore, suggest that the elite should always expend considerable resources in resisting the expansion, quite possibly resorting to overt conflict with the disenfranchised when expanding the franchise has important consequences.
3In a model of information aggregation a’ la Feddersen and Pesendorfer (1997), increasing the number of voters could have a positive effect. In this model the conflict of interest is secondary, and adding informed voters might generate more informed outcomes. It would seem, however, that this informational effect ought to be negligible when in reality the elite is large and conflicts of interest dominate.
suffrage in Britain, the question is whether the possibility of revolution was so serious to, by itself, have persuaded the elite to extend the franchise, or whether there are some other political-economic factors associated with the franchise expansion that might have entered the calculus of the elites. As we will show momentarily, the data suggest just such a factor. A massive shock—urbanization—created a sudden need for urban public goods in the early 19th century. This need, we argue, could not be fulfilled by the unreformed political system, which was captive of special interest within the aristocracy; hence the appeal of reform. To outline this argument we now give a bird’s eye view of franchise expansion and the evolution of the public sector of 19th century England.

The franchise in 19th century Britain was extended progressively, at the parliamentary level with the three reform acts of 1832, 1867, and 1884; this expansion was roughly replicated at the level of local government (except for bodies governing welfare spending). Figure 1 below shows that total government spending (central and local) as a fraction of GDP remained roughly constant after accounting for war spending. Since the expansion of the franchise does not seem to have coincided with a big change in total government spending, let us examine the composition of spending. Spending on welfare actually decreased during the 19th century—from a peak of 2 percent of GDP in 1820 to less than 1 percent of GDP through most of the rest of the century. This pattern does not seem to provide prima facie support for the “threat of revolution” scenario, according to which expanding the franchise should generate a redistribution of resources from the elite to the disenfranchised.

Instead, the first order effect is on local public spending. This changed dramatically. Spending by local government rose from 17% of total government spending in 1790 to 41% in 1890 (see Figure 2). Much of this massive increase reflected spending on public health infrastructure like sewerage systems, filtered water, and paved and drained roads.

The reason for this dramatic increase in public health infrastructure is the plight of British cities in the 19th century. With the industrial revolution, masses converged from the countryside to the cities in search of manufacturing jobs, and the urban populations swelled at unprecedented rates. Because of the pressure on a fragile infrastructure, cities were in a constant state of public health emergency. Epidemics of cholera and other diseases ravaged urban populations; in the 1830s, life expectancy in large provincial cities was only 29 years, a 25% decline from the previous decade.

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4The literature on democratization has suggested a rationale for peaceful democratic transitions, based on a variation of the hold-up problem. We will discuss this alternative explanation in the related literature.

5Section 4 will address the connection between public spending and franchise reform in more detail.

6The large peak around the start of the century reflects military spending on the Napoleonic wars.

7Transfers increase after the 1890s. This increase is supportive of a “threat of revolution model.” We will return to this issue in Section 4.

8See Peacock and Wiseman (1961) and Millward and Sheard (1995). The paving of roads was considered a public health measure because dirt roads constituted a breeding ground for microorganism (see Section 4.4).
In these circumstances, spending on health and sanitation constituted a real public good whose benefits accrued to all urban classes. Indeed, the ill-effects of the epidemics cut across classes (although, of course, the wealthy lived longer than the poor). William Farr alludes to this point in his 1838 *Annual Report* “[T]he epidemics which arise in the east end of the town [London] do not stay there; they travel to the west and prove fatal.” This was especially true of water-borne diseases such as cholera and typhoid. The surge in local public spending, then, was a direct response to an exogenous shock: rapid urbanization. This shock raised the value of local public goods not only for the (non-voting) urban poor but also, crucially for our argument, for the (voting) urban middle classes.

With respect to taxation, the age of reform is marked by the progressive elimination of tariffs, a process that begins in 1842. The best-known example of this policy is the repeal of the Corn Laws (1846). The conventional view—at least since D. Ricardo and the Manchester School—is that the

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9Cholera, for example, struck England in 1831-2 (32,000 deaths). In that year, riots associated with cholera occurred in London, Liverpool, Manchester, Exeter, Birmingham, Bristol, Leeds, Sheffield, Glasgow, Edinburgh, and other towns. The riots originated from rumors that sufferers of cholera were being murdered by medical students to obtain bodies for anatomy classes. Other cholera epidemics occurred in 1848-9 (62,000 deaths), 1853-4 (20,000), and 1866-7 (14,000). See Wohl (1983), pp. 118-9.

10Cited from Williamson (1990), p. 293. Prince Albert died of typhoid and Edward, Prince of Wales, contracted a severe case in 1871 after staying at the country home of the Countess of Londesborough. The Earl of Chesterfield, who had also stayed in the house, died of the disease. Cited from Wohl (1983).

11Section 4.2.2 provides more evidence of the strong correlation in life expectancy across classes.
abolition of duties would result in increased social surplus benefiting the working classes and the industrialists, who joined forces in the Anti-Corn Law League against the landed interests.

A picture emerges, then, in which the expansion of the franchise is accompanied by (a) an increase in the value of public goods; (b) changes in the nature of public spending toward more spending on public goods; (c) no greater transfers to the lower classes, and (d) a shift in policy in a direction favored by a majority within the elite (the commercial and urban classes) but not necessarily of all of the elite (not the landed classes). A median-voter framework could account for point (b), but cannot explain voluntary franchise expansion. Point (c) can be accounted for neither by a “threat of revolution” model nor by a model of pure redistributive politics. Point (d) highlights the internal divisions of the elite, a feature that has hitherto been neglected but which is crucial in our account for voluntary expansion. We propose a “hybrid” model of political competition which features a tension between public goods provision and redistributive politics. The model can account for points (a) through (d). Specifically, the model identifies conditions under which franchise expansion is optimal for the elite in response to an increase in the value of public goods. Remarkably, the model delivers a franchise expansion that is truly voluntary—does not require any degree of power of the disenfranchised over the elite.

In the model, politicians can choose a combination of two policy instruments, redistribution (ad-hominem benefits) and a public good with diffuse benefits. Politicians, who court specific subset of voters in the elite, find redistributive policies more expedient, all other things being equal, than policies whose diffuse benefits cannot be directed to swing voters. Thus, competition for votes induces politicians to rely excessively on instruments of special interest politics. In this setup, members of the elite may wish to reform the political system to provide incentives for politicians to employ the power of office towards the provision of policies with diffuse benefits. Enlarging
the franchise will do just that, since increasing the number of voters reduces the fraction of the electorate that can be wooed with ad-hominem promises and therefore, by comparison, increases the electoral value of policies with diffuse benefits. Politicians, then, become more likely to provide such policies. This effect pushes the political outcome in the direction preferred by the elite.

The fact that a majority of the elite can be better off after the expansion is surprising, since it would seem that, under the restricted franchise, electoral competition for the votes of the elite would guarantee that the lot of a majority in the elite cannot be improved by expanding the franchise. However, the redistributive strategy of politicians is such that not all members of the elite are given large transfers, only those who are swing voters; in equilibrium, members of the elite who are not swing voters lose out from special interest politics. Thus expanding the franchise, with the consequent shift in policy towards public goods provision, is strictly preferred by those who are not swing voters. When these voters form a majority, a majority of the electorate will prefer to expand the franchise. In our model, a majority in favor of an extension of the franchise will form when the value of public goods becomes sufficiently high, as we argue happened in British cities in the 19th century.

According to our model, extending the franchise has the advantage for the elite of inducing office-motivated politicians to increase the provision of public goods. An extension of the franchise causes a shift away from special-interest politicking towards a more public-oriented legislative activity. Just such a shift in the mode of political competition has been documented in Britain’s age or reform. Seymour (1915, p. 447), for example, finds that as a result of the expansion of the franchise “the very nature of electioneering has been transformed,” from purchasing a constituency with bribes to
winning it by promises of legislation (pp. 453-4). The diminished importance of special interest in politics has been analyzed extensively by historians under the rubric of “waning of Old Corruption.” Cox (1987) lends empirical support to this strand of the literature with his analysis of parliamentary minutes, which demonstrates that the expansions of the franchise coincided with a shift away from personal politics towards voting on broad programs. The battle against corruption is the lens through which some historians view the entire process of franchise reform (see e.g. Seymour 1915 and Harling 1996). The same was true of some contemporaries: in the eyes of the Radicals, a primary goal of franchise reform was the extinction of “interest” in the House of Commons.

At this point a question arises. Did a majority of the elite see the unreformed government as inadequate for public good provision? In other words, could the elite have achieved increased spending on local public goods by means other than expanding the franchise? It is hard to give a confident answer to these questions. Nevertheless, most students of local government agree that the increase in local public goods could not have come about without the “municipal revolution,” the progressive reform of local government initiated by the Municipal Corporations Act of 1835.12 The municipal revolution, in turn, could hardly have happened without the change in the composition of electorate. According to Smellie (1949), “[t]he most important changes in the structure of English local government followed the extension of the suffrage in 1832 to the middle class, in 1867 to the urban working class, and in 1884 to the agricultural labourer.”13 We follow these students of local government in arguing that without the shock of a change in the electoral composition, it would have been impossible for the majority within the elites to force the necessary legislative reforms.

Our model of consensual expansion of the franchise can, we believe, contribute in building a coherent picture of Britain’s “age of reform.” Our contribution is somewhat provocative because it asserts that the self-interest of the elites is not necessarily an obstacle to democratization. Indeed, self-interest may conceivably dictate relinquishing some power. We reiterate, however, that we do not take our model literally as showing that the franchise expansion happened in the absence of any pressures from the disenfranchised. What we take from the model is that there are shifts in public spending that follow the expansion of the franchise, and that these shifts may be beneficial for important subsets of the elite. In regards to the “threat of revolution” thesis we recognize that there are elements of extra-economic conflict between the disenfranchised and the elite, and there is no question that the “threat of revolution” was used by contemporaries as a powerful rhetorical argument. But, was there a realistic threat of revolution in 18th century Britain? In this, historians differ. Some scholars discount the “threat of revolution” story in accounting for the causes of British franchise reforms. This is partly because they reckon that the revolutionary

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12See section 4.
13Cited from Smellie (1949), p. 27. For a similar assessment, see Newman (1935), p. 163.
movements in 19th-century Britain were weak and did not impact the politics of reform. Other scholars place more emphasis on the threat of revolution; we refer to Acemoglu and Robinson (2000) for a presentation of that strand of the literature. Our position is that our model is not alternative, but rather complementary to existing views of franchise expansion. The forces highlighted in our model may well co-exist with a threat of revolution. The key point is that the model does not need the threat of revolution to explain the franchise expansion.

2 The Simple Logic of Franchise Expansion: An Example

To illustrate in the simplest way the key forces of our model, we first analyze an example of democratic provision of public goods in which some very stark assumptions are made. Most of these assumptions are then dispensed with in the main analysis of the model. We compare the equilibrium under restricted suffrage with the equilibrium under universal suffrage. We show that in the equilibrium with restricted suffrage, no public good is provided, whereas under universal suffrage the public good is provided. What is more, we show that the equilibrium allocation under universal suffrage involves a Pareto improvement relative to the allocation under restricted suffrage.

There are two candidates who maximize the share of the vote. There is a measure 1 of identical citizens. There are two goods: money and a public good. Each citizen is endowed with one unit of money. Citizens have linear utility for money so that consuming one dollar gives them utility 1. Producing the public good takes all the money that is present in the economy and gives utility \( G \) to all citizens. Therefore, a candidate can either promise to tax all the endowment from all citizens and to provide the public good, or promise to redistribute resources across voters by choosing ad-personam taxes and transfers.

One half of the population (the elite) has the right to vote. We assume that \( 2 < G < 4 \). Under this assumption, the allocation that maximizes the sum of the utilities of the members of the elite entails providing the public good (it is impossible to give more than 2 to all members of the elite without providing the public good).

The electoral game is sequential. First, candidate 1 chooses whether to promise transfers or the public good. Then, candidate 2 observes the promise made to each voter by candidate 1 and

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14The democratic demands of the lower classes were represented by the Chartist movement. The height of Chartist power was reached in the demonstrations of 1848, which echoed the unrest across Europe. But “when the demonstrations of 10 April did not come off and it became evident that the greatest mass movement of the nineteenth century had ended in failure, Prince Albert wrote the next day to Baron Stockmar ‘We had our revolution yesterday, and it ended in smoke.’ Of course, historians more or less unanimously agree—which in itself is quite a noteworthy fact—that there existed neither cause nor chance for a successful revolution in Britain in 1848.” Cited from Wende 1999, p. 147.
chooses whether to promise transfers or the public good. Finally, each voter observes the promise made to her by each candidate and votes for the candidate who promises her the greatest utility. The policy offered by the candidate with a majority of the votes (among the enfranchised) gets implemented.

**Political equilibrium under restricted suffrage** Assume for the moment that candidate 1 promises the public good (this is true in equilibrium). Then, candidate 2 will offer transfers and win a majority of the votes. Candidate 2 will offer nothing to the half of the population which is disenfranchised. He will also offer nothing to some members of the elite so that he can target a mass of almost $1/G$ of elite members and promise them a bit more than the value of the public good $(G + \varepsilon)$. By taking $\varepsilon$ to be arbitrarily small, the mass of elite members who vote for candidate 2 is $1/G$. Thus, his vote share is $2/G$ (recall that the elite is half of the population) which is larger than 50% if $G < 4$. In contrast, opting to provide the public good leads to a tie with candidate 1. Thus, candidate 2 will promise redistribution, will garner a vote share of $2/G$ and the implemented policy results in $2/G$ of the elite receiving a utility level of $G$ and the rest of elite members receiving zero. Let us now go back and check that, indeed candidate 1 offers the public good. Suppose he promises redistribution; then candidate 2 could win a vote share arbitrarily close to 100% by promising $\varepsilon$ more than candidate 1’s promise to $1 - \varepsilon$ of the voters. Thus, by offering the public good, at least candidate 1 can guarantee himself a non-negligible vote share.

**Political equilibrium under universal suffrage** For the same reason as before, candidate 1 will promise the public good. Now let us compute candidate 2’s best response. If candidate 2 chooses to redistribute, the most he can garner is a vote share of $1/G$ which is below 50 percent because $G > 2$. Relative to the case of restricted suffrage, this vote share is smaller because now all citizens vote, and so the strategic advantage of redistribution is smaller. Candidate 2 will therefore promise the public good, resulting in a 50-50 split and a 0.5 probability of getting elected. With universal suffrage, therefore, all elite members receive $G$.

**Universal suffrage is Pareto-improving for the elite** Under restricted suffrage, a majority of the elite receives a utility level of $G$ and the rest receive zero. Under universal suffrage, all elite members receive $G$. This means that some members strictly prefer expansion, some are indifferent. Expanding the franchise constitutes a Pareto-improvement for the elite. Furthermore, any small amount of uncertainty about their position (i.e., about who will be the ones who get $G$) would drive all members of the elite to strictly prefer expansion.

The fact that elite members *unanimously* prefer expansion is peculiar to this example. In the next section we analyze a model that relaxes some of the stark assumptions of this example. There,
the voting game is simultaneous (instead of sequential), the public good is a continuous (instead of an all-or-nothing policy,) and voters are endowed with an ideological motive. In that more realistic model elite members will not generally be unanimous in their preference for expansion, but we will provide conditions under which a majority of the elite favors expansion.

3 Theory

We build on the model of redistributive politics provided by Lindbeck and Weibull (1987) and Dixit and Londregan (1996). We modify their framework by adding the possibility of investment in a public good and a restricted franchise.

There are two parties (or candidates), $R$ and $L$. Candidates make binding promises about policy in order to maximize their vote share.\(^{15}\)

There is a continuum of citizens of measure 1. Citizens are divided into groups that are indexed by $i \in \{0, 1, ..., N\}$. Group $i$ is composed of a mass $n_i$ of citizens. Each citizen of group $i$ is endowed with $\omega_i$ units of a consumption good, which we will call “money.” We denote the aggregate resources of the economy by $\omega = \sum_{i=0}^{N} n_i \omega_i$. We assume that taxation is non-distortionary. This implies that only the level of the aggregate resources will matter, not the distribution of endowments.

Not all citizens vote. Those who have the right to vote we call “elite,” the rest we call “disenfranchised.” We assume that citizens of groups $0, ..., s$ are voters, and those in groups $s + 1, ..., N$ are disenfranchised. Thus, the extent of the franchise is measured by the fraction of citizens who have the right to vote: $\sum_{i=0}^{s} n_i$. Below we will first consider the effect of a marginal extension of the franchise as an increase in the fraction of group $s$ citizens who have the right to vote. We then discuss global changes in the franchise.

A public good can be produced from money by using the technology $g(I)$ where $I$ denotes the amount invested in the public good. The function $g$ is assumed to be strictly increasing, strictly concave, and differentiable twice. We also assume that $g'(0) = \infty$. This assumption ensures that the equilibrium level of public good provision is greater than 0. If $I$ is invested in the public good and citizen $i$ consumes $c_i$ of the consumption good, citizen $i$ receives utility

$$U(c_i + g(I)),$$

We assume that $U$ is strictly increasing, concave, twice differentiable, that $U'$ is bounded away from zero, and that $U''(0) = \infty$.\(^{16}\) Note that all citizens benefit equally from the public good.

In addition to these ‘material’ preferences, citizens also have preferences according to their ideology. This is captured by endowing a citizen of type $i$ is endowed with a personal ideological

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\(^{15}\)In this model all the results are exactly the same if candidates maximize the probability of winning.

\(^{16}\)Extending the model to allow for heterogeneous preferences is straightforward.
parameter $x$, which denotes the additional utility that the citizen enjoys if party $L$ is elected. For each citizen, $x$ can be positive or negative and is the realization of an independent draw from random variable $X_i$. We denote with $F_i$ the c.d.f., and with $f_i$ the density of $X_i$ which we assume is differentiable. This ideological parameter is meant to capture additional elements of the political platforms of the two parties which is not related to economic policy. An example would be the parties’ attitudes towards issues such as foreign policy or religious values. Candidates only know the distribution $F_i$ of the ideology of citizen $i$ and do not know the exact realization of the value of $x$. Thus, candidates promises cannot depend on $x$, although they can depend on $i$. Note that in the example in section 2, ideology was absent: all voters voted solely according to their material preferences. Thus, our result about franchise extension does not rely on the presence of ideology. However, in the model of Lindbeck and Weibull, this element is essential for the existence of equilibria in pure strategy.

Suppose a member of group $i$ with ideological preference $x$ is promised consumption $c_{iL} + g(I_L)$ by party $L$ and $c_{iR} + g(I_R)$ by party $R$. Then this voter prefers (and will vote) for party $L$ if and only if

$$U(c_{i,L} + g(I_L)) - U(c_{i,R} + g(I_R)) > x.$$ 

Thus, the probability that voter $i$ votes for candidate $L$ given the candidates’ platforms $c_{iL}, c_{iR}, I_L, I_R$ is

$$F_i(U(c_{i,L} + g(I_L)) - U(c_{i,R} + g(I_R)))$$

Adding up across voters we obtain candidate $L$’s vote share.

$$S_L = \sum_{i=0}^{s} n_i [F_i(U(c_{i,L} + g(I_L)) - U(c_{i,R} + g(I_R)))]. \quad (1)$$

Party $R$’s vote share is $1 - S_L$.

Given candidate $R$’s platform, candidate $L$ chooses a platform $(c_{iL}, I_L)$ that maximizes $S_L$ subject to the non-negativity constraints

$$c_{iL} \geq 0 \text{ for all } i.$$

and the resource constraint

$$I_L + \sum_{i=0}^{s} n_i c_{iL} = \omega.$$ 

In writing the last constraint we have implicitly assumed that candidates will not waste any transfers on citizens who do not have the right to vote. This is obviously true in equilibrium.
As in Lindbeck and Weibull (1987), in order to guarantee existence of a pure strategy equilibrium we assume that the objective function of both candidates is strictly concave. A sufficient condition is that, for all \(i\), \(F_i(U_i(x)) - U_i(y))\) be strictly concave in \(x\) and strictly convex in \(y\). We refer the reader to Lindbeck and Weibull (1987) for details. Throughout the remainder of this paper we also make the two following assumptions.

**Assumption 1 (Ordering of groups.)** We assume that \(f_i(0)\) is decreasing in \(i\).

**Assumption 2 (Symmetry.)** We assume that \(f_i\) is symmetric around zero.

As will become clear, assumption 1 implies that the return in terms of vote share of offering one more dollar to voters in a given group is smaller for lower indexed groups. This in turn implies that candidates will tend to make better promises to voters with lower \(i\). Given an exogeneous level of the extent of the franchise, this assumption is merely an ordering of the indices \(i\) and is therefore without loss of generality. The substantive content of this assumption is that disenfranchised citizens would be less responsive if the franchise were extended. As will become clear, this assumption can be relaxed considerably without affecting the substance of the argument. However, making this assumption simplifies the exposition.

Assumption 2 guarantees that newly enfranchised groups are not biased in favor of either candidate. Thus, neither candidate is favored by an extension of the franchise. This allows us to separate the forces identified in our model from a “partisan” motive for franchise extension, in which the newly enfranchised voters are a natural constituency for one of the candidates.\(^{17}\)

### 3.1 Benchmark: absent public good, no voluntary expansion of the franchise

When \(g(I) \equiv 0\), i.e., investing in the public good is wasteful, then this game is a version of Lindbeck and Weibull (1987). In this environment, candidates offer transfers only to members of the elite members. Candidates allocate the total endowment \(\omega\) so that the marginal return, in terms of vote share, of a dollar spent on a member of group \(i\) is the same as the marginal return of a dollar spent on a member of group \(j\). Formally, the equilibrium conditions read as follows:

\[
 f_i(0) U'(c_i) = f_j(0) U'(c_j), \quad \text{for all } i, j \in \{0, ..., s\}. \tag{2}
\]

Thus, groups which are more responsive (higher \(f_i(0)\)) receive higher transfers.

We now argue that, in this environment, an extension of the franchise is opposed by all members of the elite. Suppose members of group \(k\) are newly enfranchised. The allocation for members of group \(k\) is determined by a version of equation (2), which means that newly enfranchised voters

\(^{17}\)For a discussion of these models see Acemoglu and Robinson (2000).
receive a positive share of the total endowment $\omega$. But then less than $\omega$ is left to allocate among previous elite members, which means that they all receive less than before the expansion. We have therefore demonstrated the following result.

**Theorem 1** With pure redistribution (no public good) the elite unanimously opposes extending the franchise.

We now turn to the case in which providing the public good is part of the political equilibrium.

### 3.2 Public good provision that maximizes the elite’s surplus

The allocation that maximizes the social surplus of the members of the elite is the solution to the following maximization problem:

$$
\max_{I,c_i} \sum_{i=0}^{s} n_i U(c_i + g(I)) \\
\text{s.t. } I + \sum_{i=0}^{s} n_i c_i = \omega
$$

Note the difference between this maximization problem and the maximization problem (1) faced by candidates. In the surplus maximization problem the component of ideology is absent: the ideological motives of voters, which in principle should affect the computation of welfare, can be ignored. This is because the distributions $F_i$ of ideology were all assumed to be symmetric. Therefore, there is no aggregate ideological bias at the group level. So, while each voter’s ideological bias may lead him to regret or rejoice the election of a particular candidate, the ideological component cancels out within each group. Consequently, in this setup the voters’ ideological motives do not influence welfare comparisons between policies.

The maximization problem is solved by substituting for $I$ in the objective function and taking first order conditions with respect to $c_i$. Inspection of the first order conditions immediately reveals that at the allocation that maximizes the elite’s surplus each elite member receives the same amount of the transfers. If we denote with $I^{SM}$ the investment level that solves the maximization problem, from the optimality conditions we have

$$
g'(I^{SM}) = \frac{1}{(\sum_{i=0}^{s} n_i)}.
$$

Clearly, $I^{SM}$ depends on the extent of the franchise: the larger the franchise, the larger the surplus-maximizing level of investment in the public good. This reflects the fact that, when the franchise represents a small fraction of the population, it is wasteful (from the point of view of the enfranchised) to devote a large amount of resources to the production of a public good whose benefits are mostly enjoyed by non-enfranchised citizens.
3.3 (Under)provision of public good in the political equilibrium

The following proposition characterizes the equilibrium for a given suffrage level s. Our first task is to show that members of groups with a smaller index i receive more transfers (and therefore greater utility) than members of a group with a higher i. The intuition for this result is straightforward (and very close to results in Dixit and Londregan 1996.) Groups with a lower i are composed of individuals who are more responsive to electoral promises. Therefore, electoral competition between the parties will be more intense for those voters, resulting in a higher level of promised utility. This result is proved in part (i) of the next proposition.

The fact that voters are treated differently in equilibrium has important consequences for the level of public good provision. Since the public good cannot be targeted to individual groups within the elite, it is a relatively inflexible instrument of electoral competition. The candidates’ incentive to treat votes differently will lead them to distort their platform towards the targetable instrument (transfers) relative to the efficient level. This effect results in underprovision of the public good relative to the level that maximizes the elite’s surplus. This is shown in part (iii) of the next proposition.

Part (ii) shows that the root of the inefficiency is in the incentive for parties to treat voters differently. Absent this incentive, the targetability of the transfers has no strategic value and public good provision is efficient.

**Proposition 1** In a symmetric political equilibrium:

(i) Voters in more responsive groups (smaller i) are promised more transfers. Some groups of voters (possibly a majority of the elite) may be promised no transfers.

(ii) If all groups are identical (f_i(0) = f(0) for all i) then all voters receive equal amounts of the transfers, and investment in the public good maximizes the social surplus of the elite.

(iii) If any group of voters receives no transfers then the public good is underprovided relative to the level that maximizes the elite’s surplus.

**Proof:** The Lagrangean for candidate L can be written as:

\[ \mathcal{L}_L = \sum_{i=0}^{s} n_i \left[ F_i \left( c_{i,L} + g(\omega - \sum_{j=0}^{s} n_j c_{j,L}) \right) - U(c_{i,R} + g(I_R)) \right] + \sum_{i=0}^{s} \mu_i n_i c_{i,L} \]

The first order conditions for candidate L at the symmetric equilibrium imply:

\[ f_k(0)U' \left( c^*_k,L + g(I^*_L) \right) \leq g'(I^*_L) \sum_{i=0}^{s} \left[ n_i f_i(0) U' \left( c^*_{i,L} + g(I^*_L) \right) \right] \quad \text{for } k = 0, ..., s, \]

and equality holds whenever \( c^*_k,L > 0 \). Consider those groups \( k \) for which equality holds. Since the right-hand side is independent of \( k \), and since on the left hand side \( f_k(0) \) is decreasing in \( k \), then
must be non-increasing in $k$ (remember that $U$ is concave.) This argument establishes that if the nonnegativity constraint on $c_{k,L}$ is not binding for some $k$, then it is also not binding for all $k' < k$. Thus, there is an $H$ such that for $k \geq H$ the non-negativity constraints are binding and for $k < H$, the non-negativity constraints are non-binding. It is possible that voters in groups $H \ldots s$ form a majority of the elite; sufficient conditions for this to be the case are given in Lemma 1. This establishes part (i).

Multiplying equation (3) by $n_k$ and summing up over $k$ we get

$$\sum_{k=0}^{s} n_k f_k(0) U'(c_{k,L}^* + g(I_L^*)) \leq \left( \sum_{k=0}^{s} n_k \right) \cdot g'(I_L^*) \cdot \sum_{i=0}^{s} \left[ n_i f_i(0) U'(c_{i,L}^* + g(I_L^*)) \right],$$

whence

$$g'(I_L^*) \geq \frac{1}{\left( \sum_{k=0}^{s} n_k \right)}.$$

This shows that the equilibrium level of investment in the public good is lower than $I_{SM}$, thus establishing part (iii).

The proof of part (ii) is immediate from the previous analysis.

This proposition establishes that investment in the public good never exceeds $I_{SM}$, the level that maximizes the surplus of the elite. A candidate who promised an investment above $I_{SM}$ could improve his offers to all elite members by reducing investment slightly and transferring the money saved uniformly to voters. The proof also establishes that, if all voters receive positive transfers, then investment in the public good must maximize the surplus of the elite. Intuitively, if this were not the case, a candidate could proportionately reduce the transfers to all voters and invest the proceeds in the public good, thereby increasing the utility promised to all voters. Note that this argument fails if some voters receive zero transfers. In this case the public good is underprovided.

The intuition for under provision is the following. A candidate uses transfers to achieve a certain profile of marginal utilities of consumption across groups; ideally, less responsive voters (those with lower $f_i$) should have higher marginal utility from consumption (see equation 3). The candidate is constrained in his ability to implement this profile when some voter receives zero transfers, since the candidate cannot decrease the utility of that voter without reducing the provision of the public good. This is the force that leads to under provision of the public good. This argument suggests that under investment is severe when the public good is very valuable, since in that case most of the resources are invested in the public goods and few are available to redistribute.

Under provision is due to the combination of voter heterogeneity (different $f_i$’s) together with the lack of targetability of the public good. Heterogeneity gives candidates incentives to treat voters differently, but the public good does not lend itself to such a purpose. The lack of targetability of the public good is especially stark in our model since all voters value the public good the same.
Underprovision would still be present in a model in which the voters’ valuations for the public good are heterogeneous, provided that the public good is not targetable (or is at least partly not targetable).

### 3.4 Extending the franchise increases public good provision

We now show that extending the franchise induces candidates to promise more public good (and therefore less transfers).

**Proposition 2** \(\text{Extension of the franchise increases the equilibrium provision of the public good.}\)

**Proof:** See appendix.

The intuition for Proposition 2 is the following. As argued in the discussion following Proposition 1, candidates face a trade-off between offering the public good, which is a more efficient way of offering utility to voters, and offering transfers, which are more targetable. The public good benefits equally the elite and the disenfranchised, and candidates do not internalize the benefits of the disenfranchised. As the franchise is extended, promising to invest in the public good becomes more appealing to candidates because the candidates internalize the utility of these additional voters. Another way to see this is to consider what happens when the franchise is restricted. In such circumstances, the value of targetability increases because the candidates want to be able to offer more utility to voters than to non-voters. While seemingly straightforward, this intuition rests on the fact that the newly enfranchised voters are not expected to receive large amounts of transfers. This is ensured by our assumption on the ordering of responsiveness (the \(f_i\)’s), with the members of the elite being more responsive than the disenfranchised. If a group of disenfranchised citizens were thought to be more responsive to candidates’ platforms than members of the existing elite, increased provision of the public good is not guaranteed. Of course, in a richer model where the elite chooses the type of citizen that receive the suffrage, such groups of voters would be unlikely to be included in a voluntary extension of the franchise.

### 3.5 Conditions for franchise expansion to benefit a majority of the elite

We now provide conditions under which a majority of the elite strictly prefers to extend the franchise. These conditions are related to the value of investing in the public good. When the public good is very powerful, i.e., investing in the public good produces a large return, much of the resources of the economy will be devoted to public good production and little will be left for redistribution. This means that few groups within the elite will receive any transfers. All the remaining groups will be in favor of franchise expansion, since that increases public good provision.
To enable us to talk about the return from investing in the public good, we parameterize the production function of the public good by a scalar $V$. Thus,

$$g = g(I, V).$$

We assume that

$$\frac{\partial g}{\partial V} > 0, \frac{\partial^2 g}{\partial I \partial V} > 0.$$

An increase in $V$, therefore, raise both the total and the marginal value of one unit of investment in the public good. We also assume that $\frac{\partial g(I, 0)}{\partial I} = 0$, and that $\frac{\partial^2 g}{\partial I \partial V}$ is bounded away from zero. For example, $g(I, V) = V g(I)$ satisfies these assumptions provided that $g(I)$ is increasing and concave.

$V$ can be seen as a parameter representing the efficiency of the production function of the public good. Another way to interpret $V$ is as the importance of a specific public good in the eyes of a citizen. The second interpretation will be preferred in the following sections, where we will apply the comparative statics derived in this section to the phenomenon of increased value of sanitation in urban areas (a public good) in response to rapid urbanization.

We now present the main theoretical result of this paper, which relates the desirability of the public good to the elite’s willingness to extend the franchise. To prove this result we need the following lemma.

**Lemma 1** Assume the function $U$ exhibits decreasing absolute risk aversion.

(i) The equilibrium provision of the public good is increasing in $V$.

(ii) For any $s$, there is a $V > 0$ such that the majority of the elite receives zero transfers if and only if $V > \bar{V}$.

**Proof:** See appendix.

>From now on we shall assume that $U$ exhibits decreasing absolute risk aversion.

**Theorem 2** For any $s$, there is a $\bar{V} > 0$ such that,

(i) for $V > \bar{V}$, a majority of the elite strictly prefers any extension of the franchise relative to the status quo. Larger extensions (those with more new voters) are preferred to smaller ones;

(ii) for $V < \bar{V}$ a majority of the elite strictly opposes extending the franchise.

**Proof:** By Lemma 1, there is a $\bar{V}$ such that for $V > \bar{V}$, a majority of the elite receives only the public good (no transfers); extending the franchise increases the provision of the public good (Proposition 2) and therefore increases the welfare of a majority of elite members. This proves part (i). If $V < \bar{V}$, then, a majority of the elite receives positive transfers. Extending the franchise makes all these voters worse off. To see this, observe first that increasing the provision of the
public good (which is a consequence of the extension) is strictly preferred by all voters who receive zero transfers. Now consider the voters who receive positive transfer, condition (3) holds as an equality for these voters, and therefore guarantees that the utility change of these voters as a result of the increased provision has the same sign. Hence, if one of these voters prefers the change, then all of them would. Thus, if any of these voters were made better off following an extension of the franchise, then the elite would be unanimously in favor of higher provision of the public good before the extension. This cannot be part of an equilibrium with the restricted franchise.

Theorem 2 may seem counterintuitive. If a majority of the elite is not satisfied with the status quo, one should expect a more appealing alternative to be proposed by the candidates. The reason this does not happen is that, in addition to caring about policy, voters also care about ideology. Indeed, assume that \( V > \overline{V} \) and consider for instance a deviation by candidate \( L \) from the equilibrium platform towards a greater provision of the public good. As was shown in Theorem 2, when \( V \) is high enough, a majority of voters receive zero transfers. Hence candidate \( L \) would receive some more votes from the majority of voters in the groups who receive no transfers from candidate \( R \). However, not all voters in these groups would switch their vote in favor of candidate \( L \) because those with high ideological attachment to candidate \( R \) would still vote for candidate \( R \) despite the more favorable promise by candidate \( L \). In fact, the gain in votes among the voters who receive zero transfers would be more than offset by a loss in the votes from the voters who receive positive transfers in equilibrium. The reason is that the latter voters are more responsive to promises of economic benefits, or in other words, less prone to vote according to their ideology at the margin (\( f_i(0) \) is larger for these groups). This discussion leaves open the question of how an extension of the franchise can come about. This is the subject of the next section.

3.6 Incentive for political actors to propose franchise expansion

In this section we discuss two mechanisms by which a franchise expansion might come about: a referendum among elite members, and the inclusion of reform by a candidate in his electoral platform. For each we present a well-defined game and study its equilibrium. Our analysis is framed within a repeated game in which an election happens in each period. The election is similar to the one analyzed in the previous sections. Voters, however, may be called to vote not only on platforms of public good and transfers, but also on the issue of reform. If franchise reform is adopted, then all future elections are conducted under the expanded franchise. Candidates maximize the discounted value of their expected vote share. Voters maximize the discounted sum of utilities, and discount the future at a rate \( \delta \). We shall assume that at date zero there is a permanent change in the value of investing in the public good \( V \) and draw out the implication for voting on extending the franchise.
3.6.1 Extension via referendum

This is a repeated game in which each period is composed of a referendum stage and an electoral stage. The electoral stage is identical to the one analyzed in the previous sections. Prior to the electoral stage, a referendum stage takes place in which any elite member can submit a proposal for a referendum expanding the franchise to all citizens. Submitting the proposal is costless. If the proposal is submitted, then elite members vote for or against it, and the proposal passes if it is approved by a majority of the elite members.\(^{18}\) The outcome of the referendum defines the voting population in all subsequent periods.

It is easy to see that, if a referendum is called in which members of the elite are asked to vote Yes or No on extending the franchise for all future elections, then, for \(V > \bar{V}\), a majority would vote Yes. This is because when \(V > \bar{V}\) a majority within the elite receive no transfers and enjoy level of public good equal to \(g(I^*)\) before the expansion. After the expansion, voters anticipate that the level of public good promised by politicians will increase. Therefore, a majority of the elite benefits from expansion and will vote Yes in the referendum. This, in turn, gives a strict incentive for some elite members to call a referendum when \(V > \bar{V}\). The argument is summarized in the following proposition.

**Proposition 3** In the equilibrium of the referendum game, if \(V > \bar{V}\) a referendum will be called in the first period and will be successful i.e. the franchise will be expanded. If \(V < \bar{V}\) a referendum will never be called because it would not be successful.

Historically however, the extension of the franchise did not come about via referendum. Rather, franchise reform was implemented by legislatures elected under the restricted franchise. In the remainder of this section we turn to environments in which franchise expansion can only come about as part of a politician’s platform. In this environment, politicians have control of the reform agenda. We will show that this makes franchise reform harder to implement compared to the benchmark case of a referendum. This is because candidates have relatively weak incentives to include franchise reform in their platform. The reason is that franchise expansion benefits precisely those elite members who are not very responsive to electoral promises, and who are therefore electorally less valuable to candidates.

3.6.2 Extension via election of candidates who propose franchise reform

This is a repeated game in which each period is composed of an electoral stage only (no referenda). The electoral stage is the same as the one analyzed in the previous sub-sections, except for the

\(^{18}\)The reasoning and the results will be analogous if passing the referendum required the approval of a supermajority, say 2/3, of the elite.
following feature. In addition to a platform of public good and transfers, a candidate can also promise to extend the franchise. If a candidate who proposes franchise extension is elected, then franchise reform is permanently adopted, i.e., all future elections are conducted under the larger franchise. For simplicity, we shall describe the equilibrium of the game in which candidates are given only one chance to include reform in their platform. If in period 0 reform is not adopted, i.e. if no candidate includes reform in his platform, or if the candidate who includes reform is defeated, then reform will never again be available in the future.\footnote{The assumption of a one-off opportunity of extending the franchise is not essential for the result obtained in Proposition 4 below. We have considered the game in which candidates can propose reform at any date. In that game there is an equilibrium in which immediate franchise expansion obtains.}

To understand whether reform is adopted in equilibrium, we now discuss the candidate’s incentives to include reform as part of his platform. These depend on whether the vote share is increased by proposing reform given that the other candidate does not. This is turn depends on how voters feel about electing the reform candidate. Consider a voter with ideology $x$, and suppose candidate $L$ offers reform whereas candidate $R$ does not. If reform is never implemented, which means candidate $R$ is elected in the current period, this voter’s discounted stream of utility is

$$U(c^*_i + g(I^*)) + \sum_{t=1}^{\infty} \delta^t \left[ U(c^*_i + g(I^*)) + \frac{1}{2} x \right],$$

where $\delta$ represents the discount factor (assumed identical for all voters), and $c^*_i$ and $I^*$ represent the equilibrium policies implemented under the restricted franchise as characterized in Proposition 1. If reform is implemented, which means that candidate $L$ is elected, his utility stream is

$$U(c^*_i + g(I^*)) + x + \sum_{t=1}^{\infty} \delta^t \left[ U(c^*_i + g(I^*)) + \frac{1}{2} x \right].$$

where $c^*_i + I^*$ represent the equilibrium policies implemented under universal suffrage which were also characterized in Proposition 1.

Note that the term $\sum_{t=1}^{\infty} \delta^t \left( \frac{1}{2} x \right)$ appears in both expressions. This term represents the discounted value of the voter’s ideology given that in equilibrium both candidates win with probability $\frac{1}{2}$ regardless of the size of the franchise.

The voter will vote for the reform candidate if the first expression is smaller than the second one, i.e., if

$$x \geq \sum_{t=1}^{\infty} \delta^t \left[ U(c^*_i + g(I^*)) - U(c^*_i + g(I^*)) \right]$$

The term in brackets is positive only for those groups who before the expansion receive positive transfers, and is negative for the rest. As $\delta$ converges to 1, the right hand side converges to $+\infty$.
for those groups who before the expansion receive positive transfers, and to $-\infty$ for those groups who receive zero transfers. Thus, voters in the latter groups will vote for candidate $L$ for sure. By Theorem 2, when $V$ is high enough (i.e., when $V > \overline{V}$), the proportion of these groups within the elite exceeds 50%. Thus, when $V$ is high enough and voters are sufficiently patient, the reform candidate is victorious. This proves the following statement.

**Proposition 4** In the equilibrium of the political reform game, if $V > \overline{V}$ and if voters are sufficiently patient, both candidates include reform in their platform in the first period, and reform is adopted immediately.

Note that, in order to ensure franchise expansion, an additional condition on the voters’ patience is necessary that was not necessary in the referendum game. The reason why this additional condition is necessary is that in the political reform game if a voter wants reform he has to choose the candidate who proposes it, and incur the ideological cost (or benefit) $x$. That was not the case in a referendum, where the reform issue is voted upon in isolation. In the political reform game, voting for reform entails selecting a particular candidate: the issue of franchise reform is bundled with the ideological baggage of the candidate who proposes it. The idea that calling a referendum entails an unbundling of issues has been introduced and studied by Besley and Coate (2002). In our setup, the fact that reform is more difficult to pass when it is bundled with the rest of a candidate’s platform (i.e., in the political reform game) reflects the intuition discussed at the end of section 3.5. When voters are patient, however, Proposition 4 shows that the long-run benefits of reform overwhelm the friction created by the bundling.

### 3.7 Discussion of the model

We have shown that in this model an increase in the value of public goods induces: (a) an expansion of the franchise; (b) changes in the nature of public spending toward more spending on public goods; (c) no greater transfers to the newly enfranchised, and (d) a shift in policy in a direction favored by a majority within the elite but not necessarily of all of the elite. These features are consistent with the stylized facts of 19th century Britain highlighted in the introduction which will be discussed in the next section.

Our model can be extended to incorporate a threat of revolution as in Acemoglu and Robinson (2000, 2001). Introducing a threat of revolution would facilitate the extension of the franchise. In this respect, our model and the model by Acemoglu and Robinson are truly complementary. Formally, the main effect of a threat of revolution in such a “hybrid” model would be to lower the threshold value $\overline{V}$ that specifies the value of a marginal investment in the public good above which a majority of the elite would vote for an extension of the franchise.
4 The British Age of Reform

In this section we offer corroborating evidence for the interpretation of franchise reform that was outlined in the introduction.

Three franchises and their different dynamics We distinguish between (i) parliamentary franchise, (ii) municipal franchise, and (iii) franchise for bodies that govern welfare spending. At the same time that the first two were expanded, the franchise for welfare spending became more restrictive. We interpret this duality as an indication that it may be misleading to read the process of franchise reform primarily through the lens of redistribution from rich to poor.

Urbanization and the increased value of local public goods In the early decades of the 19th century, Britain experienced rapid urbanization in connection with the industrial revolution. We document a dramatic increase in the value of urban public goods, particularly public health infrastructure such as sewerage, waterworks, and paved roads. According to our model, it is this increase in the value of public goods that pushed support for the franchise reforms within the elite above the majority threshold.

Failure of old institutions and the need for franchise reform We discuss the pre-1832 failure to provide public goods. Municipal corporations were controlled by a small and entrenched subgroup within the elite to the detriment of the rest of the elite. Extension of the parliamentary franchise was viewed as a pre-condition for municipal reform.

Franchise reform associated with increased spending on public health. We describe the effects of franchise reform on the role of government during the 19th century. We show that the increase in local public spending, which was described in the introduction, was mostly devoted to improvements to public health infrastructures. This is consistent with the predictions of our model.

Franchise reform and the decline of special interest politics We conclude by linking franchise reform to two important transformations in the political landscape of 19th century Britain: the end of ‘old corruption,’ and the shift away from personal politics toward voting on broad programs proposed by national parties. This is consistent with our model’s prediction that franchise expansion should be followed by a shift away from pork-barrel redistribution and towards policies with broad appeal.
4.1 Three franchises and their different dynamics

The main sources for this section are Hennock (1973), Keith-Lucas (1952, 1977), and Seymour (1915).

4.1.1 Evolution of the Parliamentary Franchise

The parliamentary franchise was extended gradually during the 19th century. The first important reform is the so called Great Reform Act of 1832. This reform formalizes the link between franchise and property ownership which was only partial prior to 1832. This act had two major components. First, it lowered the property restrictions on voting; second, it enfranchised some large cities such as Birmingham and Manchester which previously had no representation. Thus, this act reformed the geographic as well as the socio-economic basis for the right to vote. It represented a shift in favor of cities and the middle classes, and it almost doubled the size of the voting population to approximately 800,000 people.

For the second extension of the franchise we must wait until the 1867 Representation of the People Act which significantly lowered the property threshold for the franchise and led to an 88% increase in the size of the electorate. The next change in suffrage was the 1884 Franchise Act which essentially brought household suffrage to England by extending the franchise especially in counties. At this point about 1 in 5 citizen had the franchise.

An additional important reform in voting which is indirectly related to the franchise was the 1872 Ballot Act which introduced secret voting. This reform made explicit vote buying more difficult.

4.1.2 Evolution of the Local Franchise

Up to the first half of the 19th century, the panorama of English local institutions was quite complex. Keith-Lucas (1977) divides these into four major categories: The Quarter Sessions, the vestries, the municipal corporation, and a variety of bodies that have been called statutory or ad hoc commissions. The 19th century saw a complete transformation of local institutions. The 1835 Municipal Corporations Act, which established elected bodies that became the precursors of the modern municipal councils, represents a milestone in the reform of local institutions in the first half of the century. Prior to 1835 many towns were not even incorporated, and in others, the municipal

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20Keith-Lucas (1952) writes: “when Lord Melbourne took office in 1834 very few elected local authorities were to be found in the whole of England; when Mr Gladstone resigned in 1894 every town and village which was more than a mere hamlet had its governing council, elected by the people themselves. During these sixty years there had been born the two democracies of Central and Local Government, as partners to manage the affairs of England.”
corporation was run by oligarchies for the purpose of jobbery and of influencing parliamentary elections (see section 4.3). By mid-century, almost all cities were incorporated and, in most cities, the municipal corporation was becoming the most important vehicle for the undertaking of most local public projects. The franchise established in 1835 was based on the principle of one ratepayer-one vote: anyone who paid the rates (a property tax) had the right to vote. Despite the appearance of democracy however, there were two major obstacles to a large electorate. First, there was a three year residence requirement. This contrasted with a one year requirement for parliamentary elections and represented a substantial restriction in an era of great mobility and immigration into cities. The second obstacle to a large electorate was the treatment of “compounders.” Finally, recipients of aid of any sort, most notably poor relief, were disqualified from voting. The overall effect of these restrictions was that the municipal electorate was initially approximately the same as the parliamentary one despite the fact that the latter was in principle much more narrowly defined by the act of 1832 (see Keith-Lucas 1952).

As mentioned before, the role of municipal corporations evolved gradually as more towns (e.g., Manchester and Birmingham in 1838, and Bradford in 1847) became incorporated, and corporations took over a growing number of the tasks previously undertaken by improvement and ad hoc commissions, and by the parishes (see Hennock 1973). In terms of the municipal franchise though, the next change took place as a result of the 1850 Small Tenements Act which enfranchised compounders. However, adoption of this Act was voluntary so that some cities had substantial increases in the size of the electorate whereas others did not.

A big expansion of the franchise occurred following the 1869 Municipal Franchise Act & Assessed Rates Act which is analogous to the parliamentary reform of 1867. This act reduced the residence requirement to one year and definitively enfranchised compounders, thereby effectively bringing the vote to laborers. This act brought the municipal electorate to 1 voter for every 5 to 7 citizens depending on the city. The electorate increased sixfold in some cities. The 1888 act extended to the municipal level the reforms instituted at the parliamentary level by the 1884 Act. The following table summarizes the evolution in the local franchise for a few major cities.

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21 Cities did not bother collecting taxes from individuals with relatively low income; they collected taxes from their landlord who was expected to collect from his tenants by raising the rent. The individuals who thus paid rates indirectly through their landlord were called compounders. Heterogeneous treatment of compounders by different cities led to significant differences in the size of electorate (Leeds has an electorate which was three times as large as Birmingham).
Percentage of population with right to vote in municipal elections. (Source: Hennock 1973)

<table>
<thead>
<tr>
<th>Year</th>
<th>Birmingham %</th>
<th>Leeds %</th>
<th>Ipswich %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1841</td>
<td>3</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>1851</td>
<td>3</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>1861</td>
<td>3</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>1871</td>
<td>18</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>1911</td>
<td>19</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

4.1.3 Evolution of the Franchise for Welfare Spending

The poor-law refers to the system of law and norms governing poor relief. Spending on poor relief was almost exclusively a local affair. Parish vestries were mainly responsible for the management of poor-law spending. In the first half of the century, the administration of poor relief evolved in a manner that provides a sharp contrast with the gradual democratization of the parliamentary and municipal franchise.

The two major reforms in this respect were 1818-9 Sturgess-Bourne Act, and the Poor-Law Amendment Act of 1834. While vestries were very heterogeneous prior to these reforms, several vestries were effectively very democratic, making decisions in meetings open to all, and often attended by crowds of poor individuals with a stake in voting for increased relief. Both acts introduce a graduated franchise based on property: there was a minimal threshold for obtaining one vote, and wealthier individuals could cast more votes up to a maximum of six. Furthermore, property owners who were not resident in the area had the right to vote with a graduated franchise. Finally, the consent of a supermajority (two thirds) of the property owners was required to substantially raise taxes. By 1834 it becomes clear that property owners have taken a dominant role in voting on issues related to poor-law spending.

4.1.4 Key Lessons from the Evolution of the Franchises

The previous discussion highlights the following instructive institutional features of the reform process.

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22 This is only a partial picture: other vestries, known as closed or select vestries, were governed by small groups of individuals accountable to no-one. Closed vestries were abolished in 1831.
23 The main difference between the two acts is that the Sturgess-Bourne Act related to parishes, while the Poor Law Amendment Act created the Boards of Guardians that supervised unions of parishes. While both acts were designed to limit the electoral voice of recipients of public assistance, the Sturgess-Bourne Act was only partially successful.
First, there is an important contrast between the reform of the franchise for the institutions devoted to public spending in local infrastructure (municipal corporations) and for those devoted to poor relief: the latter are reformed to become less democratic. Second, until 1917, those who receive public assistance are disqualified from voting. Third, there is a different treatment of county and borough franchise: the extensions before 1884 are clearly in favor of cities (see Davis and Tanner 1996).

The first two features do not necessarily square with a theory of linear progress toward democracy based on the progressive acceptance by the elites of democratic values. The duality in the reform of the franchise suggests that a full understanding of the forces driving franchise reform requires going beyond a simple picture of redistribution from the rich to the poor: the composition of spending should be taken into account. We will see later that the evolution of public spending reflects this pattern in the evolution of the franchise: poor-law spending declines while spending on public goods increases dramatically. The third feature, the different treatment of counties and boroughs, is evidence of what we suggest as the major force driving franchise reform, namely the failure of urban infrastructure to cope with the rapid inflow of immigrants from the countryside.

4.2 Urbanization and the increased value of local public goods

4.2.1 The Plight of Cities: Urbanization and Urban Mortality

In the first decades of the 19th century some cities in England grew at phenomenal rates (e.g., between 1820 and 1830, Bradford grew by 78%, Manchester by 47%, and Glasgow by 38%).

In 1700 there were only six provincial (not London) towns with a population over 10,000 (all less than 33,000), by 1801 there were 48. In 1801 only 17% of the population of England and Wales lived in cities of more than 20,000 inhabitants; by 1911, 61% did. In 1801 only London had more than 100,000 inhabitants. By 1841 six English provincial towns and one Scottish city recorded populations over 100,000, with Liverpool, Manchester, and Glasgow each well over 200,000.

This mass urbanization had a dramatic effect on mortality. Until the first decades of the 19th century, life expectancy in England had been increasing steadily for almost a century (Wrigley and Schofield 1981). As can be seen from Figure 3 in the introduction, there was no further increase until the 1870s. This is despite the fact that economic growth was as high as it had ever been. Figure 3 also shows that life expectancy in major provincial cities was much lower than in the rest of the nation and that things worsened between the 1820s and the 1840s.

While life expectancy

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24 The discussion in this section draws on Szreter (1997).
25 For the period preceding 1851 the data is much less reliable and Szreter and Mooney draw mainly from information from Glasgow. However, the worsening living conditions in cities during those decades are confirmed by a number of other accounts. For instance, Huck (1995) report that infant mortality increased in cities during that period.
was much higher in the countryside, wages were higher in cities than in the countryside, and the disparity was increasing (Lindert 1994). Thus, the plight of cities cannot be solely attributed to poverty.

The high mortality in the new large cities is attributed by several scholars to a breakdown of public health infrastructure, in particular, the inability of a fragile infrastructure to cope with rapid city growth. Many cities did not have an integrated sewerage system, drinking water was not filtered, roads were unpaved and did not have proper drainage systems, thereby becoming breeding grounds for bacteria. Lack of sanitation and crowding were responsible for repeated outbreaks of diseases such as cholera, typhus, typhoid fever, and smallpox. Diarrhea was 8 times more fatal among urban than rural children.

4.2.2 Public Good Nature of Health Infrastructure

We now argue that (a) health infrastructure really was a public good with effects across social classes and that (b) contemporaries understood the link between the state of public health infrastructure and the spread of disease.

With respect to (a), Williamson (1990, p. 282) writes: “Mortality was less class-specific in the early nineteenth century than it was to become in the early twentieth century after the sanitary reformers had made significant progress in eradicating the water-borne diseases.”. The following quote, drawn from the Second Report of the Parliamentary Commission of Inquiry into the State of Large Towns and Populous Districts (1844) bears witness to the perceived externality in the sanitary conditions of the poor districts. “The presence of such emanations, whether they be derived from stagnant ditches, open cesspools, or from accumulation of decaying refuse, is a great cause of disease and death, not confined to the immediate district in which they occur, but extending their influence to neighborhoods, and even to distant places.”

Note that our argument is not that there were no differences in life expectancy across social classes, but simply that all classes had their life expectancy reduced by the unsanitary conditions of the poor parts of towns. Figure 4 provides some support for the view that the life expectancy of most professions moved in lockstep. It shows evidence of a common trend affecting the rise in life expectancy, at least since the 1870s.

With respect to point (b), it is important to note that until late in the 19th century there was no germ theory of disease. The theory was that disease was carried by miasma. In the words of

\[\text{\textsuperscript{26}}\text{Szreter (1997), Williamson (1990), Wohl (1983).} \]

\[\text{\textsuperscript{27}}\text{More anecdotally, the Brontes, Shelley, and Keats, are all well-to-do individuals who die of tuberculosis.} \]

\[\text{\textsuperscript{28}}\text{We were unable to find earlier data on mortality by profession. These data are taken from Woods (2000), Table 6.7.} \]
W. Farr, “This disease-mist, arising from the breath of two millions of people, from open sewers and cesspools, graves and slaughterhouses, is continual . . . in one season it is pervaded by cholera . . . at another it carries fever [typhus] on its wings. Like an angel of death it has hovered for centuries over London. But it may be driven away by legislation.”29 Some of the knowledge about the consequences of water contamination was based on sound empirical evidence For instance, the link between cholera and water was shown by Snow in 1849 in a famous study of the pattern of infection around a fountain in central London. Thus, while contemporaries could not have a detailed understanding of the causes of disease, they did have a theory that, for the purpose of justifying investment in health infrastructure, had a similar effect.

4.3 Failure of old institutions and the need for franchise reform

In this section we want to make three points. First, before the 1835 municipal reform the structure of local government was not suited to undertake the vast spending programs on local public goods that was made necessary by the increased size of cities. Second, the post-1835 municipal corporations were more successful in gradually assuming responsibility for providing local public goods, especially

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after the subsequent extensions of the municipal franchise. Finally, we argue that the municipal revolution of 1835 would have been less successful and much delayed without the prior change in the parliamentary franchise. Thus, one major effect of the extension of the franchise at the parliamentary level was municipal reform and the corresponding increase in the provision of public goods. The third point is especially important, since our model interprets franchise expansions as the means for the elite to ensure an increased provision of the public good. In accord with this view, we report below a typical comment of a contemporary politician who explicitly linked the expansion of the parliamentary franchise with the creation of a local franchise, i.e., with the municipal revolution of 1835.

Before the Municipal Corporations act, cities were unable to provide investment in local public goods. According to Williamson (1994), “[b]y 1830 [...] Britain had accumulated an enormous deficit in her social overhead capital stocks by pursuing seventy years of industrialization on the cheap.” What are the causes for this failure of city government? Much attention has been devoted to the failure of the corporation before 1835. Pre-1835 corporations were private institutions, which held property not in trust, but just as individuals own property. “Few corporations admit a positive obligation to expend the surplus of their income for objects of public advantage. Such expenditure is regarded as a spontaneous act of generosity [...] At Cambridge, the practice of turning corporation property to the profit of individuals was avowed and defended by a member of the council.”30 The corporations were governed by the common council, which was sometimes elected by the freemen but more commonly self-perpetuating. In addition, corporations were viewed as Tory strongholds.31 The state of affairs that resulted from this organizational structure is described in the 1835 Municipal Corporations Report.

The evils which have resulted from mismanagement of the corporate property are manifold and are of the most glaring kind. Some corporations have been in the habit of letting their land by private contract to members of their own body, upon a rent and at fines wholly disproportionate to their value, and frequently for long terms of years. Others have alienated in fee much of their property for inadequate considerations. [...] In general the corporate funds are but partially applied to municipal purposes [...] but they are frequently expended in feasting, and in paying the salaries of unimportant officers [...]32

While the Municipal Corporations Report is not necessarily an impartial source, it witnesses the fact, widely accepted in the literature on the history of local government, that the pre-1835

corporations were a failure as a system of local government.

The Municipal Corporations Act of 1835 provided a new unified structure that superseded the myriad of local exceptions. This unified structure was more democratic, as the council was now composed for three quarters by representatives elected by the ratepayers. In addition, corporations were now public bodies, whose surplus could only be used for “the public benefit of the inhabitants and the improvement of the borough.” The effects of the act of 1835 were felt gradually, as initially the act applied only to the 179 boroughs which were incorporated. With time, however, more cities adopted corporations charters (e.g., Manchester and Birmingham in 1838, and Bradford in 1847). While the initial power of the corporations was relatively restricted, they saw their powers increased by a series of reorganizations that eliminated the power of special authorities that pre-existed 1835. “By the time the Municipal Corporations Act of 1882 was passed, [the corporations] had acquired powers for the general regulation of their roads and streets, the provision of a system of drainage and sewage, the care of public health [...], the supply of gas and water, [...] the provision of fire brigades and control of an adequate police force.”

Could the municipal reform have been achieved without the extension of the franchise at the parliamentary level? It is hard to provide a definitive answer; however, there is reason to believe not. In the words of Joseph Parkes, the secretary of the Royal Commission appointed by the whigs in 1833 to report on municipal corporations, the Corporations act was “our postscript to the Reform Bills; in fact Municipal Reform is the steam engine for the Mill built by Parliamentary Reform.” Parkes described the Municipal Reform Bill as “the greatest political revolution ever accomplished. I don’t except the [parliamentary] Reform Bills ..., for though they were the keys to this change, yet this Municipal Reform alone gives the vitality ... It is the ‘breath of life’.”

4.4 Franchise reform associated with increased spending on public health

As described in the introduction, the composition of public spending changed dramatically. At the beginning of the nineteenth century, the major function of local government was the organization and provision of poor relief. By 1890 expenditure had increased to five times the 1820 level, and poor relief was only 12 percent of local expenditure in 1890. We now discuss evidence that most of the increase in local public spending was devoted to public health infrastructures.

Capital formation in social overheads and infrastructure was the most rapidly growing sector

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34 Cited from Smellie (1949).
35 Cited from Fraser (1982), pages 4-5. Italics are ours.
36 See Lindert (1994) for a discussion of the evolution of welfare spending in 19th century Britain and Besley, Coate, and Guinnane (1992) for an informational rationale for the changes in the law.
of the British economy between 1850 and 1910. Consistent with this statement, Figure 2 in the introduction shows a large increase in the fraction of government spending that was local. Education, a big item in local government spending after 1890, was much less important before that date and thus cannot account for the shift in the composition of public spending. A large fraction of the increase in local spending that took place before 1890 is investment in public health infrastructure. As an indication of this fact, the amount requested by local authorities in subsidized loans for sanitary activities from the central exchequer increased eightfold, from 11 million during 1848-1870 to 84 million during 1871-1897. Bell and Millward (1998) inform us that “together, water and public-health schemes constitute between 1/2 and 3/4 of all local annual capital expenditure on non-trading services.”

The same phenomenon emerges from a different angle, when we look at the breakdown of government expenditure by destination, as a percentage of total expenditure. The total of “social” and “economic and environmental” services almost doubles between 1840 and 1890. Most of the increase in these two items are public goods, since poor-law spending decreases after 1834.

<table>
<thead>
<tr>
<th></th>
<th>1790</th>
<th>1840</th>
<th>1890</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration and other</td>
<td>17%</td>
<td>16%</td>
<td>27%</td>
</tr>
<tr>
<td>National Debt</td>
<td>39%</td>
<td>42%</td>
<td>15%</td>
</tr>
<tr>
<td>Defense</td>
<td>26%</td>
<td>23%</td>
<td>28%</td>
</tr>
<tr>
<td>Social Services</td>
<td>9%</td>
<td>9%</td>
<td>20%</td>
</tr>
<tr>
<td>Economic and Environmental Services</td>
<td>9%</td>
<td>9%</td>
<td>15%</td>
</tr>
</tbody>
</table>


The precise timing of the increase in investment in public health is debated; many historians place it right after the 1867 reform act, and see that act as instrumental in diluting the power of the “shopocracy” that resisted the provision of public goods by borough councils on grounds of economy (see Szreter 1997). There is also anecdotal evidence of attempts to improve the local infrastructure which failed in the 1840s and 1850s which finally succeeded in the 1870s. As predicted by our model, after the 1867-1869 acts extending the franchise, investment in local infrastructure starts to increase.

The impact in terms of decrease mortality of these expenditures is hard to quantify rigorously. Even conservative estimates, such as McKeown & Record (1962), calculate that in the period of

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1850-1900, improvements in public health infrastructures account for 25% of the decline in mortality. Szreter (1988), Bell & Millward (1995) suggest a greater impact of public health.39

4.5 Franchise reform and the decline of special interest politics

We conclude out historical analysis by discussing two important transformations in the role of government during the first half of the 19th century. The first transformation is the so called end of ‘old corruption’ reducing the extent of cronyism that was prevalent until the beginning of the 19th century. The second transformation is in the organization of political activity itself, with a move away from personal politics and toward voting on broad programs proposed by national parties. We see these two transformations as two sides of the same coin, and argue that they can, at least in part, be attributed to the reform process in a way that is consistent with our model.

4.5.1 End of 'Old Corruption'

The term ‘old corruption’ was introduced by the radicals between the end of the 18th century and the beginning of the 19th century. It refers to what Harling (1996) calls “A parasitic system that taxed the wealth of the nation and diverted it into the pockets of a narrow political clique whose only claim to privileged status was its proximity to the sources of patronage.” These diversions represented the reward to the ability to procure votes. Buying off parliamentary votes was a necessary part of politics in a world with no strong parties, where personal politics predominated (Harling p.15-16, see also Cox (1987)).40 Getting rid of corruption required changing the political system. For instance, Rubinstein argues that “The reform of parliament itself was seen by nearly all radicals as a necessary preliminary measure for the systematic ending of old corruption, and whatever the reforming work of the previous Tory governments it is difficult to disagree with this


40 There is a lot of anecdotal evidence on the pervasiveness of this type of corruption during 18th century England. A considerable fraction of the energies of the radical movement was focused on exposing and decrying various instances of patronage and synecures that fell under the rubric of old corruption. For instance, in 1816 (and again in following editions) the radicals published a Black Book and a Red Book detailing names and takings of thousands of placemen and pensioners (Rubinstein 1983). We could not find detailed data on the size and importance of old corruption. However, there is some evidence that its existence and importance was not simply a propaganda exercise by the radicals. For instance, Rubinstein (1983) writes that “A sizable proportion of those who flourished during the early 19th century were neither landowners nor merchants, but were engaged in activities which would now be classified as in the professional, public administrative, and defense occupational categories, including especially Anglican clerics, soldiers, lawyers and judges, government bureaucrats and placemen. Nearly 10% of all British half-millionaires deceased in the early 19th century, and as many as 23% of those leaving more than 150,000 but less than 500,000 during 1809-1829 were engaged in such activities” (p. 74-75).
assessment. If one studies the long-term effects of the Great Reform Bill upon Britain’s elite structure, I think one sees just how fundamental a reforming measure it really was, and why one should not underestimate its importance or interpret it merely as a clever holding action by the old elite.” (Rubinstein (1983), p. 74-75). Rubinstein (1983) presents evidence that the numbers of rent-seekers and the size of the pie that they appropriated declined dramatically by the middle of the 19th century. This process of transformation of the public sector culminates with the Northcote-Trevelyan report of 1854 which spurred a substantial reform of the civil service. At the end of this process, civil service jobs were no longer subject to patronage.

If we accept the notion that extensive rent-seeking by the political elite is a reflection of a political system that is essentially redistributive in nature (i.e., one where politics is more about gaining a share of pork-barrell spending than about efficient ways of providing public goods), then the observed decrease in rent-seeking connected to the reform process is consistent with the predictions from our model, in which extending the franchise reduces the amount of wasteful redistribution.

4.5.2 Political Organization

Cox (1987) argues that progressive expansions of the franchise coincided with a shift away from personal politics toward voting on broad programs proposed by national parties. The conventional view, to which we subscribe, is that expansion of the suffrage made it harder to win elections on the basis of bribery. Seymour (1915, p. 447) writes that “[a] different attitude on the part of agents must have resulted from an increased electorate and the comparative equality in the value of votes; direct bribery would have proved too expensive, if it could have been made possible, to provide for it on a large and organized scale.” As a result of the expansion of the franchise, Seymour estimates a significant decrease in the sums spent on elections (pp. 448 and ff.) and finds that “the very nature of electioneering has been transformed,” from purchasing a constituency with bribes to winning it by promises of legislation (pp. 453-4). This argument was well understood by contemporaries; Cox (1987, pp.56 and ff.) states that “When Parliament sought to deal with bribery that had become too extensive, their method was often simply to expand the offending borough boundaries so as to include more electors.” In addition, Cox (1987 pp. 59 and ff.) demonstrates that the reforms increased the appetite of representatives for introducing new legislation.

These transformations are consistent with what our model predicts is the consequence of a franchise expansion. Once direct bribery becomes unsustainable as an electoral strategy, electoral

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41See Rokkan (1970) for an extended discussion of the development of party organization and the effect of suffrage on this development.

42That the methods of electioneering were transformed by the reforms is well accepted in the scholarly literature. In fact, many scholars read the reform process as one of dealing with “corruption” (i.e., contesting elections by bribing voters). See Seymour (1915), Harling (1996).
politics and parliamentary politics become more directly linked, leading to the possibility of national policies with broad electoral appeal.

5 Related Literature

The question of franchise expansion has been studied by historians, political scientists, and more recently economists. The literature has put forward some explanations for voluntary expansion. The leading explanation is one of expansion under threat: the disenfranchised group gains enlargement by effectively threatening the social order and hence the position of the enfranchised group. Acemoglu and Robinson (2000) present such a model. In their model, the franchise is a favored instrument used to transfer (future) resources because the franchise entails a commitment. As we have already discussed in the introduction, we view our contribution as complementary, not alternative, to that of Acemoglu and Robinson. Conley and Temimi (2001) study a model of expansion under threat, with particular emphasis on the degree to which the preferences of the disenfranchised are opposed to those of the elite.

A different strand of the literature sees the democratization of certain political systems as the solution to a commitment problem of the elite in the context of a hold-up problem (see Weingast 1997 for a review of that literature). In this vein, Fleck and Hanssen (2002) provide a model where farmers underinvest in the land because of fear of being expropriated by a dictator. In their model, democracy is a way to commit not to expropriate. Fleck and Hanssen relate this result to exogenous variation in the type of land in different areas of ancient Greece, and argue that democracy is more likely to emerge in areas where the type of cultivation requires more intensive investment. Thus, this paper provides an interesting explanation for why different types of institutions were able to thrive at the same time in ancient Greece. However, a key element of the hold-up model of franchise extension is that the most important component of investment was undertaken by the disenfranchised population. In cases in which a substantial fraction of investment is undertaken by members of the elite, the same argument would suggest that democratization may actually deter investment since the returns to the investment undertaken by the elite would be subject to taxation. Thus, in these circumstances democratization is unlikely to be favored by the elites. This seems to be especially relevant for the case of early 19th century Britain: those resisting extension of the franchise were the members of the landed aristocracy, whereas those in favor of extending the franchise were the members of the urban and industrial elite who were responsible for a large fraction of capital investment during the industrial revolution. This composition of support for the extension of the franchise seems to be hard to reconcile, at least in 19th century Britain, with the hold-up rationale for extension.

34
Llavador and Oxoby (2002) consider a median voter model in which an incumbent government can extend the franchise without the approval of a majority of the voters. In contrast, tax policy needs approval of a majority of the voters. Therefore, a party in power may be able to manipulate the median voter in the population by changing the franchise. In our model, we do not allow franchise changes to occur under less than majority approval. Indeed, we can even allow for franchise reforms that require supermajorities.

Lott and Kenny (1999) show that the introduction of women’s suffrage in the U.S. is accompanied by an expansion in spending on public goods. Kenny (2001) shows that the introduction of women’s suffrage came earlier in states with a smaller percentage of women. This is consistent with the notion that extending the franchise has a cost for the elite because the extension induces politicians to divert resources away from the elite towards the newly enfranchised group. When that group is too large, in our model the cost to the elite exceeds the benefits of expansion. Engerman and Sokoloff (2001) consider the evolution of suffrage institutions in the Americas. They argue that societies where the wealth distribution was initially more unequal, perhaps due to differences in their initial factor endowments, had narrower franchises than more equal societies. This is also consistent with our model because, as shown in Section 3, in societies that are more heterogenous, the value of targeting transfers is more valuable to candidates, so that the provision of public goods is particularly inefficient. Another piece of historical evidence discussed by Engerman and Sokoloff is that frontier states in the US adopted universal white male suffrage earlier. Finally, Aidt, Dutta, and Loukoianova (2001) estimate the relation between public spending and the spread of democracy in western Europe in the period 1830-1939. They estimate panel regressions, and find that the extension of the franchise to poorer voters had no impact on the size of government but, consistent with our model, it had a substantive effect on the composition of government spending, moving expenditures towards spending on public goods.

6 Conclusions

We have presented what is, to the best of our knowledge, the first model of voluntary franchise extension that is based on divisions within the elite. In our model these divisions arise endogenously through the political process: groups within the elite benefit differently from the status quo. We have shown that it is possible that a majority within the elite may favor expanding the franchise. From the theoretical viewpoint, this constitutes a novel and, we believe, nontrivial rationale for voluntary expansion of the franchise.

Focusing on divisions within the elite is important from the applied viewpoint, because they seem an important part of how peaceful extensions of the franchise come about. In Britain, substantial
subgroups within the elite championed franchise expansion. Our analysis can also account for some key shifts in the role of the public sector during the British age of reform, notably the increased provision of public goods and the decline of special interest politics. In our model, these shifts are a consequence of the reform process; in fact, reform happens when increased necessity of public good provision leads a majority of the elite to demand a redirection of the role of government away from special interest politics towards increased provision of the public goods. In 19th century Britain, rapid urbanization created a strain on urban infrastructures and made necessary a large program of spending on local public goods.

We emphasize again that we do not see our thesis as alternative to other views of reform. In particular, we believe that the “threat of revolution” thesis of Acemoglu and Robinson is also important in accounting for franchise reform. Both theses can help explain why the franchise was expanded peacefully in 19th century Britain, and in our view, neither explanation by itself constitutes a complete account of the elite’s incentives to introduce reform.
Appendix

Proof of Proposition 2.

Proof: We consider an increase in \( n_s \), the size of the least responsive group in the elite, keeping fixed the aggregate endowment. This exercise corresponds to a scenario in which the franchise is progressively extended to members of group \( s \). We show that investment in the public good increases.

If all groups \( 0, ..., s \) receive positive transfers, then by the discussion following proposition 1 investment in the public good is \( I^{SM} \). This quantity is increasing in the size of the franchise. If no group receives positive transfers, then all resources are devoted to production of the public good; extending the franchise will certainly not decrease investment in the public good. Let us now turn to the case in which some but not all groups receive positive transfers at the equilibrium.

The argument is developed here for the generic case in which a small expansion of the franchise does not change the set of binding nonnegativity constraints, i.e., the groups \( H, ..., s \) which receive no transfers. It is clear that this argument extends to cover the measure-zero cases in which a small expansion of the franchise drives the transfers of one more group to zero.

Start from a given size of the elite. If in equilibrium group \( k \) receives positive transfers, it must be that equation (3) holds with equality. Taking into account that \( c^*_j,L = 0 \) for \( j = H, ..., s \) this means that

\[
 f_k (0) U' \left( c^*_k,L + g(I^*_L) \right) - g' (I^*_L) \sum_{i=0}^{H-1} \left[ n_i f_i (0) U' \left( c^*_i,L + g(I^*_L) \right) \right] = g' (I^*_L) \sum_{j=H}^{s} \left[ n_j f_j (0) U' \left( g(I^*_L) \right) \right];
\]

or, using the first order conditions for groups \( 1, ..., H-1 \),

\[
 f_k (0) U' \left( c^*_k,L + g(I^*_L) \right) \left[ 1 - g' (I^*_L) \sum_{i=0}^{H-1} n_i \right] = g' (I^*_L) \sum_{j=H}^{s} \left[ n_j f_j (0) U'' \left( g(I^*_L) \right) \right]. \tag{5}
\]

Let us see how the equilibrium choices change as \( n_s \) increases slightly.

Differentiating the right hand side with respect to \( n_s \) yields:

\[
 g'(I^*_L) f_s (0) U' \left( g(I^*_L) \right) + \frac{\partial I^*}{\partial n_s} g''(I^*_L) \sum_{j=H}^{s} \left[ n_j f_j (0) U'' \left( g(I^*_L) \right) \right] + \frac{\partial I^*}{\partial n_s} \cdot (g'(I^*_L))^2 \sum_{j=H}^{s} \left[ n_j f_j (0) U'' \left( g(I^*_L) \right) \right]
\]

The first term is strictly positive. Consider now the other terms. Suppose by way of contradiction that as \( n_s \) increases less public good is promised, i.e., \( \frac{\partial I^*}{\partial n_s} \leq 0 \). Then all the terms in the second line of the above expression are nonnegative since \( g'' < 0, U'' < 0 \). We conclude that, if \( \frac{\partial I^*}{\partial n_s} \leq 0 \), the right-hand side is strictly positive.
Let us now consider the left-hand side of equation 5. Its derivative with respect to \(n_s\) reads as follows:

\[
\begin{align*}
&f_k(0) \cdot \left[ \frac{\partial c_{k,L}^*}{\partial n_s} + \frac{\partial I^*}{\partial n_s} g'(I^*) \right] \cdot U''(c_{k,L}^* + g(I_L^*)) \cdot \left\{ 1 - \frac{g'(I_L) \sum_{i=0}^{H-1} n_i}{H-1} \right\} \\
&- f_k(0) U'(c_{k,L}^* + g(I_L^*)) \frac{\partial I^*}{\partial n_s} g''(I_L^*) \sum_{i=0}^{H-1} n_i.
\end{align*}
\]

Following our contradictory assumption that \(\frac{\partial I^*}{\partial n_s} \leq 0\), the second line of this expression is nonpositive. We now establish that the first line is also nonpositive. The term in curly brackets is positive in view of equation (5). Since \(U'' < 0\), the entire first line is of the opposite sign as the term in brackets, which we now prove is nonnegative. By the budget constraint, \(\sum_{i=0}^{H-1} n_i \frac{\partial c_{k,L}^*}{\partial n_s} = - \frac{\partial I^*}{\partial n_s}\). Thus, there must be a \(k\) such that

\[
\frac{\partial c_{k,L}^*}{\partial n_s} \geq - \frac{\partial I^*}{\partial n_s},
\]

or

\[
\frac{\partial c_{k,L}^*}{\partial n_s} + \frac{\partial I^*}{\partial n_s} g'(I^*) \geq - \frac{\partial I^*}{\partial n_s} \left( 1 - \frac{g'(I^*) \sum_{i=0}^{H-1} n_i}{\sum_{i=0}^{H-1} n_i} \right).
\]

The right hand side is nonnegative if \(\frac{\partial I^*}{\partial n_s} \leq 0\).

We conclude that, if \(\frac{\partial I^*}{\partial n_s} \leq 0\), then the left-hand side of equation 5 is nonincreasing in \(n_s\) and the right-hand side is strictly increasing in \(n_s\) which gives us the desired contradiction. Therefore, \(\frac{\partial I^*}{\partial n_s}\) must be positive.

\[\blacksquare\]

**Proof of Lemma 1**

*Proof:* (i) Rewrite expression (5) denoting the dependence of the choice variables on \(V\).

\[
\begin{align*}
&f_k(0) U'(c_{k,L}^*(V) + g(I_L^*(V),V)) \\
&\quad \quad \quad \quad \frac{\partial g(I^*(V),V)}{\partial I} \frac{\partial I^*}{\partial V} \sum_{j=H}^{H} n_j f_j(0) = 1 - \frac{\partial g(I^*(V),V)}{\partial I} \sum_{i=0}^{H-1} n_i.
\end{align*}
\]

Differentiate the above equation with respect to \(V\). The sign of the right- and left-hand sides must match, i.e.

\[
\begin{align*}
\text{sgn} \left\{ f_k(0) U''(c + g) \left( \frac{\partial c^*}{\partial V} + \frac{\partial g}{\partial I} \frac{\partial I^*}{\partial V} + \frac{\partial g}{\partial V} \right) U'(g) \sum_{j=H}^{H} n_j f_j(0) \\
- f_k(0) U'(c + g) U''(g) \left( \frac{\partial g}{\partial I} \frac{\partial I^*}{\partial V} + \frac{\partial g}{\partial V} \right) \sum_{j=H}^{H} n_j f_j(0) \right\}
\end{align*}
\]

38
\[
\begin{align*}
&= \text{sgn} \left\{ \left( \frac{\partial^2 g}{\partial I^2} \frac{\partial I^*}{\partial V} + \frac{\partial^2 g}{\partial I \partial V} \right) \left[ 1 - \frac{\partial g}{\partial I} \sum_{i=0}^{H-1} n_i \right] + \frac{\partial g}{\partial I} \sum_{i=0}^{H-1} n_i \left( \frac{\partial^2 g}{\partial I^2} \frac{\partial I^*}{\partial V} + \frac{\partial^2 g}{\partial I \partial V} \right) \right\} \\
&= \text{sgn} \left\{ \frac{\partial^2 g}{\partial I^2} \frac{\partial I^*}{\partial V} + \frac{\partial^2 g}{\partial I \partial V} \right\}.
\end{align*}
\]

We posit, by way of contradiction, that \( \frac{\partial I^*}{\partial V} \leq 0 \). Then the RHS is strictly positive. Let us now show that the LHS is not positive if \( \frac{\partial I^*}{\partial V} \leq 0 \). This contradiction will prove that it cannot be that \( \frac{\partial I^*}{\partial V} \leq 0 \).

Assume first that \( \frac{\partial g}{\partial I} \frac{\partial I^*}{\partial V} + \frac{\partial g}{\partial V} \leq 0 \). Then the second line in the LHS is nonpositive, while the sign of the first line is of the opposite sign of \( \left( \frac{\partial g}{\partial I} \frac{\partial I^*}{\partial V} + \frac{\partial g}{\partial V} \right) \). However, by the resource constraint \( \frac{\partial I^*}{\partial V} \geq - \left( \frac{\partial I^*}{\partial V} \right) / \sum_{i=0}^{H-1} \bar{n}_i \), and so

\[
\frac{\partial g}{\partial I} \frac{\partial I^*}{\partial V} + \frac{\partial g}{\partial V} \frac{\partial I^*}{\partial V} \geq \frac{\partial g}{\partial V} \frac{\partial I^*}{\partial V} \left[ \frac{\left( \sum_{i=0}^{H-1} n_i \right) \frac{\partial g}{\partial V}^2 - 1}{\sum_{i=0}^{H-1} n_i} \right] > 0,
\]

where the last inequality makes use of the assumption that \( \frac{\partial I^*}{\partial V} \leq 0 \) together with the fact that the term in brackets is negative in view of equation (5). Thus, if \( \frac{\partial g}{\partial I} \frac{\partial I^*}{\partial V} + \frac{\partial g}{\partial V} \leq 0 \), then the LHS is negative.

Assume then that \( \frac{\partial g}{\partial I} \frac{\partial I^*}{\partial V} + \frac{\partial g}{\partial V} > 0 \). Then we rewrite the LHS as:

\[
\begin{align*}
&\left( \frac{\partial g}{\partial I} \frac{\partial I^*}{\partial V} + \frac{\partial g}{\partial V} \right) f_k(0) \sum_{j=H}^{s} n_j f_j(0) [U''(c + g)U'(g) - U'(c + g) U''(g)] \\
&+ \frac{\partial c^*}{\partial V} f_k(0) U''(c + g) U'(g) \sum_{j=H}^{s} n_j f_j(0)
\end{align*}
\]

The second line is nonpositive if \( \frac{\partial I^*}{\partial V} \leq 0 \) because then \( \frac{\partial c^*}{\partial V} \geq 0 \). The first line is strictly negative; to see this, observe that the term in brackets is strictly negative because \( u''/u' \) is increasing by the DARA assumption.

(ii) For \( V = 0 \) no public good is provided for any size of the franchise since \( \frac{\partial g(I, 0)}{\partial I} = 0 \). Suppose by way of contradiction that, as \( V \) increases \( H \) stays bounded away from zero: \( H(\infty) \geq \overline{H} \). Consider \( k, i < \overline{H} \). For any \( V \) that are sufficiently high, we must have

\[
f_k(0) U'(c^*_{k,L}(V) + V g(I_L(V))) - f_i(0) U'(c^*_{i,L}(V) + g(I_L(V))) = 0
\]

Since \( I \to \omega \) as \( V \to \infty \), we must have that \( c_k \to c_i \). But this violates the previous expression because then we would have \( f_k(0) - f_i(0) \to 0 \). This shows that a majority of the elite receives zero transfers when \( V \) is sufficiently large.
It remains to be shown that the number of groups who receive zero transfers is monotonic in $V$. To this end, consider the generic case in which the nonnegativity constraints are strictly binding for groups $H, ..., s$ and groups $0, ..., H - 1$ receive strictly positive transfers. In this case, a marginal increase in $V$ increases the provision of the public good (by part i). Hence, transfers to groups $0, ..., H - 1$ are reduced to maintain equality of the marginal returns in terms of vote share. Transfers to groups $H, ..., s$ clearly remain zero. As $V$ increases, there comes a point at which transfers to group $H - 1$ become zero. At this point, the number of groups who receive zero transfers increases by one. The claim immediately follows.
References


Llavador, Humberto and Robert Oxoby “Partisan Competition, Growth and the Franchise,” mimeo Pompeu Fabra.


