

How to Get the Snowball Rolling and Extend the Franchise:

Voting on the Great Reform Act of 1832

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Abstract

This paper suggests a new approach to analyzing the causes of franchise extension. Based on a new dataset, it provides a detailed econometric study of the Great Reform Act of 1832 in the United Kingdom. The analysis yields four main results. First, modernization theory receives limited support. Second, the reform enjoyed some measure of popular support. Third, the threat of revolution had an asymmetric impact on the voting behavior of the pro-reform Whigs and the anti-reform Tories. While the threat might have convinced reluctant reformers among the Whig politicians – and among their patrons – to support the bill, it seems to have hardened the resistance to reform among the Tories. Fourth, ideology played a critical role. Nevertheless, it also appears that self-interest and political expedience explained the votes of many Members of Parliament.

Keywords: Franchise extension; democratization; The Great Reform Act.

JEL Classification: D7, H1.

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1. Introduction

To this day, the passing in 1832 by the British Parliament of a bill, subsequently known as the Great Reform Act, is seen as a watershed. The immediate consequences of this reform were to redistribute parliamentary seats from the small “rotten” boroughs¹ to the large and fast growing industrial cities, as well as to extend the franchise to “respectable” segments of the middle class. But with hindsight, the Great Reform Act was the pivotal event that got the snowball rolling: it was the first of five major reforms that gradually transformed the political system in the United Kingdom. In the 1830 general election, no more than 3% of the adult male population could cast their vote and the bulk of the 658 Members of Parliament (MPs) were returned in uncontested elections. Less than 100 years later, in 1928, all men and women aged 21 and above could vote. In the intervening years, the franchise had gradually been extended by the Second Reform Act of 1867, the Third Reform Act of 1884, and the Fourth Reform Act of 1918. In addition, the secret ballot had been introduced in 1872, plural votes discontinued, and a uniform system of districting adopted (see Machin 2001).

Broadly speaking, the historical narrative suggests two rationales for the success of the Great Reform Act (see among others, Brock, 1973, Cannon, 1973 and Evans, 2000). One emphasizes extra-parliamentarian pressures and points to evidence such as the riots in several towns in the autumn of 1831, talks of armed uprising, and the flood of petitions to Parliament from all parts of the country in support of reform. Another emphasizes changes in the balance of

¹ “Rotten” boroughs were also known as “nomination” or “pocket” boroughs. They were constituencies that had been created in the Middle Ages and still returned MPs in the nineteenth century, even though they had by then lost the bulk of their population. The classic example of a “rotten” borough was Old Sarum, which only numbered 11 inhabitants in 1831.

power within Parliament. These changes included the fall of the anti-reform Tory government in 1830, which allowed a pro-reform Whig government to take office for the first time since 1806.

But beyond the historical narrative, Public Choice scholars, economists and political scientists alike have developed formal theories to explain the willingness of the ruling elites to share their power with groups whose goals they may oppose. The starting point for virtually all these theories is that democracy originates from the decision of the ruling elites to share their monopoly on power (Tullock, 1987: Chapter 4). The reasons for this, however, differ and some scholars have emphasized modernization theory, i.e., the role of economic growth and social progress (Lipset, 1960), while others have stressed the role of ideology, mass conscription armies (Janowitz, 1976), or the broader context of constitutional bargaining (Congleton, 2004, 2007, 2011; Coll, 2008, Munshi, 2011, Horpedahl, 2011). Some scholars, e.g., Justman and Gradstein (1999), Acemoglu and Robinson (2000, 2006), Boix (2003) and (Tilly, 2004), have argued that external pressures, which are often conceptualized as a threat of revolution, forced the elites to share power. Seen in this perspective, granting voting rights to previously disenfranchised groups was a lesser evil for the ruling elite. Others have suggested that the extension of the suffrage was a consequence of economic changes that made democracy more profitable for the ruling elite. This might be the case if property rights are better protected under democracy (Gradstein, 2007), if democracy enhances human capital accumulation (Bourguignon and Verdier, 2000) or if a significant fraction of the elite can benefit from greater provision of public services under democratic governments (Lizzeri and Persico, 2004).

All of these theories offer convincing interpretations of specific historical episodes and can be supported by detailed historical case studies. Some of them have also been subjected to

econometric testing.² These tests, which focus on the consequences of suffrage reform rather than on its underlying causes, exploit cross-country or cross-state variations in the franchise rules to identify the effects of democratization.

This paper analyzes the underlying causes of franchise extension by focusing on the votes of the politicians who adopted the Great Reform Act of 1832.³ Such an empirical study is possible because the Great Reform Act was debated and voted on under the rules of the Unreformed Parliament. These rules had not been changed for almost 200 years prior to the reform and can therefore be taken as exogenous. Moreover, the Unreformed Parliament exhibited a very rich and varied set of institutions that allows us to construct new tests of four prominent theories of franchise extension. We can thus assess the role played by ideology, the threat of a revolution, the degree of popular support for the reform, and economic factors, such as the rise of a middle class and economic prosperity, in the adoption of the Great Reform Act. For this purpose, we assembled a new dataset from a combination of primary and secondary sources that provides detailed information on the characteristics of each parliamentary constituency in England and Wales, as well as on the elected Members of Parliament (MPs).

² See among others Hettich and Winer (1988), Husted and Kenny (1997), Persson and Tabellini (2003), Aidt and Eterovic (2011), Aidt and Dallal (2008), and Aidt and Jensen (2009a, 2009b).

³ Schonhardt-Bailey (1994, 1998, 2006) adopts a similar approach in her study of the repeal of the Corn Laws as well as in her study of industrial and agricultural interests in the German Parliament during the nineteenth-century. Galor and Moav (2006) also use a comparable methodology in their study of the voting patterns of the British MPs on the 1902 Balfour Act, which suggested a reform on the English education system. See also Greene (2008), who analyzes the survival strategies of dominant parties in authoritarian regimes when they face pressures to democratize by using sample surveys of leaders from the Revolutionary Institutional Party in Mexico in the 2000s. Finally, our study is closely related to Ziblatt (2008). He studies the failed 1912 attempt to reform the voting franchise governing elections in Imperial Germany and links the voting patterns on the reform to structural characteristics of the constituencies in which the legislators were elected. In particular, he shows that landholding inequality played a major role.

As such this study provides an alternative approach to the structural and political theories of suffrage reform. Structural theories of suffrage reform argue that there is a conflict between those who are part of the political process and those who are not. This point is notably made by Moore (1966), Ziblatt (2008) and Ansell and Samuels (2010), who link land inequality to political regimes and emphasize the clout which this grants to landholding interests. In this perspective, politicians are merely channels of social preferences who acquiesce to suffrage extension under the threat of revolution. Conversely, political theories of franchise reform, e.g., Himmelfarb (1966), Llavador and Oxoby (2004), Congleton (2011), contend that democratization is achieved as a by-product of political competition between members of the ruling elites whose objectives ultimately pertain to partisan gains or to economic advantages (Lizzeri and Persico, 2004; Aidt et al. 2010).

The econometric analysis yields four main results. First, modernization theory receives only limited support, in line with the cross-country findings of Acemoglu et al. (2008). On the one hand, we find that constituencies whose population grew, and which presumably became more urbanized and prosperous, returned pro-reform MPs. On the other hand, it does not seem that areas experiencing increased industrialization were more likely to support the reform process. Second, the reform enjoyed some measure of popular support. In particular, we find that pro-reform MPs were more likely to be elected in constituencies with relatively large electorates and contested elections. Third, the threat of revolution had an asymmetric impact on the voting behavior of the pro-reform Whigs and the anti-reform Tories. While the threat might have convinced reluctant reformers among the Whig MPs – and among their patrons – to support the bill, it seems to have hardened the resistance against reform among the Tories. Fourth, ideology played a critical role in passing the bill, as party affiliation is seen to explain the attitude towards

reform of a large number of MPs. However, we also find evidence that self-interest and political expedience explained the votes of many MPs. Although we control for many observable characteristics of the parliamentary constituencies and of the elected MPs, some unobserved factors may still be omitted from the analysis – a fact that should be kept in mind when interpreting these findings.

The rest of the paper is organized as follows. Section 2 discusses the political system in the United Kingdom under the Unreformed Parliament and provides an overview of the events that led to the Great Reform Act. Section 3 sets out our hypotheses and econometric strategy. Section 4 discusses the empirical results. Section 5 concludes. An online appendix contains a detailed comparison between the initial and final draft of the reform bill, a list of definitions of all variables, descriptive statistics, and tables with the full set of estimations. These are available at <http://www.econ.cam.ac.uk/faculty/aidt/papers/papers2.htm>.

2. The Unreformed Parliament and the Great Reform Act: Data and Historical Background

In this section, we describe how the Unreformed Parliament worked and provide a brief historical overview of the events that culminated in the adoption of the Great Reform Act. This discussion allows us to present our data and to motivate the design of our empirical tests on the causes of franchise extension. A more detailed account can be found in the working paper version of the paper (Aidt and Franck, 2008). Tables A1 in the online Appendix presents descriptive statistics.

2.1. Politicians and political parties in the Unreformed Parliament

In 1830, the electoral rules of the Unreformed Parliament were still virtually the same as in the past centuries. The 658 seats of the Unreformed Parliament were divided between 188

county seats, 465 borough seats and five university seats.⁴ Due to data limitations, our econometric analysis is restricted to the MPs elected in 489 English and 24 Welsh constituencies.

Although political parties in the modern sense did not exist in the Unreformed Parliament, it is possible to identify two broad groupings of MPs: the Tories and the Whigs. The Tories supported the governments appointed by the British kings from 1808 to 1830 and were hostile to parliamentary reform. The Whigs, on the other hand, were in favor of shifting the balance of power from the King to the Commons and were more inclined to parliamentary reform than the Tories. Both parties, however, held the strong belief that society was best governed by the landowning classes. Neither the Whigs nor the Tories supported universal male suffrage. Such far-reaching ideas were reserved for the Radicals, who were represented in the 1830 Parliament by only six MPs. The 1830 Parliament was dominated by the Tories who held 63% of the English and Welsh seats. After the 1831 election, which was fought almost exclusively on the reform question, the majority had shifted: 55% of the seats were held by the Whigs.

The MPs received no salary and were subject to a high property qualification. This effectively prevented individuals from the lower classes from running in the elections and the British parliament was dominated by the landowning interest (Whitfield 2001: 33). Figure 1 shows data on the occupations and the social backgrounds of the MPs elected in 1830 and in 1831 and illustrates the aristocratic nature of the Unreformed Parliament very clearly.⁵ The MPs were army officers, lawyers or jurists, bankers, industry owners, merchants, landowners or

⁴ The universities of Cambridge, Dublin and Oxford were self-governing bodies that returned MPs on a franchise that granted all graduates the right to vote. Cambridge and Oxford returned two MPs while the University of Dublin returned only one.

⁵ These data are collected from Namier and Brooke (1964), Stookes Smith (1973), Thorne (1986), and various editions of Dod's Parliamentary.

“dynasty heirs”, i.e., the MPs who were immediately returned to Parliament when they finished their education, reached majority or both.⁶

[Figure 1 here]

2.2. The franchise rules, patronage and economic conditions in the English and Welsh constituencies

The franchise rules of the Unreformed Parliament were complex and not uniform. Unlike the counties which all had the same franchise, whereby all men who owned freehold land or property worth at least 40 shillings a year could vote, there were six franchise types in the English and Welsh boroughs. In the freemen boroughs, all individuals with the freeman status were allowed to vote, whether or not they resided in the boroughs. The freeman status could be inherited, acquired by serving an apprenticeship in the borough, or received as an honor from the borough’s corporation. In the scot and lot boroughs, inhabitants who paid the poor rates could vote. In the potwalloper boroughs, all the resident householders who “had a family and boiled a pot” could vote. In the freeholder boroughs, the franchise requirement was the same as in the English counties. In the burgage boroughs, the owners of a property with an old form of tenure, called the burgage, could vote. These were often limited to plots of land that had formed the borough when it was first laid out and could be owned by a single person. In the corporation boroughs, only members of the local town council, called the corporation, could vote. Table 1 shows the distribution of boroughs across the six franchise types and the approximate sizes of the electorates in 1830. The rules in the corporation, freeholder and burgage boroughs typically resulted in very small electorates. In contrast, boroughs with scot and lot, potwalloper or freeman franchise had relatively large electorates and usually held contested elections. There were,

⁶ It must be noted that the categories are not mutually exclusive and many MPs are therefore recorded in more than one category, e.g., army officer and landowner. In our estimations, we use landowners as the control group.

however, many exceptions, as sizes of the electorates varied within a given type. Still, elections in the Unreformed Parliament were often uncontested and when a contest did take place, electoral corruption was ripe

[Table 1 here]

It is useful to think of the Unreformed Parliament along a line that measures the degree of aristocratic influence on the elections of MPs. At one end, there were the MPs for the most populous and independent counties, e.g., Yorkshire, and the two members for Westminster, a borough with a large and independent electorate known for its radicalism. At the other end, there were the MPs for the rotten boroughs, such as Gatton and Old Sarum, which were effectively owned by private individuals who nominated the MPs. As a rule of thumb, one can assume that the influence of patrons increases as one moves to the left across the columns and down across the rows of Table 1, towards the smaller boroughs.⁷

We construct two measures of the influence of patrons in the constituencies. The first measure is an index that assesses the patrons' influence which is based on the qualitative information provided by Philbin (1965). We divide the constituencies into five categories. We consider that there was a high degree of aristocratic influence in a constituency when (i) a single patron controlled the governing body of the borough or had ownership of the property to which voting rights were attached or when (ii) a single patron effectively nominated the MPs or a sharing arrangement between multiple patrons was in place, with each of the patrons nominating

⁷ The influence of the patrons was also affected by the governance structure of a constituency. In the representative boroughs or in boroughs with officials appointed at the court leet of the lord (the court leet was a local court which could try and punish by jury crimes committed within its jurisdiction and its officials who served as local justices were appointed by the local patrons), the manor patrons could be very influential. In contrast, in boroughs with a municipal corporation, which consisted of a mayor, aldermen, burgesses and other officials, there was a body that, in principle, could curb the influence of local patrons.

one MP (“High influence”). We consider that patrons had an intermediate degree of influence when Philbin (1965) records that one, but not all the seats were controlled by a patron, or records evidence of rivalry between at least two patrons (“Some influence”). We also single out the Treasury boroughs, which were under the patronage of the government usually through employment (“Treasure borough”), as well as the constituencies that are explicitly characterized as independent constituencies (“No influence”) by Philbin (1965). Finally, we assume that there was a low degree of aristocratic influence when Philbin (1965) does not provide any specific information. This last category is used in the statistical analysis as the control group.

Table 2 shows that the majority of the English and Welsh constituencies were under some form of aristocratic or governmental influence in 1830 and it appears that patrons directly controlled about 36 per cent of the boroughs. The counties theoretically were more independent than the boroughs because of their large electorates. Nevertheless, the landowning aristocracy also controlled the majority of county seats because the relatively poor tenant farmers who could vote in the counties did not have the financial resources to stand up to their landlords.

[Table 2 here]

Our second measure of aristocratic influence is the extent to which the nine elections held between 1802 and 1831 were contested. In the vast majority of boroughs, less than half of the elections were contested, as Figure 2 shows. In a quarter of the boroughs, there was no contested election during the 30 years which preceded the Reform. Only in four boroughs - Beverley, Boston, Liverpool and Maidstone - were all nine elections contested between 1802 and 1831. Although county elections could be particularly expensive, elections did take place in at least 22 of the 40 English counties during the period, while we know for a fact that no contest took place in eight of them. In Wales, contested elections were more common, with only three boroughs

being entirely uncontested throughout the period (Philbin, 1965). For the purpose of the statistical analysis, we classify the constituencies into two categories: those with at least one contested election between 1802 and 1831 (“Contested Seat”) and those without any contested elections (“Uncontested Seat”).⁸

[Figure 2 here]

The constituencies did not differ only in their franchise rules and in the degree of patronage, but also by their economic circumstances. To assess these circumstances, we use data from the 1821 and 1831 Censuses of Great Britain. First, we compute the changes in the population of each parliamentary constituency (“population growth”).⁹ Second, we construct variables measuring the growth in the share of the population working in the agricultural (“growth in the agricultural sector”) and in the industrial sectors (“growth in the industrial sector”) in each constituency. We use these variables to proxy for “modernization”.

2.3. Parliamentary reform and the Great Reform Act: some historical background

In this section, we provide some historical background on the parliamentary reform movement in Great Britain and the events that led to the adoption of the Great Reform Act. The question of parliamentary reform had first arisen in the second half of the eighteenth century and resurfaced after the Napoleonic wars. It was spurred by the widely held view that the unreformed system was corrupt and unrepresentative (see O’Gorman 1989 for a different perspective). It

⁸ For some Welsh boroughs, we do not have definite information on the number of contested elections. We use these constituencies as the control group in the statistical analysis.

⁹ The census and parliamentary districts do not overlap exactly. This should be kept in mind when studying the descriptive statistics. However, this does not limit the relevance of these data for our estimations for two reasons. First, it is reasonable to assume that the economic differences between the census and parliamentary districts are not important. Second, we use these data to assess the impact of the local economic circumstances in the elections, not to infer how individual voters voted. In any case, as we discuss below, most individuals did not have the right to vote under the rules of the Unreformed Parliament.

was, however, not until the 1830 that the window of opportunity for reform opened. The reform process was triggered by the fall of Wellington's Tory (and anti-reform) government on 15 November 1830. This allowed Lord Grey to form the first Whig government since 1806. He immediately declared that his main objective was to introduce parliamentary reform. The committee charged with drafting the bill based their deliberations on the principle that the small boroughs needed to be disenfranchised and that their seats should be given to the large cities and to the counties. The franchise should be made uniform and based on a property qualification of £10 per year.¹⁰ It was also proposed that the maximum duration of a Parliament should remain at seven years and that voting should remain open.

On 1 March 1831, Lord Russell presented the first of three reform bills in the Commons. Table 3 gives an overview of the votes on the three versions of the reform bill. It is clear from Table 3 that participation was very high, in particular in the first two votes where more than 90% of all MPs voted. For the vote on 21 September 1831, when it had become clear that the bill would pass in the Commons, participation dropped to 73%.

After nine days of debate, the bill passed with a single vote, 302 against 301, on 22 March 1831. Table 3 shows clearly that party affiliation is a very strong predictor of the MPs' vote on the reform bill: more than 96% of the Whigs and all the Radicals voted in favor while more than 85% of the Tories voted against. Yet, the minority of about 15% "liberal" Tories who supported the bill played a key role in getting it through the Commons. However, at the committee stage, Lord Grey's government was defeated on an amendment pertaining to the total number of MPs to be returned in England and Wales.¹¹ As a consequence, Lord Grey asked the King to dissolve

¹⁰ The £10 cut-off was so high that a number of boroughs had very few voters. For example, Amersham with a population of 2612 would only have 25 £10 voters.

¹¹ The bill implied a total loss of 31 seats across England and Wales.

the Parliament on 19 April 1831. Between October 1830 and April 1831, the British Parliament received more than 3000 petitions, mostly in favor of reform (see Cannon 1973: 214). In this heated political atmosphere, the general election in 1831 was effectively a referendum on parliamentary reform. Many Tories were not returned and the election results gave the Whigs the majority they needed to pursue the reform.

[Table 3 here]

Lord Russell introduced the second reform bill shortly after the election on 24 June 1831. At the second reading on 6 July 1831, it passed with a majority of 367 against 231, reflecting the outcome of the 1831 general election. At the committee stage, it was, however, amended by the Tories but still it passed with a comfortable majority at the third reading on 21 September 1831. The next day, on 22 September 1831, Lord Russell presented the bill to the House of Lords. The Lords rejected the bill after five days of heated debate leading to a parliamentary deadlock. At the same time, riots broke out in many parts of the country and an alarming rise in the political militancy was observed. It was in this volatile political environment that Lord Russell presented the third reform bill in the House of Commons on 12 December 1831, after a period of intense lobbying of many peers and with some modifications to appease Tory critics. The bill passed the second reading with a majority of 324 against 162 on 17 December 1831 and proceeded through the committee stage without any significant amendments.

In the months leading up to the presentation of the third bill to the House of Lords, Lord Grey had suggested to a reluctant King William IV that the creation of additional Whig peers might be needed to pass the reform. The third bill was presented to the Lords on 26 March 1832. After the Bishop of London and two other leading Tory peers announced that they would support the bill, it passed the second reading in April with a narrow majority of nine votes, seven of

which were proxy votes that could not be used at the committee stage. And, unsurprisingly, things went wrong at the committee stage, where the Tory leaders were ready to introduce a series of significant amendments that. As soon as the committee stage opened on 7 May 1832, Lord Grey found himself in minority.

The next day, Lord Grey informed King William IV that he would resign failing the creation of enough Whig peers to carry the bill. Upon the King's refusal to create Whig peers, Lord Grey stepped down. Failing to form a Tory government, Lord Grey was however recalled by the King on 18 May 1832 and given a promise of the creation of 50 new Whig peers if need be. The third bill then passed the third reading of the Lords with a 106 to 22 majority: the Great Reform Act was a reality.

The final bill was given royal assent on 7 June 1832. Historians have argued about the significance of the bill and whether it deserves the adjective "great". Its immediate effect was to increase the number of voters from about 478,000 to about 800,000 i.e., from 3% to 8% of the total population. This basically enfranchised the middle class in the boroughs, but in most places the electorates continued to be very small. This restricted electorate, combined with the lack of a secret ballot, allowed many patrons to retain substantial influence in the elections. The redistribution of seats gave representation to the industrial centers, while the landowning aristocracy gained through an increase in the number of county seats. Arguably, the Great Reform Act was mostly great because it was the first in a sequence of reforms of the British political system. It opened the door for a reform of the municipal corporations and the poor laws in the second half of the 1830s, for the factory act, the repeal of the Corn Laws and the permanent introduction of the income tax in the 1840s. It got the snowball rolling.

3. Methodology

In the Public Choice and in the political science and economics literature more generally there is a lively debate on what causes suffrage reform (see, e.g., Robinson (2006), Ziblatt (2006), Przeworski et al. (2000), Przeworski (2009), Coll (2008), Munshi (2011), Horpedahl (2011) or Congleton (2004, 2011)). The quantitative data that we collected on the Great Reform Act can inform this debate by providing econometric evidence on the factors that caused constituencies to elect pro-reform MPs in the first place and the factors which then subsequently shaped the votes of the elected MPs.

To this end, we shall report evidence from two different statistical models designed to estimate the determinants of franchise extension in the Unreformed Parliament. The first model is concerned with the determinants of “party affiliation”: it identifies the factors that led to the election of a Tory or of a Whig in a given constituency.¹² We estimate this model separately for the 1830 parliamentary election and for the 1831 parliamentary election. The second model, which we refer to as the “vote regression”, is meant to explain a given MP’s support or opposition to parliamentary reform. We estimate the vote regression for each of the four votes on the reform bills listed in Table 3. Moreover, for each of these votes, which were held on 22 March 1831, 6 July 1831, 20 September 1831 and 17 December 1831, we distinguish between the votes of Tory and Whig MPs. Both the party affiliation and vote regressions focus on cross sectional variation in support for reform.

The party affiliation regression is estimated with the following probit model

$$\Pr(\textit{whig} = 1) = \gamma_0 + X_1' \gamma_1 + X_2' \gamma_2 + \eta \quad (1)$$

¹² To simplify the analysis, we assume in our estimations that Radicals and Whigs belong to the same political group (largely) in favor of reforms. In the following, we shall refer to them simply as the Whigs.

where the dummy variable *whig* takes the value 1 if the MP elected in a given constituency is a Whig and 0 otherwise, i.e., if he is a Tory, X_1 and X_2 are two matrices of explanatory variables and η is an error term that follows a standard normal distribution. The matrix X_1 includes the variables related to the political and institutional characteristics of each constituency while the matrix X_2 includes the variables related to the occupational and economic structure of the constituency.

The vote regression is also estimated with a probit model of the form

$$\Pr(\text{for} = 1) = \phi_0 + X_1' \phi_1 + X_3' \phi_2 + \nu \quad (2)$$

where the dummy variable *for* equals 1 if a given MP voted in favor of the reform and 0 if he opposed it, X_1 and X_3 are two matrices of explanatory variables and ν is an error term that follows a standard normal distribution. While X_1 is the matrix pertaining to the political and institutional characteristics of each constituency which we defined above, X_3 is a matrix of variables related to the MPs' occupations and background.

4. Results

We focus our discussion of the results on four main questions related to modernization theory, to the role of the threat of revolution, to the relative importance of party ideology versus economic and political interest, and to the extent of popular support for the reform. Selected results are reported in Tables 4 to 7 below. The full set of results for the party and the vote regressions is reported in the Online Appendix.

4.1. Modernization Theory and the Great Reform Act

One of the leading theories of democratization, the modernization theory, links the extension of the franchise to slow moving social processes that gradually over time shifts the balance in favor of a broader political franchise (Lipset, 1960). Barro (1999), Boix (2003) and

many others have reported evidence of a positive correlation between GDP and various measures of democracy, but doubts about the casual nature of this evidence have been raised by Przeworski and Limongi (1997) and Acemoglu et al. (2008) amongst others.

While the previous tests of the modernization theory have explored country level variations in income, urbanization and education, our data can offer a new perspective on the question. In particular, we ask whether constituency level differences in long-term economic trends and in the occupational structure of the constituencies at the time of the reform act were systematically related to the electoral successes of Whig (and Tory) MPs and therefore to the reform effort. Modernization theory implies that the constituencies that had prospered in the decades leading up to the reform act – and probably where the population grew and where more of the workforce found jobs in the industrial sector – would return pro-reform Whigs, while the constituencies that were undergoing an economic decline would not. Of course, local economic conditions only partially pick up the underlying social process of modernization, but if the theory is correct, local conditions should shape the reform preferences of voters and the local MPs.

[Table 4 to appear here]

The evidence presented in Table 4 suggests that constituencies with expanding populations were more likely to return a Whig MP, especially in the 1830. Since population growth is likely to have been correlated with urbanization and prosperity, this result provides some evidence that structural factors in general and the forces of modernization in particular mattered.

In contrast, we find that constituencies with rising shares of the population working in the industrial sector, as measured by the “growth in the industrial sector” variable, were unlikely to vote for Whig MPs. This negative effect is found in both the 1830 and the 1831 elections, although the Growth in the Industrial Sector variable is significant only in the latter election.

Conversely, constituencies where the population remained mostly in the agricultural sector were likely to vote for Whigs, although this result is significant only in two of our regressions.

These results might be interpreted as suggesting that more industrialized constituencies, which presumably were richer and more modernized than the more rural constituencies, were unlikely to support the reform. This goes against the modernization thesis. However, this interpretation of the negative effect of industry does not take into account that none of the large industrial centers in the Midlands and in the North actually returned MPs to the Unreformed Parliament.¹³ As such, our results do not really validate modernization theory but neither do they invalidate the possibility that industrialization produced more cohesive working and middle classes outside the enfranchised towns and cities that might have formed part of the engine of reform, not by electing reform-friendly MPs (they could not do so) but through the operation of extra-parliamentarian pressures. In sum, we must conclude that the evidence from the constituency level analysis of modernization is limited and inconclusive.

4.2. The threat of revolution and the Great Reform Act

A prominent idea in the economics literature on franchise reform is that the elite might have extended the franchise in order to avoid a violent and costly revolution. For example, Acemoglu and Robinson (2000, 2006) point out that democratization can serve as a commitment device in situations in which the elite cannot promise redistribution or other public spending programs to appease the poor. According to this view, franchise extensions are triggered by external threats and the votes of the MPs were influenced by the threat of revolution (see also Boix 2003; Justman and Gradstein 1999).

¹³ In fact, on average, the constituencies in the sample did not experience any growth in the share of employment in the industrial sector between 1821 and 1831.

One way of testing this hypothesis is to explore whether the perceived or real threat of political violence increased substantially during the late autumn of 1831. This is clearly demonstrated by Tilly's (1995) work on contentious gatherings in Great Britain. He reports that there were less than 50 such gatherings in June, July and August 1831, but more than 300 in October 1831. If the threat of revolution exercised an influence on the attitude of the MPs towards reform, there should be systematic differences between the votes held on 22 March 1831 and on 17 December 1831. In particular, we should observe a dramatic change in the influence of patrons on the votes of the MPs. In the low-tension environment of March 1831, they should have been hostile to reform and instructed the MPs under their influence to oppose it. But in the last months of 1831, which were characterized by high political tensions, they should have abandoned their anti-reform stance and encouraged the MPs under their influence to support the reform bill. In other words, in the regressions for the votes held on 22 March 1831 and on 17 December 1831, we would expect the impact of the variables capturing whether patrons had a substantial influence to go in opposite directions.

[Table 5 to appear here]

Table 5 reports the estimated influence of patrons on the votes of the MPs in support of the reform on 22 March and 17 December 1831. In the low-tension environment of March 1831, it appears that MPs elected in constituencies in which patrons had a significant influence were more likely to vote against the reform. The same was true of MPs elected in Treasury boroughs. In contrast, in the high-tension environment of December 1831, the influence of patrons was much weaker. While this is true for the group of MPs as a whole, it is also clear from Table 5 that the threat of revolution did *not* soften the anti-reform stance of many Tory MPs. In particular, Tory MPs who were elected with the support of an influential patron continued to be

more likely to oppose the extension of the franchise on 17 December 1831. This suggests that the mobilization of Tory aristocrats against the Reform Act in the 1831 election was successful in limiting the size of the Whig majority and that the threat of revolution had an impact, if at all, only on reluctant Whig patrons.

Overall, our results suggest that the threat of revolution did influence some Whig patrons and MPs who initially opposed the reform. However, the results also indicate that social unrest hardened the anti-reform stance of the Tory MPs and of their patrons, many of whom stood to lose directly from the reform. The evidence in favor of “threat of revolution” thesis is, therefore, mixed. It points to an interesting asymmetry in the effects of external threats in the voting behavior of reluctant reformers and anti-reform hardliners.

4.3. Party ideology or self-interest?

The “Enlightenment view” argues that a significant fraction of the elite supported the extension of the franchise because their social values changed as they adopted more liberal ideas (Tilly, 2004). This line of thought suggests that any conflict within the elite about the extension of the franchise was not motivated by economic or personal interest but by ideology.¹⁴ It is clear from the raw data reported in Table 3 that the votes of Whig and Tory MPs were very dissimilar: most Whigs supported the reform and most Tories were against it. This suggests that countervailing ideologies can to a large extent be proxied by party affiliations.

Against this background, we can gauge the relative importance of party ideology as opposed to economic and social interests by investigating whether the voting patterns of Whig and Tory MPs were more or less dissimilar in the constituencies that were either fully or partially controlled by patrons. This is because Whig (respectively, Tory) patrons would have instructed

¹⁴ Lizzeri and Persico (2004) also argue that the extension of the franchise was driven by a conflict of interest among the members of the elite, but they focus on conflicts along economic lines.

the MPs whose votes they controlled to support (oppose) the Reform Act if they were mainly motivated by the pro-reform (anti-reform) ideology of their party. On the other hand, if their economic and social interests, rather than ideology, drove their votes, then both Tory *and* Whig patrons, who were members of the political and economic elite, should have opposed the reform which went, by and large, against their economic and social interest.

Table 5 reports estimate of the patrons' influence on the probability that a MP voted in favor of the reform in March and December 1831. We observe that while influential Tory patrons clearly encouraged the MPs they controlled to oppose the bill, influential Whig patrons did not take a similar stance. In fact, a substantial number of Whig patrons allowed, and maybe even instructed, their MPs to support the Great Reform Act, even though it would undermine their political influence. For instance, only one of the Whig MPs elected in constituencies which were to be disenfranchised by the reform opposed the bill on 20 September 1831; eventually, all of them voted in favor on 17 December 1831. It would therefore seem that party ideology played a significant part in the success of the Reform Act.

Another way to gauge the relative importance of ideology against personal interest is to analyze whether the occupations of the individual MPs influenced their vote decision. If the party line on the reform issue was the dominant force, we would not expect to see any systematic effect of occupation on the MPs' votes: they should just vote according to the party line irrespective of their personal circumstances. Conversely, if the MPs' occupations influenced their voting decisions, this would indicate that personal interests were, in fact, important in shaping their votes.

To investigate this hypothesis, we report in Table 6, the estimated impact of the MPs' occupations and family circumstances on their votes in the four readings of the Reform Act. The

F-test for joint significance of these individual characteristics reported at the bottom of the table shows that the personal circumstances of the MPs mattered in two of the four votes, conditional on the party affiliation of the MPs.¹⁵ Thus the regression results show that the personal circumstances of the MPs did matter to an extent, lending credence to the view that ideology and party affiliation was not the only determinant of a MP's vote on the bill.

With regard to specific characteristics, we hypothesize that MPs who were dynasty heirs or had relatives in Parliament (and who were therefore indirectly part of a dynasty) were mainly interested in preserving the old political system, irrespectively of their party affiliation, in order to protect their own seats or those of their relatives. In line with this hypothesis, we find that MPs with a relative in Parliament systematically opposed the bill.

MPs with a military background might have been influenced especially by the risks of social unrest. Consistent with this hypothesis, we find that such MPs changed their allegiance from opposition to support between March and July 1831. MPs with a background in finance, commerce, or in industry might have been sympathetic to the demands for redistribution of seats away from small rural constituencies to the expanding industrial cities, but at the same time have been concerned that a broader franchise might open up the floodgates of pro-labor legislation or higher taxes. Empirically, we find that MPs with a financier background were more likely, at

¹⁵Our data record only a limited number of characteristics of the MPs. One may be worried that some of these omitted factors are correlated with characteristics that we do observe. We cannot rule this out in general, but for some omitted factors it is unlikely to be a big issue. This is, for example, the case with respect to wealth, education, and religion. All of the MPs were relatively wealthy. Nearly all of them had attended Oxford or Cambridge at a time when one had to be Anglican to attend either one of these universities because of the Test and Corporation Act. Although that law was repealed in 1828 and the Catholic Relief Act was passed in 1829 so that Catholics and Dissenters could be elected in 1830 and 1831, all English MPs in our sample were Anglican. Thus, although these factors are omitted, they are unlikely to be correlated with any of the characteristics included simply because there is little or no variation across MPs.

least in the 20 September 1831 and 17 December 1831 readings, to support the reform. This is consistent with the hypothesis that, because of their profession, they were more in touch with the aspirations of the emerging middle-class than other MPs and therefore felt less threatened by the prospect of reform. Still, given that this effect is statistically significant only in the votes that took place in the heated political environment of December 1831, we cannot rule out that their pro-reform stance was an outcome of the revolutionary threat. On the other hand, it appears that MPs with a background in industry tended to vote against the reform, maybe because they worried that an extension of the franchise would give industrial workers the power to demand new economic rights. Merchants were neither systematically pro- nor anti-reform and the same is true for jurists. As such, these results suggest that the contact with the new emerging middle- and working-classes was not a source of uniform support for the reform.

[Table 6 to appear here]

All in all, our results clearly suggest that party affiliation and ideology was an important engine of parliamentary reform. At the same time, the evidence also implies that the voting decisions of the MPs were, at least partly, driven by economic and social interests.

4.4 Popular support for the Great Reform Act?

The historical narrative stresses the role of extra-parliamentary agitation in favor of reform (Cannon 1973: chap. 10). Yet, it is an open question whether the Great Reform Act was in fact supported by large sections of the British electorate or was a project mainly driven by the political and economic elites (see Evans 2000, among others for an overview of the historical debate). Our data can cast new light on this question and allow for a systematic study of the actual support for the reform among the electorate of the Unreformed Parliament.

More specifically, we investigate whether the differences in the electoral success of the pro-reform Whigs and anti-reform Tories can be explained by the franchise type and the degree of patronage in the constituencies where they were elected. If the reform had popular support, then the Whigs would mostly have been returned in constituencies with large electorates and with no or little aristocratic patronage. Conversely, if the bulk of the electorate opposed the reform, which was merely a project driven by the elite, then the Whigs would have been elected in boroughs where the influence of patrons was large and the electorate small. This test, however, makes most sense for the 1831 election, which, as noted above, was fought almost exclusively on the reform question; for this reason, we focus only on this election in the following discussion.

[Table 7 to appear here]

Table 7 shows the estimates of the impact of franchise type and the degree of patronage on the likelihood that a constituency returned a pro-reform Whig in 1831. Recall from Table 1 that the franchise type is a good proxy for the size of the electorate in a constituency. Many boroughs with scot and lot, potwalloper, and freeholder franchises had relatively large electorates, while those with burgage or corporation franchises typically had a small number of electors. In the counties, which is the omitted category in the estimations, the franchise was comparably wide.¹⁶ If the reform had popular support, then we expect Whigs should be less likely to win in constituencies with small electorates while they should have no electoral disadvantage (relative to the counties) in the boroughs with large electorates. We do not have a prior for the constituencies with freeman franchise simply because there is no systematic link between this franchise and the size of the electorate.

¹⁶ To the best of our knowledge, there is no reliable source on the precise number of electors in each constituency.

The estimates show that the Whigs (Tories) were likely to lose (win) in boroughs with a corporation franchise and in burgage boroughs, although the latter estimate is not statistically significant. They also show that Whigs did not suffer any electoral disadvantage in the boroughs with a potwalloper franchise. This suggests that pro-reform Whigs were elected mostly in constituencies with relatively large electorates while anti-reform Tories were typically elected in constituencies with few electors. The exception is the boroughs with freeholder and scot and lot franchises where the Whigs were less likely to be elected than in counties, despite the relatively large number of electors. However we note that there were only six boroughs with freehold franchise and that some of the boroughs with a scot and lot franchise had less than 100 electors (see Table 1).

The estimation results are clear-cut with respect to patronage. The estimates reported at the bottom of Table 7 show that Whigs were usually unsuccessful in constituencies where aristocratic influence was high. These constituencies, where elections as a rule were uncontested, typically returned anti-reform Tories. Another way to interpret this is to say that in the constituencies where local patrons were influential, they provided effective support to Tories.

These results suggest that the Great Reform Act was indeed supported by a large fraction of the electorate in the open boroughs where aristocratic influence was limited and the electors therefore could vote their preference on polling day. As a matter of fact, the Tories virtually lost all popular support in the 1831 general election. Among the 187 Tory candidates returned in the English boroughs, 165 represented boroughs that were to lose their seats or had less than 400 voters, and only six Tories were returned in counties (Cannon 1973: 221). Still, we stress that popular support for the reform was not sufficient on its own for the extension of the franchise to

happen: the Great Reform Act could clearly not have been adopted without the support from a substantial part of the Whig elite.

5. Conclusion

In this study, we offer a new approach to the study of franchise reform. We provide an econometric analysis of the factors that led to the adoption of the Great Reform Act in Great Britain in 1832. We assess the relative importance of factors such as economic growth, ideology or the threat of revolution in explaining the willingness of an elite to extend the franchise.

The study yields four main results. First, modernization theory receives only limited support. While constituencies whose population grew, and where economic changes presumably were creating more cohesive working and middle classes and prosperity, spurred the reform process, boroughs and counties where an increasing share of the population worked in industries returned anti-reform MPs to the 1831 Parliament. Second, the reform enjoyed some measure of popular support. In particular, we find that pro-reform MPs were more likely to be elected in constituencies with relatively large electorates and contested elections while anti-reformer Tories were mostly elected in uncontested elections in the constituencies controlled by a local patron. Third, the threat of revolution had an asymmetric impact on the voting behavior of the pro-reform Whigs and of the anti-reform Tories. It convinced reluctant reformers among the Whig MPs and their patrons to support the bill, but strengthened the anti-reform stance of the Tories. Fourth, ideology played a critical role in the adoption of the Great Reform Act. Nonetheless, self-interest and political expedience also explained the votes of many MPs.

Our findings have interesting implications for the broader literature on franchise reform. First, our analysis of the Great Reform Act makes it clear that the autocratic elites played a leading role in bringing reform about. This is in line with the observation made by Tullock

(1987: Chapter 4) that democracy typically emerges from the wishes of the ruling elite itself. However, in contrast to Tullock, who stressed the ruling elite's desire to raise revenues, we contend that external pressure from emerging socio-economic groups helped shift the balance in favor of reform. Second, many theoretical models suggest that suffrage reforms were introduced as a pre-emptive measure to avoid a revolution or other types of civil conflict. A central feature of these models – e.g., Justman and Gradstein (1999), Boix (2003), or Acemoglu and Robinson (2000) – is that the old established elites or autocrats are united in their opposition to reform and in their response to the threat of revolution. Our results paint a more complex picture in which the members of the (British) elite were divided on the appropriate answer to the threat of revolution. This does not invalidate the underlying logic of the threat-of-revolution thesis, but it adds an additional dimension of conflict to the model that may generate more realistic regime dynamics. Moreover, insofar as the revolutionary threat did play a leading role, the source of the threat needs to be explained and integrated into the theoretical analysis. Tullock's (1971, 1974) work on revolutions would be a useful starting point. Third, Public Choice scholars, such as Congleton (2007, 2011), Munshi (2011) or Horpedahl (2011), have suggested that franchise reform is the natural outcome of peaceful constitutional exchange between the King and Parliament. Our results are not inconsistent with this view but they do raise questions about how much one should down play the role of a threat of revolution or civil conflict in generating opportunities for constitutional exchange between factions of the elite. In 1831-32, at least, such threats seem to have been one of the drivers of the reform process. Fourth, the controversy surrounding modernization theory has been given new life with the recent contributions by Acemoglu et al. (2008), who claim that there is no causal link between economic development and democratization, and Gundelach and Paldam (2009), who claim that there is. Our results cast

some doubt on the relevance of modernization theory as general explanation for democratization. Fifth, O’Gorman (1989) challenged the view that the Unreformed Parliament was fully corrupt and controlled by patrons. Instead, he painted a picture of “vitality” and suggested that the old system was fairly representative and open to competition. Our results clearly show that patrons played an important role in the Unreformed Parliament and that they controlled many MPs. Nevertheless, we do find some evidence of “vitality”. In particular, the votes of many MPs reflected their personal interests rather than those of their patrons or party. Finally, our results provide some support in favor of structural theories of suffrage reform as they show that the characteristics of the constituencies were systematically linked to the MPs' support or opposition to the Great Reform Act.

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Table 1. The Size and Type of the Borough Constituencies in England and Wales in 1830.

Size of the electorate	Franchise type						Total
	A Scot and Lot	B Potwalloper	C Freeman	D Freeholder	E Corporation	F Burgage	
1. Over 5000	1	1	5				7
2. 1001-5000	6	2	25	4			37
3. 601-1000	8	5	11	1			25
4. 301-600	11	1	16				28
5. 101-300	8	5	12	1	1	10	37
6. 51-100	4		5		2	10	21
7. 50 or less	2		14		27	15	58
Total	40	14	88	6	30	35	213

Notes:

- The coding of the English boroughs is given in the notes to Table 2 in Brock (1973). For the Welsh boroughs the coding is as follows. A3. Flint. A4. Haverfordwest. E7. Beaumaris. C2. Pembroke. C3. Cardiff, Carmartheren. C4. Cardigan, Carnarvon, Denbigh. C5. Radnor. C7. Brecon. Information on the number of voters in Montgomery, which was a freeman borough, is not available.
- Sources: Brock (1973, Table 2) for the 202 English boroughs and Philbin (1965).

Table 2. Aristocratic Influence and Patronage in England and Wales under the Unreformed Parliament.

Patronage	English Boroughs	Welsh Boroughs	English Counties	Welsh Counties	English Universities	Total
High influence	73	2	8	4	0	87
Some influence	70	8	16	7	0	101
Low influence	25	1	10	0	2	38
No influence	20	1	5	1	0	27
Treasury borough	13	0	1 ^b	0	0	14
Total	201 ^a	12	40	12	2	267

- Notes:
- a. We do not have information for New Sarum (also known as Salisbury).
 - b. Hampshire would always return “court nominees”.
 - Source: Own coding based on Philbin (1965).

Table 3. Overview of the Four Votes on the Reform Bills Examined in the Study.

Data of vote	Bill	Parliament	Votes for	Votes against
22 March 1831	Second reading of the first Reform Bill.	1830 Parliament	Whig: 248 Radical: 6 Tory: 48 Total: 302 (235)	Whig: 8 Radical: 0 Tory: 293 Total: 301 (249)
6 July 1831	Second reading of the second Reform Bill.	1831 Parliament	Whig: 316 Radical: 10 Tory: 41 Total: 367 (290)	Whig: 5 Radical: 0 Tory: 227 Total: 232 (208)
21 September 1831	Third reading of the second Reform Bill.	1831 Parliament	Whig: 302 Radical: 10 Tory: 34 Total: 346 (282)	Whig: 5 Radical: 0 Tory: 232 Total: 235 (184)
17 December 1831	Second reading of the third Reform Bill.	1831 Parliament	Whig: 285 Radical: 4 Tory: 35 Total: 324 (275)	Whig: 4 Radical: 0 Tory: 158 Total: 162 (140)

Notes:

- The votes for and against on the Reform Bills refer to all MPs, including those representing Scotland and Ireland. The votes in the bracket refer to the MPs from England and Wales.
- Source: Parliamentary Debates, various years.

Table 4. The Impact of the Occupational Structure of the Constituencies on the Return of pro-reform Whig MPs to the 1830 or 1831 Parliaments.

	Election of a Whig to the 1830 Parliament	Election of a Whig to the 1831 Parliament
Population and Occupational structure		
Population growth	0.541 [0.189]***	0.063 [0.052]
Growth in the industrial sector	-0.027 [0.192]	-0.529 [0.189]***
Growth in the agricultural sector	0.061 [0.048]	0.069 [0.054]
Observations	513	513

Notes:

- Probit estimates of the probability that a Whig was return for the 1830 or 1831 Parliament, respectively. The corresponding estimations for the Tories are the mirror image of the ones for the Whigs and not reported.
- Each regression includes the following variables: Burgage franchise, Corporation franchise, Freeman franchise, Potwalloper franchise, Scot and lot franchise, Freehold franchise, High influence, Some influence, No influence, Treasury borough, Population growth, Growth in the industrial sector, Growth in the agricultural sector, Contested seat, Uncontested seat, Dummy equal to 1 if borough to be disenfranchised, Dummy for Wales. See Online Appendix Tables C1 and C2 for the full set of results.
- Standard errors are given in brackets. *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level.

Table 5. The Influence of Patrons on the Probability that a MP supported the Reform Bills on 22 March 1831 and 17 December 1831.

	Low-tension environment			High-tension environment		
	March 22 1831			December 17 1831		
	All MPs	Tory MPs	Whig MPs	All MPs	Tory MPs	Whig MPs
High influence	-0.44 [0.222]**	-0.534 [0.266]**	-0.488 [0.453]	-0.431 [0.548]	-1.441 [0.519]***	n.a. ¹
Some influence	-0.322 [0.217]	-0.394 [0.258]	-0.454 [0.412]	-0.148 [0.535]	-0.96 [0.535]*	n.a.
No influence	0.244 [0.268]	-0.022 [0.323]	-0.74 [0.589]	0.963 [0.658]	-0.073 [0.785]	n.a.
Treasury borough	-0.922 [0.352]***	-0.534 [0.266]**	-0.488 [0.453]	-0.223 [0.657]	-1.441 [0.519]***	n.a.
Observations	484	296	163	417	148	248

1. We cannot identify the vote equation because all but 4 Whig MPs voted yes.

Notes:

- Probit estimates of the probability that a MP supported the reform bills on 22 March 1831 and 17 December 1831.
- Each regression includes the following variables: Burgage franchise, Corporation franchise, Freeman franchise, Potwalloper franchise, Scot and lot franchise, Freehold franchise, High influence, Some influence, No influence, Treasury borough, Whig MP in 1830 (or 1831) Parliament, Army career, Financier, Dynasty heir, Industrialist, Jurist, Merchant, Relatives in parliament, Contested seat, Uncontested seat, dummy for Wales, dummy for boroughs to be disenfranchised, number of seats after reform. See online Appendix C Tables C3 to C5 for the full set of results.
- Standard errors are given in brackets. *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level.

Table 6. The Influence of a MP's Occupation and Family Circumstances on the Probability that he supported the Reform Bills in Each of the Four Readings of the Reform Act.

	22 March 1831	6 July 1831	20 September 1831	17 December 1831
	All MPs	All MPs	All MPs	All MPs
Army career	-0.358 [0.209]*	0.623 [0.378]*	0.639 [0.421]	0.681 [0.409]*
Financiers	-0.414 [0.276]	1.184 [0.414]***	1.128 [0.448]**	1.041 [0.446]**
Dynasty heir	0.051 [0.171]	0.301 [0.349]	0.103 [0.418]	0.034 [0.441]
Industrialist	-0.007 [0.376]	-0.526 [0.817]	-1.409 [0.684]**	-1.007 [0.870]
Jurist	-0.158 [0.247]	0.196 [0.332]	0.351 [0.411]	0.113 [0.398]
Merchant	0.127 [0.240]	0.042 [0.430]	-0.053 [0.460]	0.319 [0.486]
Relatives in parliament	-0.144 [0.151]	-0.765 [0.246]***	-0.639 [0.228]***	-0.451 [0.261]*
F-test	9.04	16.38**	19.26***	10.74
Prob F-test	0.250	0.022	0.007	0.150
Observations	484	485	468	417

Notes:

- Probit estimates of the probability that a MP supported the reform bills on 22 March 1831 and 17 December 1831.
- Each regression includes the following variables: Burgage franchise, Corporation franchise, Freeman franchise, Potwalloper franchise, Scot and lot franchise, Freehold franchise, High influence, Some influence, No influence, Treasury borough, Whig MP in 1830 (or 1831) Parliament, Army career, Financier, Dynasty heir, Industrialist, Jurist, Merchant, Relatives in parliament, Contested seat, Uncontested seat, dummy for Wales, dummy for boroughs to be disenfranchised, number of seats after reform. See online Appendix C Tables C3 to C5 for the full set of results.
- Standard errors are given in brackets. *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level. 1. We cannot identify the vote equation because all but 4 Whig MPs voted yes.
- The null hypothesis of the F-test is that the coefficients on the seven characteristics are jointly different from zero.

Table 7. The Impact of the Franchise Type of the Constituencies and the Degree of Patronage on the Return of Pro-reform Whig MPs to the 1831 Parliament.

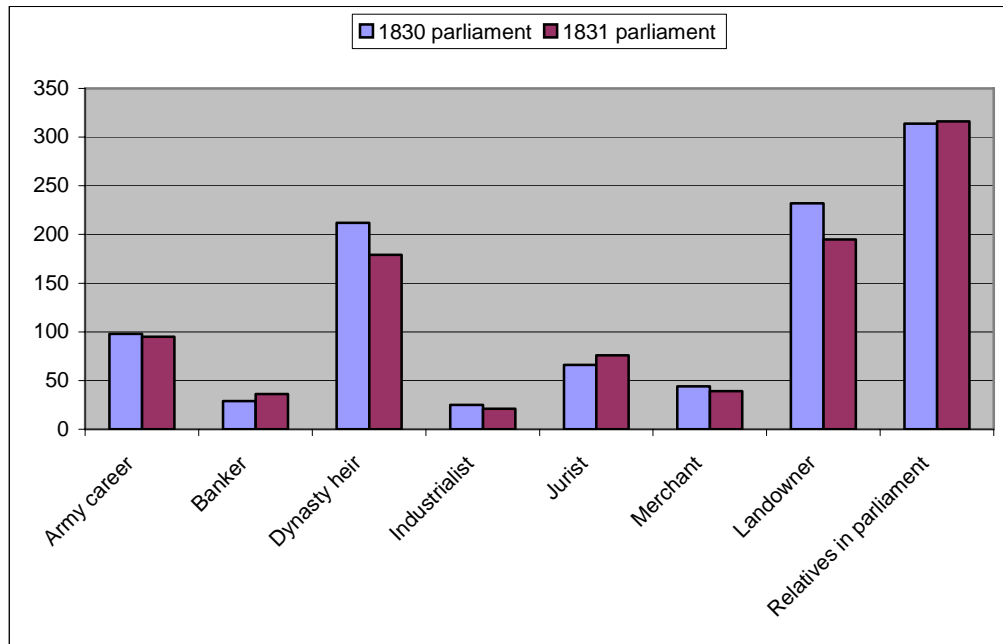
Election of a Whig to the 1831 Parliament

Franchise Type	
<i>Small electorates</i>	
Burgage franchise	-0.35 [0.275]
Corporation franchise	-1.145 [0.242]***
<i>Medium-size electorates</i>	
Freeman franchise	-0.67 [0.198]***
<i>Large electorates</i>	
Potwalloper franchise	-0.368 [0.506]
Scot and lot franchise	-0.507 [0.216]**
Freehold franchise.	-0.926 [0.330]***
Patronage	
High influence	-0.704 [0.202]***
Some influence	-0.647 [0.190]***
No influence	-0.143 [0.249]
Treasury borough	-0.186 [0.296]
Observations	513

Notes:

- Probit estimates of the probability that a Whig was returned in the 1831 Parliament. The corresponding estimations for the Tories are the mirror image of the ones for the Whigs and not reported. Each regression includes the following variables: Burgage franchise, Corporation franchise, Freeman franchise, Potwalloper franchise, Scot and lot franchise, Freehold franchise, High influence, Some influence, No influence, Treasury borough, Population growth, Growth in the industrial sector, Growth in the agricultural sector, Contested seat, Uncontested seat, Dummy equal to 1 if borough to be disenfranchised, Dummy for Wales. See Online Appendix Tables C2 for the full set of results.
- Standard errors are given in brackets. *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level.
- The omitted franchise type is the county franchise (typically associated with a large electorate).

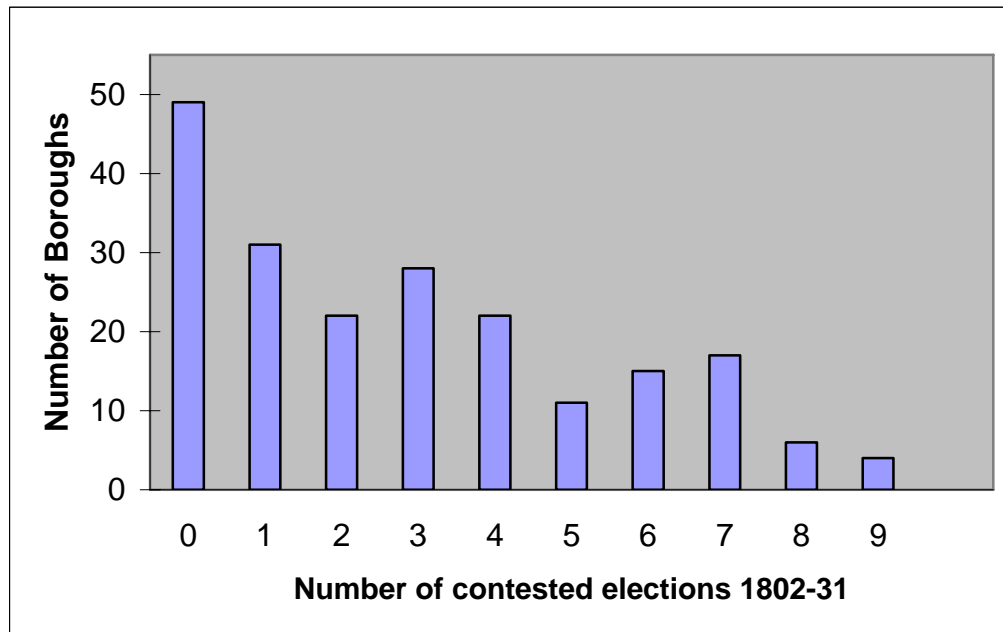
Figure 1 The occupations of the English and Welsh MPs in the 1830 and 1831 Parliaments.



Notes: The different categories are not mutually exclusive and a particular MP can therefore be recorded in more than one category (e.g., army career and landowner).

Sources: Namier and Brooke (1964), Stookes Smith (1973), Thorne (1986), and various editions of Dod's Parliamentary companion.

Figure 2 Number of contested elections between 1802 and 1831 in the English Boroughs.



Notes: The histogram includes Grampound and East Retford which were disenfranchised and had their seats transferred to Yorkshire in 1821 and Bassetlaw in 1826, respectively.

Source: Cannon (1973, Appendix 3).

Online Appendices

Online Appendix A: The franchise bills.

On 1 March 1831, Lord Russell presented the first of three reform bills in the Commons. The main features of this first reform bill were (Brock, 1973, Table 3):

- 1) 60 boroughs (listed in schedule A) were to be disenfranchised entirely, a further 47 boroughs (listed in schedule B) were to lose one seat, and Weymouth was to lose two seats out of four.
- 2) 11 new two-seat and 21 one-seat borough constituencies were to be created (in the previously un-represented towns with over 10,000 inhabitants listed in schedule C) and 6 new seats should be created in the un-represented parts of London (schedule D).
- 3) Each of the three Ridings of Yorkshire were to have two seats; 26 of the other English counties were to gain two additional seats, up from two to four (schedule E); the Isle of Wight was to be given one seat.
- 4) The county franchise was to be given to all 40-shilling freeholders, to £10 per year copyholders and to £50 per year leaseholders (with a lease of 21 years at least).
- 5) The borough franchise was to be given to adult male occupiers of houses worth at least £10 per year who had owned the property for at least one year, had paid all the relevant taxes on it and had not received poor relief in the previous year. All existing electors were to retain their right to vote for life if resident.
- 6) Open voting was to remain.
- 7) The maximum length of a Parliament was set at seven years.
- 8) A register of voters was to be established in both boroughs and counties.

The final bill that was given Royal assent on 7 June 1832 was different from that first presented to the Commons two years earlier, but carried over the main principles (Brock, 1973, Table 3):

- 1) 56 boroughs (listed in schedule A) were disenfranchised entirely, a further 30 boroughs (listed in schedule B) lost one seat, and Weymouth lost two members out of four.
- 2) 22 new two-seat and 21 one-seat borough constituencies were created in the previously un-represented towns with over 10,000 inhabitants and in London.
- 3) Each of the three ridings of Yorkshire was given two seats; 26 of the other English counties gained two extra seats, up from two to four; the Isle of Wight was given one seat.

- 4) The county franchise was to be given to all 40-shilling freeholders; to £10 per year copyholders; to £50 per year leaseholders (with a lease of 20 years at least); to £10 per year leaseholders (with a lease of 60 years at least); to £50 tenant-at-will, if occupiers.
- 5) The borough franchise was given to adult male occupiers of houses worth at least £10 per year who owned the property for at least one year, had paid all the relevant taxes on it and had not received poor relief in the previous year. The rights of the current freemen were extended to the future freemen, provided these rights a) were acquired through birth or apprenticeship and b) if acquired through birth, these rights must have been derived from qualification existing before March 1831. All other existing electors were to retain their right to vote for life if resident.
- 6) Open voting was to remain.
- 7) The maximum length of a Parliament was set at seven years.
- 8) A register of voters was to be established in both boroughs and counties.

Online Appendix B: Descriptive statistics and definitions of variables.

Table B1. Definition of variables.

<i>Franchise type</i>	Burgage franchise	=1 for burgage boroughs where the right to vote was held by the owners of certain plots of land (burgages).
	Corporation franchise	=1 for corporation boroughs where the franchise was restricted to the mayor and members of the town corporation, a group who were chosen by nomination rather than elections.
	County franchise	=1 in the counties and in a few boroughs where the right to vote was conferred on men who owned freehold land or property worth at least 40 shillings a year.
	Freehold franchise	=1 for freehold boroughs where the right of election was vested in the owners of freeholds.
	Freeman franchise	=1 for freeman boroughs where the right to vote was conferred on those who had been granted freedom of the borough. This honor could be obtained by inheritance, marriage, nomination or purchase.
	Potwalloper franchise	=1 for potwalloper boroughs where the right to vote was conferred to those whose house had a hearth large enough to boil (wallop) a cauldron (pot).
	Scot and lot franchise.	=1 for scot and lot boroughs where the vote could be exercised by all male householders who paid local taxes and who did not receive poor relief.
<i>Patronage</i>	High influence	=1 if according to Philbin (1965) i) the patron had control over the governing body of the borough or had ownership of the property to which voting rights are attached, ii) the patron effectively nominated the MPs or iii) a sharing arrangement was in place, each of the patrons nominated a MP.
	Some influence	=1 if Philbin (1965) i) names the patron(s) or ii) records that one, but not all seats were controlled by patrons, or iii) records that the influence was shared between more than one faction (patron) and recorded evidence of rivalry; or iv) if the seats were shared and the sharing arrangement was stable throughout the period 1800-32.
	No influence	=1 if explicitly characterized as independent boroughs by Philbin (1965) or controlled by Corporations.
	Treasury borough	=1 if Philbin (1965) records that the borough was controlled by the government/treasury through patronage or employment.
	Low influence	=1 when no information is given by Philbin (1965) (control group).
<i>Political</i>	Disenfranchised boroughs	=1 if the borough was disenfranchised by the Great Reform Act.
<i>Circumstances</i>	English boroughs	=1 if the borough was located in England
	Welsh boroughs	=1 if the borough was located in Wales
	Contested seat	=1 if there was at least one contested election in the borough between 1802 and 1831.
	Uncontested seat (1802-1831)	=1 if there was no contested election in the borough between 1802 and 1831.
	Seats after reform	Borough's number of seats after the Great Reform Act.
<i>MPs' occupations & attributes in 1830 and 1831</i>	Army career	=1 if the MP had a military career/was an army officer.
	Financiers	=1 if the MP was a financier.
	Dynasty heir	=1 if the MP was immediately returned to Parliament when he finished his education and/or reached majority.
	Industrialist	=1 if the MP owned industries or mines.
	Jurist	=1 if the MP was a lawyer.
	Merchant	= 1 if the MP was a merchant.
	Landowner	=1 if the MP was a landowner (control group).
	Relatives in Parliament	=1 if the MP had relatives who also sat in Parliament.

<i>Population and</i>	Change in the population	Change in the borough's population between 1821 and 1831.
<i>Occupational structure</i>	Change in the industrial sector	Change in the borough's number of inhabitants working in the industrial sector.
	Change in the agricultural sector	Change in the borough's number of inhabitants working in the agricultural sector.
<i>Support for the Reform</i>	22 March 1831	=1 if the MP supported the Reform bill on 22 March 1831.
	20 September 1831	=1 if the MP supported the Reform bill on 20 September 1831.
	6 July 1831	=1 if the MP supported the Reform bill on 6 July 1831.
	17 December 1831	=1 if the MP supported the Reform bill on 17 December 1831.
<i>Political affiliation</i>	Tory MP in 1830 (31) Parliament	=1 if the MP was a Tory in the 1830 (31) Parliament.
	Whig MP in 1830 (31) Parliament	=1 if the MP was a Whig (or a Radical) in the 1830 (31) Parliament.

Table B2. Descriptive Statistics

		Obs	Mean	Std. Dev.	Min	Max
Franchise type	Burgage franchise	513	0.105	0.307	0	1
	Corporation franchise	513	0.127	0.333	0	1
	County franchise	513	0.193	0.395	0	1
	Freehold franchise	513	0.039	0.194	0	1
	Freeman franchise	513	0.314	0.465	0	1
	Potwalloper franchise	513	0.012	0.108	0	1
	Scot and lot franchise.	513	0.211	0.408	0	1
Patronage	High influence	513	0.327	0.470	0	1
	Some influence	513	0.365	0.482	0	1
	No influence	513	0.099	0.300	0	1
	Treasury borough	513	0.055	0.227	0	1
	Low influence	513	0.154	0.361	0	1
Political circumstances	Disenfranchised boroughs	513	0.216	0.412	0	1
	English boroughs	513	0.953	0.211	0	1
	Welsh boroughs	513	0.047	0.211	0	1
	Contested seat	513	0.719	0.450	0	1
	Uncontested seat (1800-1831)	513	0.224	0.417	0	1
	Seats after reform	513	1.65	1.24	0	6
MPs' occupations & attributes in 1830	Army career	513	0.191	0.393	0	1
	Financiers	513	0.057	0.231	0	1
	Dynasty heir	513	0.411	0.493	0	1
	Industrialist	513	0.049	0.216	0	1
	Jurist	513	0.127	0.333	0	1
	Merchant	513	0.086	0.280	0	1
	Landowner	513	0.454	0.498	0	1
	Relatives in Parliament	513	0.614	0.487	0	1
MPs' occupations & attributes in 1831	Army career	513	0.183	0.387	0	1
	Financiers	513	0.070	0.256	0	1
	Dynasty heir	513	0.349	0.477	0	1
	Industrialist	513	0.041	0.198	0	1
	Jurist	513	0.148	0.356	0	1
	Merchant	513	0.076	0.265	0	1
	Landowner	513	0.382	0.486	0	1
	Relatives in Parliament	513	0.616	0.487	0	1
Population and Occupational structure	Growth in the population	513	0.243	1.203	-0.951	15.468
	Growth in the industrial sector	513	-0.049	0.343	-0.861	2.184
	Growth in the agricultural sector	513	-0.047	1.169	-1	12.765
Support for the Reform	22 March 1831	484	0.486	0.500	0	1
	20 September 1831	468	0.605	0.489	0	1
	6 July 1831	485	0.616	0.487	0	1
	17 December 1831	417	0.662	0.474	0	1
Political affiliation	Tory MP in 1830 Parliament	513	0.624	0.485	0	1
	Whig MP in 1830 Parliament	513	0.376	0.485	0	1
	Tory MP in 1831 Parliament	513	0.452	0.498	0	1
	Whig MP in 1831 Parliament	513	0.548	0.498	0	1

Appendix C: The full set of estimations.

The Tables we present below display the full set estimation results for the party and vote equations from which Tables 4 to 7 in the main body of the text have been constructed.

Table C1. Determinants of the Whigs' election in the 1830 Parliament

		Whig MP in 1830 Parliament		
		(1)	(2)	(3)
<i>Franchise type</i>	Burgage franchise	-0.137 [0.254]	-0.165 [0.329]	5.658 [0.584]***
	Corporation franchise	-0.512 [0.244]**	-0.467 [0.262]*	5.048 [0.000]
	Freeman franchise	0.024 [0.188]	-0.027 [0.197]	5.909 [0.592]***
	Potwalloper franchise	0.513 [0.586]	-0.328 [0.720]	
	Scot and lot franchise	0.315 [0.200]	0.319 [0.218]	6.143 [0.571]***
	Freehold franchise	0.586 [0.325]*	0.633 [0.355]*	12.985 [0.000]
<i>Patronage</i>	High influence	-0.141 [0.195]	-0.239 [0.210]	12.75 [0.305]***
	Some influence	-0.109 [0.183]	-0.188 [0.192]	13.091 [0.000]
	No influence	0.01 [0.234]	-0.047 [0.237]	
	Treasury borough	0.167 [0.289]	0.205 [0.302]	
<i>Population and Occupational structure</i>	Population growth	0.541 [0.189]***	0.641 [0.357]*	0.454 [0.175]***
	Growth in the industrial sector	-0.027 [0.192]	-0.024 [0.230]	-0.03 [0.364]
	Growth in the agricultural sector	0.061 [0.048]	0.012 [0.084]	0.116 [0.056]**
<i>Political circumstances</i>	Contested seat	0.146 [0.295]	0.142 [0.300]	-0.508 [0.291]*
	Uncontested seat (1800-1831)	0.407 [0.316]	0.437 [0.334]	
	Disenfranchised boroughs	-0.381 [0.170]**		
	Wales	0.048 [0.283]	0.058 [0.284]	
	Constant	-0.49 [0.306]	-0.436 [0.311]	-19.143 [0.578]***
	Observations	513	402	111
	R ²	0.063	0.051	0.191

Notes:

- This table presents regression results of a probit model that assesses the determinants of the Whigs' election in the 1830 Parliament.
- The regression in Column 1 uses the whole sample of constituencies; the sample is restricted to the constituencies which were not disenfranchised by the Reform in Column 2; the sample is restricted to the constituencies which were disenfranchised by the Reform in Column 3. Standard errors are given in brackets. *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level.

Table C2. Determinants of the Whigs' election in the 1831 Parliament

		Whig MP in 1831 Parliament		
		(1)	(2)	(3)
<i>Franchise type</i>	Burgage franchise	-0.35 [0.275]	-0.644 [0.341]*	6.419 [0.443]***
	Corporation franchise	-1.145 [0.242]***	-1.302 [0.261]***	5.916 [0.000]
	Freeman franchise	-0.67 [0.198]***	-0.758 [0.214]***	5.795 [0.488]***
	Potwalloper franchise	-0.368 [0.506]	-0.063 [0.703]	
	Scot and lot franchise	-0.507 [0.216]**	-0.557 [0.238]**	6.107 [0.462]***
	Freehold franchise	-0.926 [0.330]***	-0.871 [0.376]**	
<i>Patronage</i>	High influence	-0.704 [0.202]***	-0.726 [0.228]***	5.132 [0.308]***
	Some influence	-0.647 [0.190]***	-0.767 [0.207]***	5.342 [0.000]
	No influence	-0.143 [0.249]	-0.212 [0.259]	
	Treasury borough	-0.186 [0.296]	-0.188 [0.317]	
<i>Population and Occupational structure</i>	Population growth	0.063 [0.052]		0.589 [0.169]***
	Growth in the industrial sector	-0.529 [0.189]***	-0.37 [0.213]*	-0.916 [0.395]**
	Growth in the agricultural sector	0.069 [0.054]	0.064 [0.103]	0.131 [0.057]**
<i>Political circumstances</i>	Contested seat	0.299 [0.312]	0.371 [0.320]	-0.618 [0.293]**
	Uncontested seat (1800-1831)	0.623 [0.330]*	0.677 [0.348]*	
	Disenfranchised boroughs	-0.969 [0.176]***		
	Wales	-0.437 [0.314]	-0.44 [0.320]	
	Constant	1.004 [0.317]***	1.106 [0.328]***	-11.735 [0.468]***
	Observations	513	402	111
	R ²	0.162	0.108	0.17

Notes:

- This table presents regression results of a probit model that assesses the determinants of the Whigs' election in the 1831 Parliament.
- The regression in Column 1 uses the whole sample of constituencies; the sample is restricted to the constituencies which were not disenfranchised by the Reform in Column 2; the sample is restricted to the constituencies which were disenfranchised by the Reform in Column 3. Standard errors are given in brackets. *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level.

Table C3. Determinants of the MPs' support for Reform: all the constituencies

		22 March 1831	6 July 1831	20 September 1831	17 December 1831
<i>Franchise type</i>	Burgage franchise	0.078 [0.295]	-1.3 [0.438]***	-0.566 [0.560]	-2.001 [0.791]**
	Corporation franchise	-0.703 [0.260]***	-1.693 [0.454]***	-1.457 [0.574]**	-1.925 [0.774]**
	Freeman franchise	-0.37 [0.219]*	-0.97 [0.412]**	-0.605 [0.539]	-1.646 [0.752]**
	Potwalloper franchise	0.166 [0.680]	-0.406 [0.615]	0.226 [0.693]	-1.156 [0.917]
	Scot and lot franchise	-0.608 [0.249]**	-1.076 [0.471]**	-0.646 [0.563]	-1.519 [0.819]*
	Freehold franchise	-0.762 [0.378]**	-0.252 [0.610]	-0.432 [0.643]	-1.38 [0.893]
	<i>Patronage</i>	High influence	-0.44 [0.222]**	-0.283 [0.503]	-0.691 [0.498]
Some influence		-0.322 [0.217]	-0.088 [0.492]	-0.589 [0.469]	-0.148 [0.535]
No influence		0.244 [0.268]	0.751 [0.576]	0.566 [0.575]	0.963 [0.658]
Treasury borough		-0.922 [0.352]***	-0.302 [0.600]	-0.574 [0.570]	-0.223 [0.657]
<i>MPs' occupations</i>	Whig MP in 1830 Parliament	1.657 [0.149]***			
	Whig MP in 1831 Parliament		3.699 [0.336]***	3.699 [0.338]***	3.832 [0.376]***
	Army career	-0.358 [0.209]*	0.623 [0.378]*	0.639 [0.421]	0.681 [0.409]*
	Financier	-0.414 [0.276]	1.184 [0.414]***	1.128 [0.448]**	1.041 [0.446]**
	Dynasty heir	0.051 [0.171]	0.301 [0.349]	0.103 [0.418]	0.034 [0.441]
	Industrialist	-0.007 [0.376]	-0.526 [0.817]	-1.409 [0.684]**	-1.007 [0.870]
	Jurist	-0.158 [0.247]	0.196 [0.332]	0.351 [0.411]	0.113 [0.398]
	Merchant	0.127 [0.240]	0.042 [0.430]	-0.053 [0.460]	0.319 [0.486]
	Relatives in parliament	-0.144 [0.151]	-0.765 [0.246]***	-0.639 [0.228]***	-0.451 [0.261]*
	Contested seat	0.083 [0.310]	1.128 [0.570]**	1.54 [0.721]**	2.128 [0.880]**
	Uncontested seat (1800-1831)	-0.036 [0.340]	1.513 [0.617]**	2.386 [0.769]***	2.533 [0.925]***
	Wales	0.16 [0.333]	1.882 [0.681]***	1.464 [0.647]**	3.407 [0.674]***
	Disenfranchised boroughs	-0.545 [0.199]***	-0.135 [0.466]	0.408 [0.387]	0.845 [0.353]**
	Seats after the Reform		0.518 [0.235]**	0.796 [0.202]***	0.782 [0.213]***
Constant	0.2 [0.355]	-1.918 [1.049]*	-2.934 [1.077]***	-2.816 [1.079]***	
Observations	484	485	468	417	
R ²	0.302	0.766	0.757	0.768	

Notes:

- This table presents regression results of a probit model that assesses the determinants of the MPs' votes on readings of the Reform bills.
- Columns 1, 2, 3 and 4 respectively focus on the votes held on 22 March 1831, 6 July 1831, 20 September 1831 and 17 December 1831. The observations correspond to the MPs who took part in each vote.
- Standard errors are given in brackets. *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level.

Table C4. Determinants of the Tories' support for Reform: all the constituencies

		22 March 1831	6 July 1831	20 September 1831	17 December 1831
<i>Franchise type</i>	Burgage franchise	0.141 [0.345]		-0.176 [0.758]	
	Corporation franchise	-0.931 [0.332]***	-2.089 [0.591]***	-1.66 [0.856]*	-2.24 [0.806]***
	Freeman franchise	-0.339 [0.252]	-1.054 [0.464]**	-0.009 [0.634]	-1.828 [0.770]**
	Potwalloper franchise		0.205 [0.731]	1.506 [0.850]*	-0.328 [1.005]
	Scot and lot franchise	-0.669 [0.307]**	-0.873 [0.565]	0.195 [0.728]	-0.93 [0.859]
	Freehold franchise	-0.994 [0.612]	-0.192 [0.682]	-0.124 [0.781]	-1.299 [0.969]
<i>Patronage</i>	High influence	-0.534 [0.266]**	-1.08 [0.501]**	-1.41 [0.502]***	-1.441 [0.519]***
	Some influence	-0.394 [0.258]	-0.79 [0.450]*	-1.376 [0.456]***	-0.96 [0.535]*
	No influence	-0.022 [0.323]	-0.022 [0.557]	-0.247 [0.608]	-0.073 [0.785]
<i>MPs' occupations</i>	Treasury borough	-1.103 [0.511]**	-1.013 [0.719]	-1.166 [0.734]	-0.806 [0.740]
	Army career	-0.244 [0.266]	0.591 [0.390]	0.481 [0.449]	0.392 [0.444]
	Financier	-1.004 [0.504]**	1.132 [0.555]**	1.039 [0.571]*	0.697 [0.506]
	Dynasty heir	0.246 [0.219]	-0.021 [0.370]	-0.523 [0.498]	-0.541 [0.497]
	Industrialist	0.506 [0.498]	0.295 [0.774]	-1.536 [0.672]**	0.447 [1.214]
	Jurist	0.177 [0.289]	0.033 [0.372]	0.315 [0.433]	-0.168 [0.419]
	Merchant	-0.053 [0.359]	-0.374 [0.685]	-0.577 [0.542]	-0.498 [0.706]
	Relatives in parliament	-0.111 [0.186]	-0.638 [0.308]**	-0.512 [0.297]*	-0.24 [0.328]
<i>Political circumstances</i>	Contested seat	0.248 [0.367]	1.173 [0.611]*	0.902 [0.669]	2.857 [1.088]***
	Uncontested seat (1800-1831)	-0.061 [0.409]	1.578 [0.753]**	2.299 [0.757]***	3.307 [1.227]***
	Wales	0.129 [0.412]	1.901 [0.742]**	2.233 [0.784]***	4.58 [1.041]***
	Disenfranchised boroughs	-0.758 [0.280]***	-0.822 [0.741]	0.328 [0.673]	1.669 [0.848]**
	Seats after the Reform		0.496 [0.308]	1.014 [0.308]***	1.442 [0.447]***
	Constant	0.062 [0.413]	-1.119 [1.323]	-2.555 [1.399]*	-3.848 [1.786]**
	Observations	296	190	209	148
	R-squared	0.159	0.401	0.394	0.417

Notes:

- This table presents regression results of a probit model that assesses the determinants of the Tories' votes on readings of the Reform bills.
- Columns 1, 2, 3 and 4 respectively focus on the votes held on 22 March 1831, 6 July 1831, 20 September 1831 and 17 December 1831. The observations correspond to the MPs who took part in each vote.
- Standard errors are given in brackets. • *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level.

Table C5. Determinants of the Whigs' support for Reform: all the constituencies

		22 March 1831	6 July 1831	20 September 1831	17 December 1831
<i>Franchise type</i>	Burgage franchise	-0.038 [0.610]			
	Corporation franchise	0.287 [0.628]	-5.711 [0.000]	-15.646 [0.000]	
	Freeman franchise	-0.24 [0.396]	-5.512 [0.923]***	-15.547 [0.911]***	
	Potwalloper franchise	-1.054 [0.936]			
	Scot and lot franchise	-0.4 [0.405]	-6.168 [0.699]***	-16.146 [0.665]***	
	Freehold franchise	-0.516 [0.532]			
<i>Patronage</i>	High influence	-0.488 [0.453]	1.682 [0.683]**	1.592 [0.587]***	
	Some influence	-0.454 [0.412]	0.544 [0.633]	0.675 [0.645]	
	Treasury borough	-0.74 [0.589]			
<i>MPs' occupations</i>	Army career	-0.859 [0.458]*	-0.421 [0.940]	-0.544 [0.910]	
	Financier	-1.068 [0.500]**			
	Dynasty heir	-0.578 [0.396]	0.908 [0.865]	0.782 [0.803]	-0.146 [0.578]
	Industrialist	-0.531 [0.496]	-1.934 [1.210]	-1.928 [1.219]	-1.303 [0.641]**
	Jurist	-0.84 [0.536]	-0.186 [1.056]	-0.323 [0.916]	
	Merchant	0.655 [0.507]			
	Relatives in parliament	-0.054 [0.281]			
<i>Political circumstances</i>	Contested seat	-6.098 [0.000]	2.19 [0.746]***	13.113 [0.715]***	
	Uncontested seat (1800-1831)	-5.637 [0.356]***	0.473 [0.000]	11.471 [0.000]	
	Wales	0.113 [0.605]		3.979 [0.000]	
	Disenfranchised boroughs	-0.099 [0.332]	0.121 [1.274]	0.241 [1.239]	
	Seats after the Reform		0.476 [0.610]	0.501 [0.617]	0.057 [0.081]
	Constant	8.156 [0.610]***	4.26 [1.406]***	3.359 [1.330]**	2.573 [0.427]***
	Observations	163	97	99	248
R-squared	0.144	0.352	0.442	0.16	

Notes:

- This table presents regression results of a probit model that assesses the determinants of the Whigs' votes on readings of the Reform bills.
- Columns 1, 2, 3 and 4 respectively focus on the votes held on 22 March 1831, 6 July 1831, 20 September 1831 and 17 December 1831.
- The observations correspond to the MPs who took part in each vote. Because of multicollinearity, some observations and variables were dropped out of the regressions. Standard errors are given in brackets. *** indicates significance at the 1%-level, ** indicates significance at the 5%-level, * indicates significance at the 10%-level.

