War and the Rise of Parliaments

Leandro de Magalhaes
Francesco Giovannoni

Discussion Paper 19 / 709
20 February 2019

Department of Economics
University of Bristol
Priory Road Complex
Bristol BS8 1TU
United Kingdom
War and the Rise of Parliaments

Leandro de Magalhaes*
Department of Economics, University of Bristol

Francesco Giovannoni‡
Department of Economics, CSE and CMPO, University of Bristol

February 20, 2019

Abstract

We consider the development of political institutions in Europe between 1350 and 1700 AD. In particular, we propose a model which links the i) frequency of calling of Parliament and ii) the transition (or absence of such transitions) to “Rule by Parliament” (i.e. Constitutional Monarchy) with the risks associated with particular battles and the underlying economic relationship between monarchs and the commercial elites. We test the model’s predictions with a dataset we compile for England, France, Portugal and Spain that includes yearly parliamentary activity, major battles and measures of economic activity. We find support for two predictions of the model. Firstly, we provide empirical evidence that Parliaments are more likely to be called in years in which a) the country suffers a territorial defeat – our proxy for a high-risk war; and b) agriculture output is relatively low – our proxy for the resources available to the monarch that are not constrained by the commercial elites. We also discuss a case study for each of the countries in our dataset that links the model’s results with the development (or lack) of transitions to Rule by Parliament.

Keywords: Political Transitions; Wars; Glorious Revolution; Commitment; Parliament; Autocracy; Democracy.

JEL Classification: P16, H11, N40.

1 Introduction

There is a wide consensus that wars were a major factor in shaping nation states and their institutions in Western Europe (e.g. [Tilly 1990]). In fact, well into the 18th century the main business of government was to finance and wage wars. The goal of this paper is to explain how wars and their financing influenced the rise (and demise) of parliaments in Western Europe. We

*Priory Road Complex, University of Bristol, Priory Road, Bristol, BS8 1TU, UK. Email: leandro.magalhaes@bristol.ac.uk

†Priory Road Complex, University of Bristol, Priory Road, Bristol, BS8 1TU, UK. Email: francesco.giovannoni@bristol.ac.uk

1In England, still in parts of the 19th century, between 74% and 85% of government revenue was dedicated to warfare (Brewer [1989] Table 2.2). See Bonney and Bonney [1993] (figure 7) for data on France and Thompson [1994] (p. 156) for data on Spain.
focus on four countries: England, France, Portugal and Spain and on a historical period that stretches from medieval times – when Parliaments in all four countries were similarly active – up to the end of the 17th century, when a clear institutional pattern emerged where England started holding Parliaments every year while the other three countries saw a drastic reduction, or stopped holding them altogether as in France (Figure 1).

We introduce a model that explains both the regular calling of Parliament and full-blown political transitions and which provides us with testable predictions. In particular, the model considers the situation where foreign policy is in the hands of the Monarch (i.e. absolutism) and where the outcome of wars is dependent on the amount of resources invested in them. The Monarch, therefore, may find itself in the position of having to ask the Commercial Elites for financial assistance in the conduct of war, even in situations where these Elites does not agree with the foreign policy chosen by the Monarch. Typically, these will be situations where the Monarch pursues a foreign policy based on dynastic, as opposed to economic, considerations. The model predicts that Parliaments are more likely to be called in situations where the Nation is facing high-risks rather than low-risks. To gain a sense what we mean by high-risks and low-risks and how these affect the frequency of calling of Parliament, consider England and France. These countries were at war with each other on and off throughout the period we study (1350-1700). In years in which one country had the upper-hand the other was likely to be under high-risk. One would then expect a negative correlation between the calling of Parliament in England and France in years where these countries were at war with each other and indeed this is what we find. England and France were at war for 137 years in the period from 1350 to 1700. The correlation between holding parliament between these two countries in those years is -0.14 and statistically significant. The correlation in years of peace is -0.04 and not statistically different from zero.

Our model also considers the possibility that, in the rare event of a situation of extreme-risk, where the current Monarch is fighting for her dynastic survival, the country might transition to Rule by Parliament, which - in the context of our model - is the situation where the Monarch commits to handing the choice of foreign policy to Parliament. This occurs, because in these situations, the Commercial Elite may withhold financial assistance and therefore precipitate the Monarch’s replacement. As discussed in the model, an essential ingredient is that the possible replacement Monarch/dynasty will be one more favorable one to the Elite itself (e.g. the new Monarch will pursue a foreign policy more aligned with that or the Elite and/or is militarily stronger) so that the threat of withholding help is credible. In terms of testable implications, the model argues that withholding financial assistance is a stronger threat to the Monarch if the economy is such that the Commercial Elite controls a higher share of the country’s resources. This may be because, typically, the economy has a higher share of commercial resources that

---

2There is a long standing literature that has underlined the importance of warfare for the birth of Parliaments in the preceding period, i.e., the 12th and 13th century (e.g., Bisson (1966), Procter (1980), and Maddicott (2010)).

3Years of Anglo-French war: 1350-1453; 1496-1498; 1512-1514; 1522-1526; 1542-1546; 1557-1559; 1627-1629; 1666-1667; 1689-1697.
cannot be easily taxed or expropriated by the Monarch (in the data this will be proxied by 1 minus the share of agriculture). Thus the Commercial Elites have more leverage in bargaining with the current Monarch, and when this leverage is sufficiently important, the only solution available to the latter is to commit to future gains for the former by handing over decision power regarding foreign policy to Parliament. Thus, our model builds on the basic idea in Acemoglu and Robinson (2001) that views representative institutions as a solution to a commitment problem, although in our case bargaining occurs between a Monarch and an Elite over the choice of foreign policy while in Acemoglu and Robinson (2001), bargaining takes place between an Elite and the rest of the population over redistribution, a phenomenon that only becomes relevant after our period of interest.

Our main empirical contribution is to compile a data set linking yearly parliamentary activity, detailed information about battles, and economic variables for the period 1350 to 1700 that allows us to test the predictions of the model. Specifically, we focus on all battles involving our four countries that are referenced in Bradbury (2004) (before 1500) and Clodfelter (2002) (after 1500). This data gives us information not only on the outcome, but also on the location of the battles (which we will use to proxy for the level of risk) and other characteristics. For economic data, we utilize Broadberry et al. (2015) which gives us information on the share of agriculture in England for the entire period while Alvarez-Nogal and De La Escosura (2013) provides data on agriculture consumption per capita for Spain. For France we use tree-ring data (Labuhn et al. (2016)) as

\[\text{Note: 11-year moving averages. A value of 1 indicates that a parliament was held in the past five years, the current year, and the future five years. Data compiled by authors. Sources are described in Section 4.1.}\]
a proxy for agricultural output. Previous research that gathered information of parliamentary activity in this period (Van Zanden et al. (2012) and Stasavage (2010)) has not attempted to explain how this activity may have varied from year to year. Furthermore, the literature has not investigated the link between yearly parliamentary activity and yearly data on battles.\footnote{Stasavage (2010) runs a regression linking the average frequency of parliamentary meetings with average years a country was at war, but finds no effect. Blank et al. (2017) studies the link of regime type (but not parliamentary frequency) with yearly battle data.} We find that i) parliaments are more likely to be called in high-risk periods, which we proxy with territorial defeats (i.e., defeats in battle that took place within the boundaries of the country or in its vicinity); ii) parliaments are less likely to be called in periods in which the resources available to the monarch are relatively high, which we proxy with the share of agriculture for England, agricultural consumption per capita for Spain, and inferred rainfall data for France. All results are robust to country specific regressions.

Our modeling of war builds on Jackson and Morelli (2007).\footnote{Jackson and Morelli (2007) study the impact of a different willingness between Monarch and Elite on the decision to go to war, whereas we assume that wars happens, and the Monarch and Elites differ in their preferences over foreign policies.} Parliamentary activity in our model is the result of a game between two players, the Monarch and the Elite. Whoever holds power has the prerogative to chose which foreign policy to follow: either ‘aligned’ or ‘misaligned’. An aligned foreign policy yields high monetary returns to both the Monarch and to the Commercial Elite. A ‘misaligned’ foreign policy has an intrinsic bias: the monarch receives an ego-rent from participating in it, but it brings relatively little economic returns to either side. Thus, if the ego-rents are high enough, the Monarch may prefer a misaligned foreign policy while the Commercial Elite prefers an aligned one. An example of the former is a policy leading to war led by a catholic Monarch with protestant subjects against another protestant country. Other examples of misaligned wars are costly dynastic wars that benefit the Monarch but not the Elite. Aligned foreign policies, instead, protect the interests of the Commercial Elites, such as colonial wars, which expand the markets for the commercial elites’ products. More generally, they may just be foreign policies which do not lead to unnecessarily costly wars. This explicit modeling of wars is a key difference between our model and other papers that include wars in their modeling of political transitions such as Hoffman and Rosenthal (2000), Ticchi and Vindigni (2009), and Arias (2013). In these papers war is an exogenous threat with a fixed costly payoff and its aftermath is not explicitly modeled.

The need for the Monarch to bargain with the Elite for resources is a feature of the model that is shared by Angelucci et al. (2017). They provide a detailed study of self-governed towns in England and how the King needed to negotiate with them in order to raise extra-ordinary taxes. They also discuss how the efficient institution for this negotiation was Parliament. In our model the need for the Monarch to bargain increases in periods in which the share of the resources easily available to the monarch is small. We interpret agricultural income as more easily available to the Monarch than commercial income for two complementary reasons. First,
the landed aristocracy is inherently more aligned with a Monarch than the Commercial Elites might be since the former’s dynastic success is often tied to the success of a particular Monarch or a particular dynasty. The more the economy is dominated by agriculture, the more the Monarch finds willing sources of financing no matter what foreign policy the Monarch pursues. Second, even if the landed aristocracy is not so aligned with the Monarch, commercial and financial wealth is harder to tax and to expropriate than agricultural wealth simply because the latter is much more difficult to hide than the former. The consequence is that, in periods in which commerce and finance are relatively important, the Monarch must bargain with the Commercial Elites in order to secure their financial assistance during war times. Therefore, if commercial wealth grows relative to agricultural wealth, the consent of the Commercial Elites becomes a key component of the war effort. This increases the need for calling Parliament and, in cases of extreme risk, the possibility of a transition to Rule by Parliament.

Other political-economic models that have tackled the issue of political transitions have mostly focused on contemporaneous (19th and 20th century) transitions to democracy and on a state whose main role is either to redistribute wealth to the masses (e.g. Acemoglu and Robinson (2001), Boix (2003)) or to provide public goods (e.g. Lizzeri and Persico (2004), Llavador and Oxoby (2005), De Mesquita and Smith (2010)). Within this literature, two papers have looked at models where the threat of war may influence political transitions. In Ticchi and Vindigni (2009) wars are external threats that help the elite make a credible commitment to the citizen-soldiers, who demand redistribution in return for exerting effort during a war. So, even in their model, the citizen’s objective in taking over power is to use the state apparatus for redistribution. While we do not dispute the role of redistribution in driving political transitions, particularly in the 19th and 20th century, in several instances, Rule by Parliament was achieved earlier, when there were no mass armies and the government did not occupy itself with either redistribution to the masses or the provision of other economic public goods. In Hoffman and Rosenthal (2000), the King and the Elite each control a different part of the country’s economy. By unifying resources either

---

7Dincecco et al. (2011) discuss an example of such proximity for the case of the Italian Risorgimento.

8Evidence for this argument is found in Brewer (1989), who shows that while the bureaucracy handling the excise and customs taxes were around 3,000 strong in late 17th century England, the land tax scarcely had an administration at all (Brewer (1989) pg. 66 and 101). Ertman (1997) notes that a land tax is easier to administer because a fixed amount can be attributed to each region, which is then left to raise the resources as the local officials see fit (Ertman (1997) pg.16). The argument that land is easier to tax is also present in Bates and Lien (1985), Levi (1988), and Bonney (1995). A similar argument regarding the mobility of capital is present in Boix (2003). Another strand of the literature focuses on spatially fragmented wealth and the degree of centralization (Dincecco (2009), Gennaioli and Voth (2015), and Arias (2013)). Finally, Besley and Persson (2009), discuss how the state can invest over time on the capacity to tax in order gain access to more resources, and financial or commercial wealth in particular. In our setting, our interpretation is that revenues must be raised with no delay in order to address an imminent threat to the country. With no time to build state capacity beyond the existing one, the Monarch must rely on the willingness of the Elite for those resources that cannot be taxed.

9There is also a large literature in history, sociology, and political sciences that analyzes the relationship between the economy and institutions (see, for example, Lipset (1959), Moore Jr. (1966), Bates and Lien (1985), Ertman (1997), and Stasavage (2003)). There is a literature that analyzes the relationship between war and institutions (see Hintze (1975), Downing (1988), Tilly (1990), Kiser and Drass (1995), and Spruyt (2007) for a review) but our work is the first to provide a complete framework for the impact of specific economic variables - through wars - on political institutions.
through rule by parliament or with an autocratic system a country can achieve higher revenues. This aspect of their model, that the Elite and the King control different parts of the economy is similar to ours. The main difference is that we explicitly model the decision to go to different wars and the threats that may lead a monarch to hand over power to parliament. Crucially, we also provide some empirical support.

In the next section we introduce the model, in section 3 we present our results, in section 4 we present our empirical results, and in section 5 we discuss some historical examples to transitions to Rule by Parliament.

2 The Model

2.1 Setup

Our setting focuses on a specific country (which we sometimes refer to as “our country”) and an infinite number of periods $t \in \{0, 1, \ldots\}$. In each period, there are two players: the Elite(s) ($E$), which represent the wealthy ruling class, and a Monarch ($M_t$).\(^{10}\) In what follows, we will index variables with the subscript $t$ to indicate the period $t$ and with superscripts $M$ and $E$ to denote the Monarch and the Elite, respectively, with $I \in \{M, E\}$ denoting the generic player. The main potential for conflict between $E$ and $M_t$ in our model is the decision of which foreign policy to pursue, and so whenever it is important to distinguish between the player that has the authority to direct foreign policy and the other player, we use the superscript $I$ to denote the former and $-I$ to denote the latter. In some (rare) cases, we will allow for the possibility that $M_t$ is replaced by another Monarch in the future, so that we use $M$ to describe the incumbent monarch while $\hat{M}$ will denote the possible replacement but unless it is important to distinguish them we will use $M$ to denote a generic Monarch. In each period $t$, we assume that $E$ and $M$ own all the wealth in our country, which produces an investable income equal to 1. Investable income can be invested in wars which - if won - generate an additional return. We assume away savings so that the income generated by existing wealth and war investments in a particular period is consumed in that same period. All such income is shared between $M$ and $E$ in proportion $k$ and $1 - k$ respectively. The fraction $k \in (0, 1)$ is available to the Monarch directly, through ownership, expropriation, taxation, or loans.\(^{11}\) The Elites’ fraction $1 - k$ cannot be utilized without $E$’s consent. The main conflict we intend to model is between Commercial Elites and the Monarch (and, possibly, the Landed Elites allied with the Monarch).\(^{12}\) In addition to investable income, there is also non-investable income $\phi$ which represents the component of income that is available to the whole population and which we interpret as sustenance income. All non-investable income

\(^{10}\) We abstract from the collective-action problem and free-rider issues by treating $E$ as an individual player.

\(^{11}\) Any loans from outside the country would have to backed up by the monarch’s resources as collateral so such loans can be thought of part of the Monarch’s income.

\(^{12}\) But our model is also compatible with a scenario where the non-agricultural sector of the economy is negligible and the conflict is between the Monarch and the landed nobility.
is owned by $E$ but cannot be utilized or even collateralized for wars.\footnote{Presumably, Monarchs also need a fraction of their income for expenditure besides wars, but such income will not be a significant fraction of the whole and is therefore omitted from the model. As will become apparent below, this simplification has no significant impact on our results.} We also assume that $E$ and monarchs discount the future period’s utility at a rate $\beta \in (0,1)$.

Wars occur in each period\footnote{This is for simplicity: the model could be extended to allow for the possibility of periods without wars without significantly affecting our results.} We will assume that the agent who chooses the foreign policy will always participate in such wars, whereas the other side might decide to participate with their resources or not. Wars differ along two possible dimensions. The first dimension differentiates between wars that are low-risk for our country and wars that are high-risk. In low-risk wars both Monarch and Elite face no downside risk in the sense that only the resources invested in war are at stake. We interpret these as wars where the action is far away from our country, as in an offensive campaign. High-risk wars, on the other hand, are wars where - in case of defeat - some losses are incurred regardless of whether there is active participation in the war, and which can be interpreted as defensive campaigns on home soil. The second dimension differentiates wars on the basis of the foreign policy adopted by our country. Whomever has control of foreign policy has the option of choosing between a foreign policy in which the Monarch’s objectives are aligned with those of the Elite and one where there is a misalignment between the two sides. In particular, we assume that an aligned foreign policy is one which is, in expectation, profitable for both $M$ and $E$, while a misaligned foreign policy may be very profitable for $M$ but not profitable for $E$. The main interpretation here is that misaligned foreign policies arise when an absolutist Monarch puts egoistic or dynastic considerations above the welfare of the country as a whole.

In an absolutist regime, the Monarch is in charge of foreign policy whereas this is determined by the Elite under rule by parliament (in short, RBP). The chosen foreign policy determines the potential rewards for participation in a war as described above.

Regardless of the choice of foreign policy, there an exogenous - and fixed - probability that our country will face a low-risk scenario in any particular period whereas with complementary probability, our country faces a high-risk scenario.\footnote{This set-up, therefore, assumes that foreign policy has no impact on the low/high risk dimension, as it is not clear what such impact should be. The main conclusions of the model would be robust if we assumed that foreign policy also affects the probability of a high-risk scenario.} In this latter case, we will also allow for the (small) probability that the threat is so severe that the monarch will be replaced in case of a defeat in the sense that a new monarch will take over in the following period. We will call this, an extreme-risk scenario.

Returns from war are shared between $M$ and $E$ through Nash-bargaining in each period if both participate. The disagreement point is the player’s outcome in case of non-participation. Given our assumptions, at least one side always participates in any given war. The participating side obtains all the potential returns from war in case of non-participation from the other side. The non-participating side maybe convinced to join in exchange for within-period transfers. These (possible) transfers between the two players have two natural restrictions:
Only tangible resources can be transferred.

As we describe in detail below, a misaligned foreign policy is attractive to $M$ because of the ego-rents it is capable of generating, but these will typically be non-tangible gains that cannot be transferred to $E$.

Inter-temporal transfers are not allowed.

This is a crucial assumption and is necessary in a model where we wish to endogenize the creation of institutions. Any promise to provide more transfers or change foreign policy in the future will not be credible in the absence of institutions to enforce it. In particular, the only way the monarch has to commit to future transfers is to allow for Rule by Parliament because with it, in the future foreign policy will be chosen by $E$.

### 2.1.1 Low-risk Scenarios

The returns from war in a low-risk scenario depend on the choice of foreign policy. The total expected returns available from a unit investment from such wars are equal to

$$
\varepsilon_f^M + \varepsilon_f^E + \Pr(x_t^E, x_t^M) \rho_f
$$

with

\[
\begin{align*}
    \Pr(1, 1) &= p, \\
    \Pr(0, 1) &= pk \\
    \Pr(1, 0) &= p(1 - k)
\end{align*}
\]

Pr $(x_t^E, x_t^M)$ captures the probability of winning the war and depends on the participation decision of the two sides. In particular, a decision to participate implies committing all investable resources in the war, so that there is a basic probability $p$ if both $M$ and $E$ participate in the war, and this probability is reduced proportionally to the investment if only one side participates. The linearity assumption simplifies the analysis, but our results would still hold if we assumed that the probability of winning was an increasing and (weakly) concave function $P(k)$ of the overall resources invested in war with $P(1) = p$.

For a given foreign policy $f = a$ (aligned) or $-a$ (misaligned), $\rho_f$ represents the total returns in tangible resources and $\varepsilon_f^I$ the returns in non-tangible resources (ego-rents) for $I \in \{M, E\}$, where the former can only be obtained in case of victory. The variable $x_t^I \in \{0, 1\}$ represents player $I$’s decision to enter the war or not. Given our assumption that the agent who decides on foreign policy has to participate in the war, we must have that $x_t^M = 1$ under absolutism and $x_t^E = 1$ under RBP. We embed the Nash bargaining assumption directly in our payoffs. Let
\( \tau^f_t(x^E_t, x^M_t) \) represents the net transfers from \( M \) to \( E \) given the participation decisions. If one of the two sides does not participate in the war, then it gets its reservation income while the participating side gets all the returns from war.

We distinguish between aligned and misaligned foreign policy by assuming that

\[
\begin{align*}
\rho^f = \begin{cases} 
R & \text{if } f = a \\
r & \text{if } f = -a
\end{cases} \\
\varepsilon^f_M = \begin{cases} 
0 & \text{if } f = a \\
\gamma & \text{if } f = -a
\end{cases} \quad \text{and} \quad \varepsilon^f_E = 0
\end{align*}
\]

The parameters \( R \) and \( r \) represent returns on the tangible resources that are obtained in case of victory. The parameter \( \gamma \geq 0 \) represents non-transferable ego-rents that will be given to \( M \) in case of a misaligned foreign policy. In our interpretation, a good example of the case where \( \gamma > 0 \) is that where a Monarch has an incentive to choose a foreign policy that increases her (or her royal house’s) prestige regardless of the possible benefits that may accrue to the Elite. Note that we assume \( \varepsilon^f_E = 0 \) but this is just a normalization: any model where \( E \) also gets ego-rents from foreign policy, as long as it allows for greater returns for \( M \) from misaligned foreign policies and greater returns for \( E \) for aligned foreign policies would give us the same results.

So, \( M \)'s utility given participation decisions will be

\[
u^M_t(x^E_t, x^M_t) = \begin{cases} 
\varepsilon^f_M + pk\rho^f - \tau^f_t (0, 1) & (x^E_t, x^M_t) = (0, 1) \\
\varepsilon^f_M +pp\rho^f - \tau^f_t (1, 1) & (x^E_t, x^M_t) = (1, 1) \\
(1-k) - \tau^f_t (1, 0) & (x^E_t, x^M_t) = (1, 0)
\end{cases}
\]

In a similar fashion, the corresponding expected returns for \( E \) are

\[
u^E_t(x^E_t, x^M_t) = \begin{cases} 
p(1-k)\rho^f + \phi + \tau^f_t (1, 0) & (x^E_t, x^M_t) = (1, 0) \\
\phi + \tau^f_t (1, 1) & (x^E_t, x^M_t) = (1, 1) \\
(1-k) + \phi + \tau^f_t (0, 1) & (x^E_t, x^M_t) = (0, 1)
\end{cases}
\]

which differ from the monarch’s in two ways, as mentioned above: the non-investible resources \( \phi \) are only present in \( E \)'s pay-off and there are no ego-rents, of any kind, for the Elite.

### 2.1.2 High-risk and Extreme-risk Scenarios

We also model the possibility that, regardless of the foreign policy chosen, our country may finds itself in a high-risk (defensive) position. We model this different situation by assuming that if a given side does not participate in a high-risk war, but the war is lost, then \( E \) and \( M \) will incur losses \( l \) and \( L \) respectively. We also allow for extreme-risk scenario – a special case of a high-risk scenario – where the stakes are maximal for everyone involved: the Monarch will be removed in case of a loss, thus getting zero returns for current period and all future periods, whereas \( E \) will lose all of her resources (including \( \phi \)), but for the current period only. This is to capture

\[16\text{By modeling } \tau^f_t \text{ as net transfers from } M \text{ to } E \text{ we are of course allowing for the possibility that such transfers are negative.}\]
the asymmetry between a Monarch that can lose everything and the Elite which can suffer a big blow but not a vital one. Below, we use $U^I_t$ to indicate the per-period utility for player $I$ in a high-risk period and $\hat{U}^I_t$ to indicate the per-period utility for player $I$ in an extreme-risk period. Thus, beginning with high-risk periods, utility given participation decisions will be

$$U^M_t(x^E_t, x^M_t) = \begin{cases} 
\varepsilon^f + p\rho^f - \tau_t^f (0, 1) & \text{if } (x^E_t, x^M_t) = (0, 1) \\
\varepsilon^f + p\rho^f - \tau_t^f (1, 1) & \text{if } (x^E_t, x^M_t) = (1, 1) \\
k - (1 - p(1 - k))L - \tau_t^f (1, 0) & \text{if } (x^E_t, x^M_t) = (1, 0) 
\end{cases}$$

and

$$U^E_t(x^E_t, x^M_t) = \begin{cases} 
p(1 - k)\rho^f + \phi - (1 - p(1 - k))l + \tau_t^f (1, 0) & \text{if } (x^E_t, x^M_t) = (1, 0) \\
\phi - (1 - p)l + \tau_t^f (1, 1) & \text{if } (x^E_t, x^M_t) = (1, 1) \\
1 - k + \phi - (1 - pk)l + \tau_t^f (0, 1) & \text{if } (x^E_t, x^M_t) = (0, 1) 
\end{cases}$$

respectively. In an extreme-risk period, instead, we have:

$$\hat{U}^M_t(x^E_t, x^M_t) = \begin{cases} 
\varepsilon^f + p\rho^f - \tau_t^f (0, 1) & \text{if } (x^E_t, x^M_t) = (0, 1) \\
\varepsilon^f + p\rho^f - \tau_t^f (1, 1) & \text{if } (x^E_t, x^M_t) = (1, 1) \\
k - (1 - p(1 - k))L - \tau_t^f (1, 0) & \text{if } (x^E_t, x^M_t) = (1, 0) 
\end{cases}$$

and

$$\hat{U}^E_t(x^E_t, x^M_t) = \begin{cases} 
p(1 - k)\rho^f + \phi - (1 - p(1 - k))l + \tau_t^f (1, 0) & \text{if } (x^E_t, x^M_t) = (1, 0) \\
p\phi + \tau_t^f (1, 1) & \text{if } (x^E_t, x^M_t) = (1, 1) \\
pk(1 - k + \phi) + \tau_t^f (0, 1) & \text{if } (x^E_t, x^M_t) = (0, 1) 
\end{cases}$$

So, in a high-risk war more resources are at risk than in a low-risk war, which makes the outside of option of not participating costlier. Typically, this will happen when the war is in or near our country’s own territory. In extreme-risk cases, for the Monarch, there in no difference with the high-risk case from the perspective of the one-shot payoffs described above, but in case of defeat, the Monarch will get a flow of zero utilities from then onwards. For $E$, the difference between high-risk and extreme-risk wars is that in the latter, all resources are at risk for the elite, including $\phi$. We assume, for consistency, that $l \leq 1 - k + \phi$ and $L \leq k$. We next proceed to describe utilities for $E$ and $M$ over the whole infinite horizon.

### 2.1.3 Infinite Horizon

In each period, a high-risk scenario obtains with probability $\pi$ and a low-risk scenario with complementary probability $1 - \pi$. In addition, conditionally on a high-risk scenario, there are rare cases where such scenario actually becomes an extreme-risk scenario. We will actually assume that this probability is arbitrarily close to zero so that in effect the total utility for $E$ in
the game is
\[ \sum_{t=0}^{\infty} \beta^t \left[ (1 - \pi) u_t^{E,f_t} + \pi U_t^{E,f_t} \right], \]
where \( f_t \) is the foreign policy chosen in period \( t \). For \( M \) we have, analogously,
\[ \sum_{t=0}^{\infty} \beta^t \left[ (1 - \pi) u_t^{M,f_t} + \pi U_t^{M,f_t} \right]. \]

The assumption that extreme risks are negligible, guarantees that when choosing foreign policy in a given period, both the Elite and the Monarch never see the risk of devastating effects as a possibility. This assumption considerably simplify the analysis without affecting our results and fits with the idea that foreign policies that could lead to extreme risks would never be undertaken if the probability of such risks was significant. Another way to interpret this would be that Monarchs are more optimistic (or reckless) and systematically underestimate the probability of finding themselves in a position where they could be losing it all. [Hoffman and Rosenthal (2000)] suggests that occurrences very are indeed very rare, but not impossible.

Regardless of the interpretation, in case of a defeat by the monarch \( M \) in an extreme-risk scenario, a new Monarch will take her place. We will allow the new Monarch to differ from the incumbent on two dimensions which may make her a more or less palatable alternative from the Elite’s perspective. The first dimension is ego-rents (which we denote with \( \zeta \)) so that the new Monarch may be more or less aligned with the Elite’s foreign policy preferences. We assume that the new Monarch may also bring a new probability of winning wars (which we denote with \( q \)). This is to capture both the possibility that the new Monarch may be more competent and able to leverage our country’s investable resources or have a network of alliances that have an impact on the probability of winning wars. To simplify notation, we abuse it slightly by using \( p \) and \( \gamma \) to represent the generic Monarch’s probability of winning and her ego-rents while using \( \zeta \) and \( q \) only when we wish to emphasize we are discussing the new Monarch.

2.2 Timing

We assume absolutism at the beginning of the game. This means that \( M \) decides on which wars to undertake unless she voluntarily gives \( E \) such power. Formally, we will denote with \( I_t \) the player in charge of foreign policy in period \( t \) (with \( I_0 = M \)) while \(-I_t\) denotes the other player.

In the each period \( t \geq 0 \)

1. \( I_t \) decides on foreign policy \( f_t \in \{a, -a\} \).

2. Nature determines whether the war is high-risk (with probability \( \pi \)) or low-risk (with complementary probability). In the former case, Nature also determines whether there is extreme risk (with probability \( \chi \)) or not. As discussed above, all players behave as if \( \chi = 0 \).
3. Having observed the type of war determined by nature, if $I_t = M$ then $M$ chooses whether to concede Rule by Parliament (RBP) - where $E$ will choose foreign policy in the next period - or stick with absolutism. If $I_t = E$ then nothing happens.

4. If $I_t = M$ then net transfers $\tau^f_t(0, 1)$ and $\tau^f_t(1, 1)$ are determined whereas if $I_t = E$ then transfers $\tau^f_t(1, 0)$ and $\tau^f_t(1, 1)$ are determined. We interpret non-zero transfers through Nash-bargaining as Calling Parliament (CP).

5. Conditional on the transfers offered $-I_t$ decides whether to join the war ($x^{-I}_t = 1$) or not ($x^{-I}_t = 0$).

6. Given $x^{-I}_t$, Nature determines whether the war is won or not and payoffs are realized. In case of defeat in a extreme-risk war, the incumbent Monarch $M$ is replaced by the new Monarch $\hat{M}$.

If we have had RBP conceded by $M$ in period $t$ then $I_s = E$ for any $s \geq t + 1$. If on the other hand, an extreme-risk war was lost in period $t$ then Monarch $\hat{M}$ takes over and $I_s = \hat{M}$ for any $s \geq t + 1$. We assume that extreme-risk periods are only possible when $I_t = M$ and can no longer happen otherwise. This closes the model in the simplest way possible without affecting our results in any significant way.

We interpret the Nash-bargaining between the Elite and the Monarch on whether to join the war as Calling Parliament. This is in keeping with the notion that public policy is all about wars and that most parliaments focused on how to raise resources to the Monarch to fight a war. Transfers can be interpreted in different ways. If they are agreed before the outcome of the war is known, they can be interpreted as a way of sharing the expected spoils of war, where expectation is taken with the probability of winning. Transfers can also be interpreted as the elite providing resources now whereas the Monarch gives rights that yield monetary benefits such as titles, lands, marriages, monopolies, city and market liberties, etc.\footnote{By assumption these transfers are within periods. So $E$ internalizes that any benefits that are based on future income streams may be revoked at any future period by the Monarch.}

As for RBP, our time-line assumes that if it is conceded in any period, it will be enforced in the future as long a extreme-risk war is not lost in the same periods. This is a necessary condition for RBP to matter because if $M$ could revoke such power at will, Rule by Parliament would be irrelevant. Equally, this allows us to interpret RBP as a commitment device for undertaking the wars the Elite prefers since without such commitment the Monarch could not credibly promise this. This differs from CP where these is no commitment of any sort on future policy decisions and simply consists of the Elite’s decision to participate in a war called up by the Monarch. We will also make the following assumptions.

**Assumption 1** $r < \frac{1}{p} < R$

**Assumption 2** Either $\zeta = 0$ or $\zeta$ is arbitrarily high.
Assumption 1 gives aligned foreign policy profitable returns whereas - except for ego-rents to the monarch - misaligned foreign policy does not have profitable returns \((pr < 1)\). Note that we do not put restrictions on \(q\) for misaligned wars which allows for the possibility that the new Monarch \(\hat{M}\) brings a sufficiently higher probability of winning such that \(qr \geq 1\). Assumption 2 allows us to focus - when we look at extreme-risk scenarios - on the most interesting case. The new Monarch \(\hat{M}\) either has no ego-rents, or very high ego-rents.

A few observations about the structure we’ve described are worth making, particularly with respect to comparisons with the existing literature. The first observation is that our payoff structure is very similar to that in [Jackson and Morelli (2007)] in that wars require that a country invests certain resources hoping to gain a return by taking over the enemy’s resources, with the possibility of a bias that implies a difference in preferences towards war between ruler and the commercial elites. A first, obvious, difference is that while Jackson and Morelli (2007) study the impact of the bias on the decision to go to war, we assume that a war will happen, with the bias being about preferences between aligned and misaligned wars. More importantly, we distinguish between resources that \(M\) can freely utilize for war and those that require \(E\)’s participation and this will be crucial in a dynamic setting such as ours where \(M\) may be forced to abandon absolutism in order to obtain \(E\)’s cooperation. Indeed, being able to explain when this mechanism leads to a change in political regime away from absolutism and when it doesn’t can be seen as a way of endogenizing bias. Also, the distinction between investable and non-investable resources, on the one hand, and the distinction between resources that are immediately available to the sovereign and those that are available only with the Elites’ consent, allows us to capture the notions of state and fiscal capacity as discussed in [Besley and Persson (2009)]. In our setting, these are modeled as exogenous parameters, but when we discuss our results, we will discuss the possibility of changes driven by economic development and developments in credit markets.

The second observation is that there are also important similarities and differences with the setting in [Acemoglu and Robinson (2001)]. The obvious similarities are that both models seek to explain institutional transitions by taking economic fundamentals as given. The differences are in the fundamentals themselves that matter. [Acemoglu and Robinson (2001)] assume a level of development where redistribution is the crucial issue in public policy so that the incentives for democratization are mainly determined by the level of inequality in the country. In their model, recessions might give the poor a lower opportunity cost of a revolution and democracy might ensue because it is the only way for the Elites to credibly commit to a redistributive policy. In our paper, we focus on an earlier level of development, when public policy is mostly about the decision of whether to pursue misaligned (e.g. dynastic) or aligned (e.g. colonial) wars and the incentives for introducing Rule by Parliament are mainly determined by how many resources the Monarch has at her disposal in order to wage war; this, in turn, is determined by the way the economy is structured. Thus, times of crisis might give the Elites the opportunity to remove a

\[^{18}\] Jackson and Morelli (2007) model bias as different returns in transferable resources, whereas we model bias in the form of ego-rents because we believe it better fits some of the historical evidence for the age we consider.
Monarch that chooses misaligned wars even if this comes at a cost. When this threat is credible, the Monarch might decide to voluntarily relinquish her absolutist powers (i.e. the power to choose which wars to wage) in order to retain the throne.

Another key difference between our setup and Acemoglu and Robinson (2001) regards the implicit collective-action problem associated with revolutions. As noted by Tullock (1971), in a revolution, each individual citizen has an incentive to free-ride on the revolutionary efforts of others in order to avoid the individual costs, but still benefit from the gains of a successful revolution. In our model, the individual Elite members are not required to coordinate in order to realize the threat of not assisting the monarch during a defensive war; if anything, the collective-action problem arises if they wish to assist the Monarch. Political transitions in our model are, therefore, not so dependent on the necessity of solving a collective-action problem among the member of the group that wishes for a political transition.

Finally, our model is dynamic only in a limited sense because we do not allow any of our parameters to evolve over time. A fully-fledged dynamic model would also allow, for example, for \( k \) to increase or decrease depending on the foreign policy decisions by the Monarch and the participation decisions by the Elite. Still, it would be very difficult to extend the model in this way and hope to come up with definitive answers. Geographical and technological factors would certainly have a significant, and possibly greater impact than the foreign policy decisions on how the fractions of resources available to the Monarch and the Elite evolves over time. Taking into account theoretically and testing the results empirically would be extremely difficult, especially given the limited amount of data at our disposal. The model presented here, therefore, should be interpreted as model that takes certain characteristics of a country as given and describes how these may have an impact on the country’s institutional framework, but it does not aim to follow the impact of these changes on those same characteristics.

## 3 Analysis

We will consider, as is standard, stationary equilibria of our game. As discussed, we will use the generic notation \((p, \gamma)\) to denote the generic monarch’s idiosyncratic parameters.

### 3.1 Normal periods

Recall our assumption that, from both \( E \) and \( M \)’s perspective, extreme-risk periods have a negligible probability of occurring. This means that when deciding on which foreign policy to undertake, both \( M \) (under absolutism) and \( E \) (under RBP) neglect this possibility so that it is

---

19The collective-action problem is implicit because both in Acemoglu and Robinson (2001) and here, individual citizens (elite members in our model) act as one agent by assumption.

20Acemoglu and Robinson (2006) discuss in detail the potential solutions for the collective-action problem such as ideology, pecuniary incentives, or the exclusion from the benefits of revolution.

21For example, the discovery of extensive silver deposits in South America certainly had a crucial impact on the ratio \( k \) for Spain. We will discuss this more extensively in our empirical section.
possible for us to analyze a whole period where the extreme-risk does not get realized, including the choice of foreign policy in the analysis. We describe, therefore, behavior in low-risk and high-risk periods, assuming a given foreign policy. We then characterize, foreign policy choices and ask whether, under absolutism, \(M\) would want to concede RBP.

If we consider aligned wars first, the large amount of transferable resources available imply that both \(E\) and \(M\) will want to participate in both low-risk and high-risk periods. In the case of misaligned wars things are more complicated as the Monarch gets ego-rents from such wars which \(E\) does not get, but the former will still benefit from the additional probability of winning that \(E\)’s participation guarantees. In particular, Assumption 1 implies that \(pr < 1\) so that \(E\) will not participate unless appropriate transfers are given\(^{22}\). The key question is whether the transfers needed to get \(E\) to participate are sufficiently low to be worth paying from the Monarch’s perspective. Under Assumption 1, the answer is negative in low-risk periods as opposed to high-risk periods where the answer is positive, as long as the damage \((l)\) to \(E\) from losing a high-risk war is large enough. In such cases, \(E\) will be more willing to participate and the transfers needed will be small enough for \(M\) to be willing to pay them. These are the cases in which Parliament is called.

Given the participation decisions described above, the foreign policy decisions follow. Under RBP, \(E\) will choose an aligned foreign policy whereas under absolutism \(M\) will choose misaligned foreign policies unless ego-rents \(\gamma\) from such policies are small enough. We can also study whether a Monarch in a low- or high-risk period will even concede RBP. Obviously, a Monarch who chooses an aligned foreign policy need not concede RBP, since she is choosing the foreign policy \(E\) wants anyway. A Monarch who prefers a misaligned foreign policy will only concede RBP, and therefore commit to aligned foreign policies for all future periods – if i) her preference for misaligned foreign policies is not too strong and ii) she heavily discounts the future so that getting help today is very important. Thus, RBP is virtually impossible in low- or high-risk periods if the Monarch cares enough about the future.

We summarize this discussion in the following proposition:

**Proposition 1** In any non-extreme period (high or low risk):

1. Under RBP, the Elite will always choose an aligned foreign policy. Under absolutism the Monarch will select a misaligned policy whenever \(\gamma \geq \gamma^*\) and an aligned foreign policy otherwise\(^{23}\).

2. Under absolutism, the range of parameter values under which RBP can obtain vanishes as \(\beta \to 1\).

3. \(E\) and \(M\) will always participate in any aligned wars. \(M\) will always participate in any misaligned wars, whereas, under Assumption 1, \(E\) will never participate in low-risk

\(^{22}\)If \(qr \geq 1\) then \(E\) will participate voluntarily in misaligned wars if ruled by \(\hat{M}\).

\(^{23}\)The threshold \(\gamma^*\) is described in the appendix.
misaligned wars and only participate in high-risk misaligned wars iff

\[ l \geq l^* = \frac{1 - pr}{p} \]

If \( qr \geq 1 \) then \( E \) will always participate in misaligned wars.\[24\]

In the appendix, we also show that \( \gamma^* \) is an increasing function of \( R, k, \pi \) and \( l \) and a decreasing function of \( r \). By their very nature, ego-rents are virtually impossible to measure so these comparative statics on \( \gamma^* \) can at best be useful in the discussion of anecdotal evidence. However, our results yield testable predictions for the calling of Parliament. Our analysis shows that \( E \)'s participation in misaligned wars and the accompanying Nash-bargaining is easier to obtain in high-risk periods than in low-risk periods. In addition, \( l^* \) is obviously a decreasing function of \( r \) and \( p \). Finally, recall also that \( l < 1 - k + \phi \) which means that higher values of \( k \) and lower values of \( \phi \) make it harder for an \( l \) that satisfies both this constraint and \( l \geq l^* \) to exist. All of this means:

**Observation 1** In an absolutist regime, parliaments are more likely to be called when:

1. Elites have more non-investable resources or high-risk period losses are more destructive.
2. The probability of winning wars is larger.
3. The level of misalignment is reduced.
4. High-risk periods are more frequent.
5. Monarchs have a lower share of investable resources.

The first observations are of immediate intuition: anything that directly gives \( E \) greater incentives to join a high-risk war will increase the frequency of successful negotiations for \( E \)' participation. Also, since participation is impossible in low-risk periods and possible in high-risk periods, we should observe more parliaments when the probability of high-risk increases. As we shall see in the empirical section, we will proxy the existence of high-risk wars with defeats in battles that occurs within our country or on an adjacent one and will test whether in these cases the probability of parliaments being called is indeed higher. The most interesting, albeit intuitive, comparative static result is the one with respect to \( k \): \( E \) has more at stake for small \( k \) and therefore has a greater incentive to join the war. Again, in the empirical section we will proxy for the share of resources between \( M \) and \( E \) in various ways and study the consequences for the likelihood of parliament being called.

\[24\]The proof of Proposition 1 is in the appendix.
3.2 Extreme-risk periods

The previous section shows that in our model RBP cannot happen in low- or high-risk periods if \( M \) and \( E \) value the future enough. In this section, we show that RBP can happen even when \( M \) and \( E \) care about the future, if they find themselves in an extreme-risk period. For \( E \), the choice is now between helping the current Monarch, against the possible gain in future periods from a new Monarch, who may be more aligned and/or more powerful. For \( M \), instead, the trade-off is between the possible need of committing to a future aligned foreign policy - by instituting RBP - and the decision to go it alone, increasing the risk of a defeat that will remove her altogether.

Proposition 1 shows that \( M \) will only choose a misaligned foreign policy if \( \gamma \geq \gamma^* \) so that the concession of RBP only makes sense if this is the case, otherwise the current monarch will already be voluntarily be choosing an aligned foreign policy in future periods. So, we begin our discussion by assuming that our country is in a situation where \( \gamma \geq \gamma^* \).

If agents are patient enough, then, the crucial difference between extreme-risk and normal periods is that now agents trade-off the impact of their decisions on what happens in the future, not on the outcome in the current period. Thus, a first consideration is what the new Monarch can offer \( E \): the more attractive the new Monarch is, the less likely that there is scope for \( M \) and \( E \) to come to an agreement that involves participation. This also means that there is scope for \( E \) to refuse participation even if the current monarch does concede RBP as it is possible the replacement Monarch will provide even better outcomes.

Besides the relative advantages of the new versus the current Monarchs, a first crucial factor in determining the possibility of RBP are ego-rents. As \( \gamma \) increases, \( M \) and \( E \) become more and more misaligned, in the sense that if \( E \) demands RBP in exchange for participation, \( M \)'s incentives to concede RBP decrease. The second crucial factor is the fraction of investable resources \( k \). If \( k \) increases, the importance of \( E \)'s participation to the war decreases and so the \( M \)'s willingness to concede RBP also decreases. Also, for large values of \( k \), the relative difference between foreign policies is reduced and \( E \) is relatively more concerned on protecting her non-investable resources \( \phi \). This means that \( E \) is less willing to refuse participation, and hence trigger the possibility of RBP. These intuitions lead to the following result:

**Proposition 2** Suppose \( \gamma > \gamma^* \) and \( \beta \approx 1 \). Then \( M \) will choose a misaligned foreign policy in an extreme-risk scenario and there exist a \( \tilde{\gamma} > \gamma^* \) and a \( \tilde{k} \) such that whenever \( \gamma > \tilde{\gamma} \) or \( k > \tilde{k} \) then RBP cannot obtain. Conversely, if \( \gamma \leq \tilde{\gamma} \) and \( k \leq \tilde{k} \) then we can define two further values \( k_T \) and \( k_\Delta \), with \( k_\Delta \geq k_T \) such that

- If \( k_T > 0 \) then RBP will obtain for all \( k \in \left[ k_T, \min(k_\Delta, \tilde{k}) \right] \)
- If \( k_T \leq 0 \) but \( k_\Delta > 0 \) then RBP will obtain for all \( k \in \left[ 0, \min(k_\Delta, \tilde{k}) \right] \)
- If \( k_\Delta \leq 0 \) then RBP will not obtain.

\(^{25}\)In the proof of Proposition 2, in the appendix, we nevertheless provide a more complete characterization. \(^{26}\)The proof is in the appendix, where \( \tilde{\gamma} , \tilde{k} , k_T \) and \( k_\Delta \) are all explicitly defined.
The first important observation is that while RBP cannot happen for large values of $k$, it need not happen for low values of $k$ either, even if $\gamma$ is small enough. This is because, if $k$ is very low, then $E$ deeply cares about the returns on investable resources and if the new monarch brings a significantly better probability of winning (that is, better diplomacy or simply better ability to utilize war resources) then not helping the incumbent, even if RBP is offered, might be worthwhile. This is possible even if the new Monarch is not aligned, compensating with this higher ability for the non-optimal choice of foreign policy. The most important consequence of proposition 2 for our purposes, however, is that it confirms that the relative bargaining power $E$ has against $M$ is in inverse relation with $k$. The fewer resources the Monarch has, the more willing it will be to make concessions to $E$ while at the same time $E$ will be more willing to extract concessions from the Monarch. These two effects will lead to more RBP except for the case when $k$ is so small and the potential new Monarch so attractive to $E$ that nothing the current Monarch can do will ensure $E$’s cooperation. In such cases, $E$ actively wishes to bring in a foreign monarch. One historical example of this in our data is Portugal in 1580, where a large section of the elites supported being ruled by the Spain rather than a native dynasty. This case is studied in detail in section 5.1. Another historical example occurred in medieval Genoa, as discussed in De Magalhães (2013).

We can summarize our results in the following observation:

**Observation 2** Absolutist regimes will only concede RBP when under direct threat of being replaced, which happens rarely. Even in such cases, however, such regimes will only do this when their misalignment is not extreme and when they have a relatively small share of the country’s resources. If the Monarch’s share of such resources is particularly low and the replacement Monarch is particularly attractive to the elites, the latter can go as far as trying to to remove the incumbent.

4 Empirical Analysis

4.1 Data

Our study covers the period from 1350 to 1700 AD with data from England, France, Portugal and Spain. We start in 1350 because this is year in which the plague, which arrived in Western Europe in 1348, had run its course. This common shock to our four countries helps to level their initial conditions regarding the economy, labor market, and feudal institutions (Voigtländer and Voth (2012), Acemoglu and Robinson (2013), and Scheidel (2017)). Moreover, as assumed in our model, it is only by 1350 that all our countries had parliaments with an established third estate (which we refer to as “the commons”) that had a clear say on taxation. In England, the requirement that Parliament should always include representatives of the counties and towns (burgesses) was introduced in 1327 and Edward III formally renounced the right to raise levies
without parliament’s consent in 1340 (Marongiu (1968), pp. 90-91).

In France, Marongiu (1968) describes the parliament of 1302 as the first Estates General (i.e., with the third estate present). In the Estates General held in 1355, for the first time, the third estate demands direct participation in government in exchange for accepting an increase of the salt tax to fund an army (Marongiu (1968), p. 100). In Portugal, the Cortes in 1331 were the first to give the commons a separate status, and the first at which they met separately from the other estates (Duarte (2003)). In Spain, during the first half of the 14th century, the King often met each estate separately instead of calling the entire Cortes (O’Callaghan (1989) pp. 36-39). With the death of King Alfonso XI in 1350 due to the plague, this practice became less common and the full Cortes took precedence.

We chose 1700 as the last year in our sample because by then a clear diversion in Parliamentary activity had occurred. In England, Parliament starts to meet every year; in Portugal, there are no meetings in the 18th century at all whereas in Spain there are 6 meetings before 1789 (during 17th century Spain parliaments were held in 52% of the years). Finally, in France, Parliament is last summoned by Louis XIV in 1649 and 1651, but in both occasions the King canceled the summons before Parliament convened. There are no further meetings of the three Estates until 1789. By that point, the threat of revolution and the need of redistribution starts to play a more important role in explaining political transitions then the threat of war (Acemoglu and Robinson (2000), Acemoglu and Robinson (2006), Aidt and Jensen (2014), and Aidt and Franck (2015)). Moreover, from around 1650 another mechanism starts to become prominent: the building of state capacity. Dincecco (2009) suggests that the degree of centralization played an important role from the 18th century onwards. Gennaioli and Voth (2015) also shows evidence that most of the growth in state capacity occurs after 1650, when a country military might and a country’s wealth become more closely linked.

The four countries in our study provide a benchmark to compare how institutionally similar countries in the start of the period diverged so much by the end of the 17th century. All four are in Western Europe with access to the Atlantic and participated actively in Atlantic trade and colonization (Acemoglu et al. (2005)). Parliaments developed independently in all four countries approximately in the same period. For most of the period, all four countries were Catholic and had to acknowledge Papal influence. The pair England-France shared territory for a large part of the period studied; their ruling houses had similar origins and competing claims for each others thrones. The aristocracy in both countries spoke similar languages and had land in both countries for part of the period. They were also involved in common wars. The pair Portugal-Spain shared a common origin, a similar language, and a similar foundation based on

27 In 1362 a statute established that Parliament must approve all taxation. See https://www.parliament.uk/about/living-heritage/, origins of parliament.

28 Dincecco (2009) shows that per capita revenues are more or less constant for most of the 17th century in England. Growth starts in 1688 with the Glorious Revolution. In France, growth in per capita revenues only picks up after the French Revolution.

29 Voigtländer and Voth (2012) also focus their study in the period 1350-1700.
reconquering lost territory from a common opponent. Their royal houses were closely related for most of the period with good claims on each other’s throne.

Any other countries in Western Europe differ from these four countries in fundamental ways, and some of these differences imply that their experience is not directly covered by our theoretical model. Countries that existed as a polity throughout most of the period we study such as Denmark, Sweden, and Austria, for example, have parliaments that only started to convene much later, respectively in the 15th, 16th, and 16th centuries (Van Zanden et al. (2012)); none participated fully in Atlantic colonization; and Parliament activity was lower on average than the four countries we study. The Netherlands had a highly active parliament, but only gained independence in 1581 and then as a Republic, a different institutional setup. Germany and Italy did not have consolidated polities until after the period we study even though there was Parliamentary activity across their different regions (Van Zanden et al. (2012)). Eastern European countries differed from the four countries we study in systematic ways already at the beginning of the period and fundamentally so after 1500 (Acemoglu et al. (2005)).

We manually coded yearly parliamentary activity by creating the variable $\text{Parliament}_{it}$, which takes value 1 if a Parliament was summoned in country $i$ in year $t$. For England we use Given-Wilson et al. (2005) for parliaments between 1350 and 1504, and Houses of Parliament on-line resources for parliaments after 1504. For France we use Marongiu (1968) and Boule (1845) for parliaments before 1421 and Major (1960) for parliaments thereafter. For Portugal we use Valério (2001). For Spain we use the appendix of the Enciclopedia Universal Ilustrada. In comparison with Van Zanden et al. (2012), we have the same sources for Portugal and Spain while for France we added Boule (1845). Our sources for England are different because they are more detailed.

We also manually coded from printed sources all 337 battles in Bradbury (2004) and Clodfelter (2002) involving any of our four countries according to their location, characteristics, and outcome (England: 131 battles, France: 99, Portugal: 38, and Spain/Castile-Leon: 69). Battles are defined as territorial if they took place within the country or in a neighboring country with a shared land border. Naval battles immediately off the coast of the home country are also counted as territorial. Hence the variable $\text{Territorial battles}_{it}$ takes value 1 if there were a territorial battle in country $i$ in year $t$. A battle is defined as naval if it took place in European waters but not immediately off the cost of country $i$. Thus, $\text{Naval battles}_{it}$ takes value 1 if there were such battle involving country $i$ in year $t$ or 0 otherwise. Similarly, $\text{European battles}_{it}$ takes value one if it is a land battle involving country $i$ but taking place somewhere in Europe away from $i$. Colonial battles$_{it}$ are either naval, territorial battles, or revolts involving country $i$ in year $t$ but taking place in another continent. We also code battles as internal if they were described as part of civil wars, or wars of succession (e.g. the War of the Roses, the English Civil War, the

---

30http://www.histparl.ac.uk/research/parliaments.
31Bradbury (2004) is the source for the period before 1500 and Clodfelter (2002) for the period after 1500.
32For example, territorial battles in Normandy during the One Hundred Years War are coded as territorial for England.
Huguenot rebellion. \textit{Battles internal}_{it} takes value 1 if these events took place in country \( i \) in year \( t \).

Data on GDP per-capita and the share of agriculture in England’s economy was made available for our period of interest by [Broadberry et al. (2015)]. Álvarez-Nogal and De La Escosura (2013) constructs yearly agricultural consumption and GDP per capita for Spain for the same period.\footnote{Álvarez-Nogal and De La Escosura (2013) also have estimates of the share in agriculture for Spain but this data is not available in their supplementary material. The authors were contacted and we were informed that these data are preliminary and consists of averages over longer periods and, therefore, are not suitable for our regressions based on yearly observations.} We were unable to find yearly economic data for Portugal and France for our period. As an alternative, we looked for weather data. Climate researchers use different indicators to reconstruct historical rainfall estimates and we take these estimates as a proxy for variations in yearly agriculture output. We were able to find reconstructed rainfall data for England, France, and Spain. Labuhn et al. (2016) uses oxygen isotope ratios in oak tree rings in Fontainebleau and Angouleme from 1326 to 2000. Wilson et al. (2013) uses ring-width data measured from oak trees in southern England from 663 to 1925. Romero-Viana et al. (2011) uses Lake La Cruz (between Madrid and Valencia) calcite lamination thickness from 1579 onward. From these datasets, we create an indicator variable that takes value 1 if estimated precipitation was at least one standard deviation away from the country mean.

\textbf{Table 1: Parliament, Battles, and Agriculture in Western Europe (1350-1700) - Summary}

\begin{table}[h]
\centering
\begin{tabular}{lcccccccc}
\hline
\ & England & & France & & Portugal & & Spain & \\
\hline
Percent of years with & pre-1500 & & post-1500 & & pre-1500 & & post-1500 & \\
Parliament & 56 & & 53 & & 21 & & 10 & \\
Territorial battles & 13 & & 3 & & 11 & & 8 & \\
Naval battles & 1 & & 7 & & 1 & & 2 & \\
European battles & 2 & & 3 & & 3 & & 6 & \\
Colonial battles & 0 & & 6 & & 1 & & 4 & \\
Civil/Revolts battles & 7 & & 7 & & 2 & & 4 & \\
Agriculture (% of GDP) & 45 & & 38 & & - & & - & \\
Number of observations & 151 & & 151 & & 199 & & 199 & \\
\hline
\end{tabular}
\end{table}


In Table 1 we present summary statistics for our data. For each country, we provide one column for the period 1350-1500 and on column for the period 1501-1699. The country that calls parliament more often is Spain. In both periods parliaments meets 60% of the years. England follows with approximately 55% of the years having a parliament in both periods. France and
Portugal see a clear decrease in parliamentary activity between the two periods, respectively from 21% to 10% and from 44% to 13%. Territorial battles (in the country or close to its border) are more common in England and France (respectively 7% and 9% of the years for the entire period) than in Portugal and Spain (2%). Naval battles occur less frequently – no higher than 7% of the years for England in the post-1500 period. European battles (that is, not within the country nor in its immediate borders) are more frequent in periods in which countries are relatively richer than its neighbors, 6% of years for France post-1500 and 12% for Spain post-1500 but no higher than 3% in other instances. Internal battles (part of civil wars or revolt) are frequent in England (7% across the period), followed by France (3%) but are rare in Portugal and Spain. Finally, in row 7 we can see that the share of agriculture decreases in England when comparing the two periods (45% to 38%), but stays constant in Spain (57% and 56%).
4.2 Results

We estimate with OLS the following linear probability model:

$$\text{Parliament}_{it} = \beta' X_{it} + \epsilon_{it},$$

where \( \text{Parliament}_{it} \) is our dependent variable that takes value 1 with Parliament in country \( i \) convened in year \( t \) and 0 otherwise. The matrix \( X_{it} \) includes, dependent on the specification: the battle variables defined above, the lag dependent variable, \( \text{Parliament}_{it-1} \), the share of agriculture (for England), agriculture consumption (Spain) and GDP per capita (available for England and Spain), rainfall proxies, year and country fixed effects, and Monarch fixed effects. Standard errors are clustered at the level of the Monarch.

The main result is a negative statistically significant contemporaneous correlation between a Parliament being called and there being a territorial defeat in that year.\(^{34}\) In Table 2, column 1, we can see that the baseline probability of a Parliament being called – when pooling all four countries for the entire period 1350-1700 – is 38% in a given year. This probability doubles in a year with a territorial defeat. The result is robust to including all other battle variables in column 2, and to including year and country fixed effects in column 3. In Table 2 column 4, we also add a lag dependent variable, i.e., and indicator variable for whether parliament was summoned in the previous year.\(^{35}\) In the pooled sample there seems to be some persistence in the calling of Parliaments. A Parliament in the previous year increases the probability of a Parliament the current year by approximately 50%. This is a similar magnitude to having a territorial defeat in the current year.\(^{36}\)

The partial correlation between a territorial defeat and parliament being called is also robust to splitting the sample in two, pre and post 1500, Table 2 columns 6 and 7. This robustness is important for three reasons. First, the year 1500 is often used to delineate the start of the modern era. Second, we use two different sources for battles, one for pre 1500 (Bradbury (2004)) and one for post 1500 (Clodfelter (2002)). Third, the relationship between state formation and wars (but not parliamentary activity) has been the focus of empirical studies for the period post-1500 (Karaman and Pamuk (2013) and Gennaioli and Voth (2015)). Related to this literature, the point estimate of the lagged Parliament for the period pre-1500 is close to zero and not statistically significant (Table 2 column 6). This suggests that the calling of Parliament before 1500 may have been driven by specific necessities instead of institutional build-up whereas post-1500 Parliaments may have been able to arrange to meet again on their own accord or in order to deal with changes in underlying circumstances. For example, as suggested in Karaman and Pamuk (2013) and Gennaioli and Voth (2015) warfare may have become more complex in the

\(^{34}\)This is exclusively a contemporaneous correlation (Appendix, Table B1).

\(^{35}\)Our large time dimension suggests we do not have to worry about the incidental parameter problem or the Nickell bias (Baltagi (2008)).

\(^{36}\)In Table B2 in the Appendix we show these results are robust to probit and logit specifications and to the addition of monarch fixed effects.
latter period, requiring multiple sessions of Parliament. Thus the strong effect of the lagged dependent variable in the post-1500 period is further evidence that state capacity was indeed being built to deal with new circumstances.

Table 2: Battle defeats and the calling of Parliaments

<table>
<thead>
<tr>
<th>Dependent Variable: Parliament held in a given year: 1350-1700</th>
<th>pre 1500</th>
<th>post 1500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag1 Parliament</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Territorial</td>
<td>-0.06</td>
<td>-0.08</td>
</tr>
<tr>
<td>Territorial defeat</td>
<td>0.34</td>
<td>0.36</td>
</tr>
<tr>
<td>Naval</td>
<td>-0.18</td>
<td>0.12</td>
</tr>
<tr>
<td>Naval defeat</td>
<td>-0.19</td>
<td>0.11</td>
</tr>
<tr>
<td>Abroad Europe</td>
<td>-0.09</td>
<td>0.06</td>
</tr>
<tr>
<td>Colonial</td>
<td>-0.10</td>
<td>0.06</td>
</tr>
<tr>
<td>Internal</td>
<td>0.21</td>
<td>0.17</td>
</tr>
<tr>
<td>Constant</td>
<td>0.38</td>
<td>0.37</td>
</tr>
<tr>
<td>Country dummies</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>century dummies</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>Number of observations</td>
<td>1400</td>
<td>1400</td>
</tr>
</tbody>
</table>

Note: England, France, Portugal, Spain (parliaments of Leon-Castile and Catalonia from 1469). Standard errors clustered by monarch. * p < 0.1 ** p < 0.05 *** p < 0.01

The correlation between a territorial defeat and Parliament being called is also robust for country regressions (Table 3). In Table 4, we document the relationship between calling Parliament and the economy. Our ideal variable is the share of agriculture as it comes closest to the parameter k in our model. According to the model, a high share of agriculture implies that the Monarch finds it easier to observe and appropriate a larger share of the country’s income, be it through taxes, expropriation, or forced loans. A low share of agriculture implies that a higher share of the country’s income is from commerce, finance, and proto-industries. Income from these sources are harder to verify and hence, harder for the Monarch to appropriate. Hence, our model suggests that Parliament must be called more often when bargaining for these resources is...
Table 3: Battle defeats and the calling of Parliaments - by country

<table>
<thead>
<tr>
<th>Dependent Variable: Parliament held in a given year</th>
<th>England</th>
<th>France</th>
<th>Portugal</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag1 Parliament</td>
<td>0.08</td>
<td>0.32</td>
<td>0.16</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.06)**</td>
<td>(0.04)***</td>
<td>(0.10)**</td>
</tr>
<tr>
<td>Territorial</td>
<td>0.15</td>
<td>-0.02</td>
<td>0.08</td>
<td>-0.09</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.02)</td>
<td>(0.21)</td>
<td>(0.24)</td>
</tr>
<tr>
<td>Territorial defeat</td>
<td>0.18</td>
<td>0.14</td>
<td>0.58</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>(0.08)**</td>
<td>(0.07)*</td>
<td>(0.22)**</td>
<td>(0.26)*</td>
</tr>
<tr>
<td>Naval</td>
<td>0.16</td>
<td>-0.06</td>
<td>0.76</td>
<td>-0.39</td>
</tr>
<tr>
<td></td>
<td>(0.13)</td>
<td>(0.07)</td>
<td>(0.04)***</td>
<td>(0.15)**</td>
</tr>
<tr>
<td>Naval defeat</td>
<td>-0.06</td>
<td>0.02</td>
<td>-</td>
<td>0.73</td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td>(0.07)</td>
<td>-</td>
<td>(0.21)***</td>
</tr>
<tr>
<td>Abroad Europe</td>
<td>-0.03</td>
<td>0.03</td>
<td>-</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.07)</td>
<td>-</td>
<td>(0.07)</td>
</tr>
<tr>
<td>Colonial</td>
<td>0.09</td>
<td>-0.05</td>
<td>-0.03</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>(0.24)</td>
<td>(0.02)*</td>
<td>(0.06)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Internal</td>
<td>0.17</td>
<td>0.09</td>
<td>-</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.12)</td>
<td>-</td>
<td>(0.29)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.64</td>
<td>0.13</td>
<td>0.32</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>(0.07)**</td>
<td>(0.05)**</td>
<td>(0.12)**</td>
<td>(0.11)***</td>
</tr>
<tr>
<td>century dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.09</td>
<td>0.15</td>
<td>0.18</td>
<td>0.10</td>
</tr>
<tr>
<td>Number of observations</td>
<td>350</td>
<td>350</td>
<td>350</td>
<td>350</td>
</tr>
</tbody>
</table>

Note: England; France; Portugal; Spain (parliaments of Leon-Castile and Catalonia from 1469). Standard errors clustered by king. * p < 0.1 ** p < 0.05 *** p < 0.01
more important, i.e., when the share of agriculture is low. The results for England can be seen in column 1 of Table 4. As predicted by our model, the share of agriculture is negatively related to a Parliament being called in a given year. For Spain, column 3, we have estimates of agricultural goods consumption per capita. Since we control for estimates of GDP as well, they have a similar interpretation as the share of agriculture. We find that in years with above average agricultural consumption (years of high yields), Parliaments in Spain are less likely to be called. For France we have estimates of rainfall. The variable ‘Unusual Rain (1sd)’ takes value 1 if the estimated rainfall in that year was 1 standard deviation above the sample mean. In column 2 we can see that years with too much or too little rainfall (and so bad for agriculture), Parliament is more likely to be summoned. In column 4 we run a pooled regression using the variable ‘Unusual Rain (1sd)’ for all three countries and the result found for France stands.

Table 4: Agriculture and the calling of Parliaments

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>France</th>
<th>Spain</th>
<th>Pooled-Rain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag1 Parliament</td>
<td>0.03</td>
<td>0.32</td>
<td>0.20</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td>(0.06)***</td>
<td>(0.08)**</td>
<td>(0.08)***</td>
</tr>
<tr>
<td>Territorial</td>
<td>0.13</td>
<td>-0.01</td>
<td>-0.25</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.02)</td>
<td>(0.23)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Territorial defeat</td>
<td>0.16</td>
<td>0.14</td>
<td>0.66</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>(0.09)*</td>
<td>(0.07)*</td>
<td>(0.23)**</td>
<td>(0.07)*****</td>
</tr>
<tr>
<td>Share Agriculture</td>
<td>-0.02</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(0.01)***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agric. cons. per capita</td>
<td>-</td>
<td>-</td>
<td>-0.01</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.00)***</td>
<td></td>
</tr>
<tr>
<td>GDP per capita</td>
<td>0.07</td>
<td>-</td>
<td>0.02</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(0.04)*</td>
<td></td>
<td>(0.01)*</td>
<td></td>
</tr>
<tr>
<td>Unusual Rain (1sd)</td>
<td>-</td>
<td>0.15</td>
<td>-</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.08)*</td>
<td></td>
<td>(0.04)**</td>
</tr>
<tr>
<td>Constant</td>
<td>1.17</td>
<td>0.10</td>
<td>0.15</td>
<td>0.43</td>
</tr>
<tr>
<td></td>
<td>(0.45)**</td>
<td>(0.04)**</td>
<td>(0.94)</td>
<td>(0.07)***</td>
</tr>
<tr>
<td>country dummies</td>
<td>No</td>
<td>no</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>century dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.13</td>
<td>0.16</td>
<td>0.14</td>
<td>0.27</td>
</tr>
<tr>
<td>Number of observations</td>
<td>350</td>
<td>350</td>
<td>350</td>
<td>822</td>
</tr>
</tbody>
</table>

Note: Data on agriculture in England: [Broadberry et al. (2015)]; in Spain: Álvarez-Nogal and De La Escosura (2013); and rainfall data for England: Wilson et al. (2013); Spain (from 1579): Romero-Viana et al. (2011); and France: Labuhn et al. (2016). Naval, colonial, and battles abroad included in regression. Standard errors clustered by king.∗ p < 0.1 ∗∗ p < 0.05 ∗∗∗ p < 0.01
5 Discussion of Historical Case Studies

In this section we describe two transitions under extreme-risk conditions for Portugal and England. We also discuss more broadly why Rule by Parliament did not take hold in either France or Spain.

5.1 Portugal 1580: The Elites Prefer a Foreign Monarch

Portugal had a very active Parliament in the pre-1500 period (Figure 2a) while it expanded its trading empire in the Mediterranean and down the coast of Africa by a series of naval battles. By opening up a direct trade route to Asia it became one of the wealthiest countries in Europe and faced little foreign threat during the first half of the 16th century.

The death of Dom Sebastian I in 1578 without a male heir started a succession crisis. Three main claimants soon emerged: Dona Catarina, Duchess of Bragança; Dom Antonio Prior do Crato, illegitimate grandson of former King Manuel I; and Philip II, King of Spain, the closest male relative to the dead King, but from his mother side. Philip eventually won the Portuguese throne through a skillful strategy of bargaining while showing military superiority. The Spanish army entered Portuguese territory while the Portuguese Parliament was still discussing the validity of the multiple claims. Soon, Philip negotiated with Dona Catarina for her to drop her claim but fighting continued as he and Dom Antonio failed to reach a compromise. Dom Antonio had himself declared King without the consent of Parliament but he was soon defeated by the Spanish forces, when few in the country joined his cause. Ramos (2009) (pp. 270) summarizes the event as follows: “...one must not forget the constant armed threat, but it is certain that an important part of the Portuguese elite negotiated with Philip their becoming a part of a Catholic Monarchy that would cover the entire [Iberian] Peninsula.”

The unification of the Portuguese and Spanish crowns under Philip II is an example of a case in which the country’s Elite chose a military strong foreign Monarch instead of someone from the incumbent dynasty. This confirms the predictions of our model: when the incumbent Monarch or dynasty faces a misaligned - but much stronger - possible replacement future returns for the Elite increase as victory in future wars is more likely. Veen et al. (2000) suggests exactly this in the case of the Portuguese mercantile Elite joining the Spanish crown: “To them [New Christian Portuguese], satisfying the need for silver of the Habsburg monarchy became a more attractive proposition than investment in the Carreira da India.”

By the time Portugal reconquered its independence in in 1640, its role as an international trading nation was in decline. In Figure 2a we can see the drop in the number of ships to Asia. Parliament was called often both during the succession crisis in 1580 and during the independence struggles around 1640 but its presence declined thereafter.

38 Self-translation from the Portuguese.
39 We normalized the number of ships sent to Asia and the Americas so that they take value between 0 and 1. The number of ships to Asia is divided by 157 the highest number achieved in any decade by a country in our sample (England 1681-1690).
Figure 2: Parliament activity and Atlantic Trade in England, France, Portugal, and Spain

Note: 11-year moving averages. A value of 1 indicates that a parliament was held in the past five years, the current year, and the future five years. Data on Parliaments compiled by authors. Sources are described in Section 4.1. Data on ships to Asia by decades from Steensgaard (1970). Normalized so that the period with highest number for a given country (157 ships from England in 1681-1690) is normalized to 1. Data on five-yearly ships to America is from Tracy (1993). Normalized so that the period with highest number (193 ships in 1606-1610) is normalized to 1.
5.2 England 1688: The Glorious Revolution

England had a very active Parliament until the end of the One-Hundred Years War (Figure 2c). There is a drop in Parliamentary activity after that – with the exception of the period around the succession crisis due to the death of Henry VIII. Activity picks again during the Civil War and reaches its peak after the Glorious Revolution.

The transition to Rule by Parliament in England took place under William of Orange in 1688. While William was sitting on the English throne, James II had fled into exile in France. The English Elite had to choose between a Catholic monarch who wanted an alliance with France - the strongest military power of the time - or a Protestant monarch and his alliance with the weaker Dutch Republic. In Table 5 we can see that by 1700 France had by far the largest army (larger then the sum of England and the Dutch Republic). All three countries had similar size navies.

Looking at the situation through the lens of our model, one could therefore argue that the Elite could negotiate with William while holding a strong bargaining position: without their support, James II and his misaligned foreign policy would be reinstated, but the alliance with militarily strong France would also bring benefits to them, so that the threat was credible. Compatibly with the analysis in our model, William then granted Rule by Parliament in exchange for the Elite’s support in his war against France. The outcome was an institutional setting where Parliament finally had a decisive advantage over the Monarch, as described in North and Weingast (1989) and Cox (2012).

<table>
<thead>
<tr>
<th>Country</th>
<th>1550</th>
<th>1700</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>army</td>
<td>navy</td>
</tr>
<tr>
<td>England</td>
<td>41</td>
<td>25</td>
</tr>
<tr>
<td>France</td>
<td>43</td>
<td>14</td>
</tr>
<tr>
<td>Dutch Republic</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Spain</td>
<td>145</td>
<td>18</td>
</tr>
</tbody>
</table>

Source:?

One could also ask why James II did not hand over power earlier in the reverse situation, when faced with the threat of invasion from the Dutch? In our model, the level of misalignment between Monarch and Elite is a crucial variable and a Monarch who enjoys high ego-rents may choose go it alone over handing power to parliament. It is reasonable to assume that James II faced a more difficult decision as he was a Catholic King facing a Protestant Parliament, a Parliament that, in charge, would have made a return to Catholicism impossible. William of Orange did not have a significant religious or political misalignment with Parliament and, 40

because of his background as Stadtholder in the Dutch Republic, was accustomed to having to
deal with powerful Parliaments.

The reason that the commercial Elites were able to play such a key role in the Glorious
Revolution (and earlier during the Civil War) is clear in Figure 2c. Inter-continental trade
increased substantially and rapidly during the 17th century. The number of ships to Asia goes
from near 0 in the decade 1601-1610 to 193 in the decade of 1681-1690. At the same time, the
share of agriculture in England started to decline. Thus indicating a rapidly growing relative
strength of commercial and financial wealth.

5.3 France

France had an active Parliament during the One-Hundred Years War (Figure 2b). After 1450
its activity declines but shows signs of persistence, in particular during the period around the
French Wars of Religion in the mid 16th century. From the moment Louis XIV becomes King in
1638 Parliament convened twice in 1649 and 1651, but it never met. It would not meet until the
French Revolution.

Why didn’t a similar transition to rule by parliament occur in France around the same period?
Instead, there seems to have been a transition to Absolutism. According to our model, there
are two reasons. First, France relied heavily on agriculture throughout the period. According
to Maddison (2007), even by the year 1700, France had high share of the population working in
agriculture, 63% (the share of the population in agriculture is our best proxy for the agriculture
share of GDP). For reasons outside the scope of this paper, France did not develop a commercial
sector to the same extent that England did in the 16th and 17th century. As it can be seen in
Figure 2b, France sent a considerably smaller number of ships to Asia (approximately 30% of the
total sent by England by the year 1700). In our model, this low level of commercial development
is associated with a high \( k \), which makes the Monarch less likely to need to bargain with the
Commercial Elites, in high-risk or even extreme-risk periods.

The second reason is that France became the undisputed strongest military power by the end
of the 17th century, which had not been the case in the preceding centuries. This can be seen in
Table 5. This implies that the probability of being in a high-risk (or extreme-risk) period in 17th
century France was low. It is hard to think of a credible external threat to the French throne
for that period, i.e., a threat of an alternative dynasty to the ruling Bourbons that would bring
with it, a higher probability of winning wars or a more aligned foreign policy. This may explain
why absolutism consolidated in France: a high \( k \), a very strong military and so low probability
of being in a high-risk (extreme-risk) period and, on top of that, the lack of a credible dynastic
alternative.

---

\[ \text{Maddison} (2007) \] shows direct evidence from the Civil War period that parliamentarians who were shareholders of
overseas assets tended to support reforms that favored Parliament over Absolutism.
5.4 Spain

Our contention is that Spain was on track towards Rule by Parliament until the discovery of silver and gold in vast quantities in the Americas in the early 16th changed the economic and institutional trajectory. Spain had a institutional setup that was relatively open to its city and commercial Elites until the discovery of the silver in America. At the beginning of our period of observation, Spain has a need to attract migrants to settle the land conquered from the Moors and so did not begin from a fully-blown medieval feudal system. For the same reason, Spanish cities had traditionally enjoyed a series of liberties vis-a-vis the Monarchy. The Cortes, the Spanish equivalent of a Parliament, played an important part in policy and in financing the Monarchy itself. Aragon was already major trading power when it joined the kingdom of Castile. Indeed, the discoveries in the new world themselves were an accident in the attempt to open new trade routes to Asia.

Silver changed the equilibrium between cities such as Barcelona, the Cortes, and the Monarchy. In the language of our model, the parameter $k$ increased substantially. The Spanish Crown’s main source of wealth from then on came from silver mines in South America. Even when not directly belonging to the Crown, the wealth from the silver mines was observable and verifiable and therefore easily controlled by the Monarch.\textsuperscript{42} The process began in the early 16th and went on until the mid 17th century. The share of revenue that required approval by the Cortes went from 63% in 1517, down to an average of 30% in the remaining of the 16th century and never goes above 50% in the 17th century (see Thompson (1994) Table 3, pg. 165). Drelichman and Voth (2014) (p.7) explicitly note that “...silver revenues flooded in on a scale that made compromises with Castile’s representative assembly-The Cortes-seemingly expendable”.

As predicted by our model, the silver allowed Phillip to bypass (and actually co-opt) the Cortes and to follow his military policy unconstrained so that instead of securing trading routes and further colonization, the silver wealth was used to pursue costly dynastic wars in European territory. Besides the resource curse on the economy, there was a clear resource curse on the political institutions with the Cortes losing powers in its dealings with the monarch (Drelichman and Voth (2008) and Drelichman and Voth (2014)). When the silver ran out Spain had lost most of its manufacture and Aragon, now part of Spain, had lost its place as a leading trading nation to England and the Netherlands. Spain became a backward agricultural nation where it took very long for any form of consensual institutions to develop. In Figure 2d we see that, beginning in the year 1600, there is a consistent and rapid drop in the number of ships to the Americas, indicating a declining commercial sector. Further, in the 16th century, Spain also had a significant military power. As can be seen in Table 5 by 1550 Spain had the by far the largest armed forces. As for France in the 17th century, it is hard to imagine a credible threat to the Spanish monarch losing his throne during the 16th century.

\textsuperscript{42}On a few occasions the King expropriated entire shipments of bullion.
6 Concluding Remarks

Political transitions to Rule by Parliament as described in our model occurred in England in the 17th century and arguably in other polities in periods further back in time, e.g., Athens in 461/462 BC and the Venice in 1172 (see De Magalhães (2013)). These transitions are rare and require very specific conditions to take place. Our model helps us narrow down these conditions. First, the country must be in a weak position militarily, otherwise there is no credible threat of an alternative invading ruler. Second, the country’s Commercial Elite must be relatively important compared to its agricultural sector, otherwise the ruler has no need to bargain. Third, the alternative to the current ruler cannot be too attractive for the Elite either as it is may be better for the Commercial Elite to live under absolutism with a militarily strong ruler than with Rule by Parliament under a weaker one. This was the case of Portugal in 1580, as discussed above. Another example comes 13th and 14th century Genoa (see De Magalhães (2013) for a discussion). Finally, the current Monarch must be misaligned with the Elite, but not too misaligned at it may prefer to go it alone instead of bargaining with Parliament. Our model makes it explicit that transitions to Rule by Parliament in historical times were extremely rare because they required Goldilocks conditions: moderate military strength, a significant but not extreme misalignment between Monarch and Commercial Elites, and an economy where Commercial Elites were sufficiently important. If all these conditions held and an extreme-risk event occurred, i.e., a looming foreign invasion, then a transition to RBP was possible.

A further contribution of our model is to highlight that the same forces that shape a (rare) transition to Rule by Parliament in the event of an extreme-risk scenario, are behind the importance of Parliaments in relatively absolutist regimes. We cannot empirically test models that predict transitions to Rule by Parliament in historical times as these events are extremely rare but since the institutional setup used to explain RBP is the same that is used to explain the regular calling of Parliament, we can empirically test predictions of the model for the much more frequent periods where the institutional setup is stable and there are no extreme-risk events. Thus we can – indirectly – provide an empirical test for a model that accounts for rare events of political transitions. Here, we show two main empirical findings. First, battle defeats in a country’s own territory or on its immediate border – our proxy for high-risk – are positively correlated with there being Parliament that year. Second, years of relatively low agricultural production (or high commercial/manufacture output) are also positively correlated with Parliament being called. Both results support the empirical predictions of our model and also suggest that military and economic events help explain the institutional path of these countries.

These two types of events, military defeats and agricultural output variation can be thought of as random shocks. Indeed, compatibly with both the model and our empirical results, it is defeat in territorial battles, not battles as such, that are related to Parliament being called. Gennaioli and Voth (2015) discuss how battles should be seen as having probabilistic outcomes, particularly in the period we study. Historically, agriculture output has mostly been driven by random
variations in rainfall patterns. These shocks, in turn, can be thought of as critical junctures (see Acemoglu and Robinson (2013) and Capoccia (2016)): winning or losing particular territorial battles (and/or facing a low agriculture output) has implications on Parliament being called that year, and once it has been called, further institutional changes may be set in motion. Hence, another interpretation of our empirical results is that we provide evidence that probabilistic events such as defeats in battle and generalized crop failures are good candidates for critical junctures in explaining institutional development.

The model also helps us discuss some specific critical junctures. Had the One-Hundred Year War ended with England conquering most of France, it becomes hard to imagine - according to the model - that Parliament would have been as active as it turned out to be in England or that a joint England-France would have evolved to a full blown Rule by Parliament when it did. The Monarch of a victorious England-France would rule a country with a higher share of agriculture and with the ability of raising a significant army, thus reducing the need of Parliament. Conversely, a losing but independent France that was small and centered in the Seine valley might have required more Parliament activity do to its vulnerability. Had Dom Sebastião not died in a colonial battle defeat in 1578, the Portuguese Commercial Elite would have continued to thrive and Parliament would have been more active than it became under Spanish rule. If no silver or gold had been found in the Americas, Spain may have continued to be a trading and manufacturing nation with an active Parliament.

An important caveat should be added here. This is that the critical juncture interpretation of our results is more suitable for the post-1500 period. According to our results, in the pre-1500 era, we find that Parliament being called in a given year is not related to whether it had been called in the previous year. This lack of path dependence suggests that these military and economic shocks may have had little long term impact in setting off institutional divergence between countries in the pre-1500 era. In the post-1500 era, on the other hand, path dependence becomes important. Parliament being held in a given years increases the probability of it being held again in the succeeding year. A single shock of military-defeat/crop-fail may lead to Parliament being called, thus increasing the probability of another being called, and thus potentially strengthening the institutional support for regular parliament.

References


7 Appendix A

In the appendix we prove propositions 1 and 2 under more general conditions than those discussed in the main part of the paper so that the statements there are spacial cases of those considered here.

Proof of Proposition 1 Under absolutism $M$ participates, while $E$ can participate in low-risk, high-risk, neither or both. Also, this will depend on the foreign policy. Let

$$W^F_j(x^E_k(f), x^E_l(f))$$
$$W^M_j(x^E_k(f), x^E_l(f))$$

be $E$ and $M$’s continuation values in a generic period, when there is absolutism, when $f$ is the foreign policy and $E$’s decision is $x^E_k(f)$ in high-risk periods and $x^E_l(f)$ in low-risk periods. Since $\tau^E_j(1, 1)$ represents transfers from $M$ if $E$ agrees to join the war and $\tau^E_j(0, 1)$ the transfer if $E$ does not, then $M$’s utility is clearly maximized if $\tau^E_j(0, 1) = 0$ and so we will denote with $\tau^E_j = \tau^E_j(1, 1)$ for $j \in \{h, l\}$.

Given this we have that, net of possible ego-rents

$$W^M_j(1, 1) = \frac{1}{1 - \beta} \left\{ \pi \left[ p \rho - \tau^E_j \right] + (1 - \pi) \left[ p \rho - \tau^E_l \right] \right\}$$
$$W^M_j(0, 1) = \frac{1}{1 - \beta} \left\{ \pi pk \rho + (1 - \pi) \left[ p \rho - \tau^E_l \right] \right\}$$
$$W^M_j(1, 0) = \frac{1}{1 - \beta} \left\{ \pi \left[ p \rho - \tau^E_h \right] + (1 - \pi) pk \rho \right\}$$
$$W^M_j(0, 0) = \frac{1}{1 - \beta} \left\{ \pi pk \rho + (1 - \pi) pk \rho \right\}$$

and

$$W^E_j(1, 1) = \frac{1}{1 - \beta} \left\{ \pi \left[ \phi - (1 - p) l + \tau^E_h \right] + (1 - \pi) \left[ \phi + \tau^E_l \right] \right\}$$
$$W^E_j(0, 1) = \frac{1}{1 - \beta} \left\{ \pi \left[ 1 - k + \phi - (1 - pk) l \right] + (1 - \pi) \left[ \phi + \tau^E_l \right] \right\}$$
$$W^E_j(1, 0) = \frac{1}{1 - \beta} \left\{ \pi \left[ \phi - (1 - p) l + \tau^E_h \right] + (1 - \pi) (1 - k + \phi) \right\}$$
$$W^E_j(0, 0) = \frac{1}{1 - \beta} \left\{ \pi \left[ 1 - k + \phi - (1 - pk) l \right] + (1 - \pi) (1 - k + \phi) \right\}$$

We begin with the case where $E$ participates in both HR and LR periods and then consider the case where $E$ only participates in HR periods: since the reservation utility from non-participation is lower in HR periods, it will never be the case that $E$ only participates in LR periods. Nash bargaining implies that in LR periods, conditional on participation in HR periods, $\tau^E_j$ maximizes

$$\left( p \rho - \tau^E_j + \beta W^M_j(1, 1) - pk \rho - \beta W^M_j(1, 0) \right)$$
$$\times \left( \tau^E_j + \phi + \beta W^E_j(1, 1) - (1 - k + \phi) - \beta W^E_j(1, 0) \right)$$
subject to
\[ p\rho^f - \tau^f_l + \beta W^M_f (1,1) - p\rho^f - \beta W^M_f (1,0) \geq 0 \iff p\rho^f (1-k) \geq \tau^f_l \]
\[ \tau^f_l + \phi + \beta W^E_f (1,1) - (1-k+\phi) - \beta W^E_f (1,0) \geq 0 \iff \tau^f_l \geq 1-k \]

It is easy to see that there exist transfers that can satisfy both constraints iff \( p\rho^f \geq 1 \). In HR periods, conditional on participation in LR periods, \( \tau^f_h \) maximizes
\[
\left( p\rho^f - \tau^f_h + \beta W^M_f (1,1) - p\rho^f - \beta W^M_f (0,1) \right) 
\times \left( \phi - (1-p) l + \tau^f_h + \beta W^E_f (1,1) - (1-k+\phi) + (1-pk) l - \beta W^E_f (0,1) \right)
\]
such that
\[
\tau^f_h \geq (1-k) (1-pl)
\]

Now, since in aligned wars to \( p\rho^a = pR > 1 \) while in misaligned wars \( p\rho^{-a} = pr < 1 \) by assumption, and \( E \)'s participation constraints are weaker for high-risk periods (since \( 1-pl < 1 \)), then a solution exists only for aligned wars and by solving the problem it is easy to see that it is equal
\[
\hat{\tau}^a_l = \frac{1}{2} (1-k) (pR + 1) \text{ and } \\
\hat{\tau}^a_h = \frac{1}{2} (1-k) (pR + 1 - lp)
\]

It is easy to check that these transfers satisfy the participation constraints and (since \( l > 0 \)) that \( \hat{\tau}^a_h < \hat{\tau}^a_l \).

So, while aligned wars will lead to \( E \)'s participation in both high and low risk periods, this is not the case of misaligned wars. As discussed, \( E \)'s participation is easier to guarantee in HR periods. So, focusing on misaligned wars, then conditional on non-participation in LR periods, \( \tau^{-a}_h \) maximizes
\[
\left( p\rho^a - \tau^{-a}_h + \beta W^M_a (1,0) - p\rho^a - \beta W^M_a (0,0) \right) 
\times \left( \phi - (1-p) l + \tau^{-a}_h + \beta W^E_a (1,0) - (1-k+\phi) + (1-pk) l - \beta W^E_a (0,0) \right)
\]

40
subject to
\[ pr - \tau_h^{-a} + \beta W^M_{-a} (1,0) - pkr - \beta W^M_{-a} (0,0) \geq 0 \Leftrightarrow pr (1 - k) \geq \tau_h^{-a} \]
\[ \phi - (1 - p) l + \tau_h^{-a} + \beta W^E_{-a} (1,0) - (1 - k + \phi) + (1 - pk) l - \beta W^E_{-a} (0,0) \geq 0 \]
\[ \Leftrightarrow \tau_h^{-a} \geq (1 - k) (1 - pl) \]

In this case, participation constraints can be satisfied for any \( \tau_h^{-a} \) such that
\[ pr (1 - k) \geq \tau_h^{-a} \geq (1 - k) (1 - pl) \]

which is possible whenever
\[ pr \geq 1 - pl \Leftrightarrow l \geq \frac{1 - pr}{p} = l^* \]

Conditional on this condition being satisfied, we then have that optimal transfers are
\[ \hat{\tau}_h^{-a} = \frac{1}{2} (1 - k) (pr + 1 - pl) \]

Now, obviously the condition \( l \geq l^* \) is easier to obtain as \( r \) and \( p \) increase, but observe that we also have the constraint that \( l < 1 - k + \phi \) which implies that higher values of \( k \) and lower values of \( \phi \) make it harder for there to exist an \( l \) that satisfies both this constraint and \( l \geq l^* \).

We now consider the foreign policy decision for \( M \). By choosing an aligned foreign policy (and given the \( E \) will always participate in wars with such foreign policy) then \( M \) can expect
\[
\frac{1}{1 - \beta} \{ \pi [pR - \hat{\tau}_h^a] + (1 - \pi) [pR - \hat{\tau}_l^a] \} = \frac{pR (1 + k) - (1 - k) (1 - \pi pl)}{2 (1 - \beta)}
\]

whereas with a misaligned foreign policy, she can expect, if \( l \geq l^* \)
\[
\frac{1}{1 - \beta} \{ \gamma + \pi [pr - \hat{\tau}_h^{-a}] + (1 - \pi) pkr \}
= \frac{2 \gamma + p (\pi + 2k - \pi k) r - \pi (1 - k) (1 - pl)}{2 (1 - \beta)}
\]

41
or, if \( l < l^* \)

\[
\frac{1}{1 - \beta} \{ \gamma + \pi pkr + (1 - \pi) pkr \}
\]

\[
= \frac{\gamma + pkr}{1 - \beta}
\]

Putting everything together, we have that \( M \) will choose a misaligned war whenever

\[
\gamma \geq \gamma^* = \begin{cases} 
\frac{pR (1 + k) - pr (\pi + 2k - \pi k) - (1 - k) (1 - \pi)}{2} & \text{if } l \geq l^* \\
\frac{pR (1 + k) - pr (\pi + 2k - \pi k) - (1 - k) (1 - \pi)}{2} + \frac{1}{2} \pi (pr + pl - 1) (1 - k) & \text{if } l < l^*
\end{cases}
\]

where we note that

\[
\frac{\partial}{\partial k} \left( \frac{pR (1 + k) - pr (\pi + 2k - \pi k) - (1 - k) (1 - \pi)}{2} \right) = \frac{1}{2} (pR - 2pr + \pi pr + 1 - \pi) > 0
\]

\[
\frac{1}{2} (pR - 2 + \pi + 1 - \pi) = \frac{1}{2} (pR - 1) > 0
\]

while

\[
\frac{\partial}{\partial k} \left( \frac{pR (1 + k) - pr (\pi + 2k - \pi k) - (1 - k) (1 - \pi)}{2} + \frac{1}{2} \pi (pr + pl - 1) (1 - k) \right)
\]

\[
= \frac{\partial}{\partial k} \left( \frac{pR (1 + k) - pr (\pi + 2k - \pi k) - (1 - k) (1 - \pi)}{2} \right) + \frac{1}{2} \pi (1 - pr - pl)
\]

and since \( l < l^* \) then \( 1 - pr - pl > 0 \). It is immediate to check that \( \gamma^* \) is increasing in \( \pi, l \) and decreasing in \( r \).

Under RBP the same exact kind of analysis applies, but we omit it here as it is obvious that \( E \) will always choose the aligned foreign policy and \( M \) will always participate in aligned wars.

The remaining question is whether, under absolutism, \( M \) will ever want to concede RBP. Obviously, this is an issue only when \( \gamma \geq \gamma^* \). We begin with the case \( l \geq l^* \) so that parliament would be called successfully in a HR period. When \( l \geq l^* \), in a low-risk period, the expected utility for \( M \) to not conceding RBP is

\[
\gamma + pkr + \beta \frac{2 \gamma + p (\pi + 2k - k) r - \pi (1 - k) (1 - pl)}{2 (1 - \beta)}
\]

while by conceding RBP this becomes

\[
\gamma + pr + \beta \frac{pR (1 + k) - (1 - k) (1 - \pi pl)}{2 (1 - \beta)}
\]
Not conceding RBP is preferable if

$$\gamma \geq \gamma^* + pr (1 - k) \frac{1 - \beta}{\beta}$$

Similarly, in a high-risk period for RBP to not be conceded we need

$$\gamma + \left( pr - \frac{1}{2} (1 - k) (pr + 1 - pl) \right) + \beta \frac{2 \gamma + p (\pi + 2k - \pi k) r - \pi (1 - k) (1 - pl)}{2 (1 - \beta)} \geq \gamma + pr + \beta \frac{pR (1 + k) - (1 - k) (1 - \pi pl)}{2 (1 - \beta)}$$

$$\Leftrightarrow \gamma \geq \gamma^* + \frac{1}{2} (pr + 1 - pl) (1 - k) \frac{1 - \beta}{\beta}$$

If we instead consider the case $l < l^*$ then the conditions for not conceding RBP in both low-risk and high-risk periods becomes

$$\gamma + pkr + \beta \gamma + pkr \frac{1 - \beta}{1 - \beta} \geq \gamma + pr + \beta \frac{pR (1 + k) - (1 - k) (1 - \pi pl)}{2 (1 - \beta)}$$

$$\Leftrightarrow \gamma \geq \gamma^* + pr (1 - k) \frac{1 - \beta}{\beta}$$

Clearly, these boundaries are higher than $\gamma^*$ for any $\beta < 1$ but equal to $\gamma^*$ for $\beta = 1$.

**Proof of Proposition 2** We begin with the case where $M$ is in charge, and compare the decision to participate from $E$, conditional on future foreign policies being alinged or misaligned. Similarly to Proposition 1, we assume zero transfers for non-participation while $\tau^f_A$ represent transfers to $E$ for participation when future wars are aligned and $\tau^-_A$ when they are misaligned. Finally, $V$ represents to continuation value in future periods for $E$ in case of defeat (no such continuation values applies to the monarch who will be replaced in such case). In the case where, if the monarch continues, the foreign policy will be aligned (which happens when RBP is granted, or when $\gamma < \gamma^*$), we are maximizing

$$\left( pp^f - \tau^f_p + p\beta W^M_a (1, 1) - pkp^f - pk\beta W^M_a (1, 1) \right)$$

$$\times \left( \tau^f_A + p\phi + p\beta W^E_a (1, 1) + (1 - p) \beta V - pk (1 - k + \phi) - pk\beta W^E_a (1, 1) - (1 - pk) \beta V \right)$$

subject to

$$pp^f - \tau^f_A + p\beta W^M_a (1, 1) - pkp^f - pk\beta W^M_a (1, 1) \geq 0$$

$$\Leftrightarrow p (1 - k) \left[ p^f + \beta W^M_a (1, 1) \right] \geq \tau^f_A$$

$$\tau^f_A + p\phi + p\beta W^E_a (1, 1) + (1 - p) V - pk (1 - k + \phi) - pk\beta W^E_a (1, 1) - (1 - pk) V \geq 0$$

$$\Leftrightarrow \tau^f_A \geq p (1 - k) \left[ k - \phi + \beta V - \beta W^E_a (1, 1) \right]$$
So, for the monarch, there is a continuation value (with an aligned foreign policy) only in case of victory while for \( E \) continuation values are represented by \( W^E_0 \) in case of victory and \( V \) in case of defeat.

Recall that we consider \( \tau^f_A \) as the net transfers for participation, which means that it is possible that \( \tau^f_A < 0 \) satisfies both of these constraints. Transfers that satisfy these two constraints exist whenever

\[
p(1-k) \left[ \rho^f + \beta W^M (1,1) \right] \geq p(1-k) \left[ k - \phi + \beta V - \beta W^E (1,1) \right] \\
\Leftrightarrow W^M (1,1) + W^E (1,1) + \frac{\phi + \rho^f - k}{\beta} \geq V \\
\Leftrightarrow \frac{1}{1-\beta} [pR + \phi - \pi l (1-p)] + \frac{\phi + \rho^f - k}{\beta} \geq V
\]

Whenever feasible this gives us transfers

\[
\tau^f_A = \frac{1}{2} p (1-k) \left( \beta (V + W^M (1,1) - W^E (1,1)) + k + \rho^f - \phi \right)
\]

On the other hand, if whenever the monarch survives, the foreign policy will be misaligned (which happens when \( \gamma > \gamma^* \) and RBP is not granted) and in this case, we are maximizing

\[
\left( pp^f - \tau^f_A - p\beta \left[ W^M (x^E,0) + \frac{\gamma}{1-\beta} \right] - pkp^f - pk\beta \left[ W^M (x^E,0) + \frac{\gamma}{1-\beta} \right] \right) \\
\times \left( \tau^f_A + p\phi + p\beta W^E_0 (x^E,0) + (1-p) \beta V - pk (1-k + \phi) - pk\beta W^E_0 (x^E,0) - (1-pk) \beta V \right)
\]

subject to

\[
pp^f - \tau^f_A - p\beta \left[ W^M (x^E,0) + \frac{\gamma}{1-\beta} \right] - pkp^f - pk\beta \left[ W^M (x^E,0) + \frac{\gamma}{1-\beta} \right] \geq 0 \\
\Leftrightarrow p (1-k) \left[ \rho^f + \beta \left( W^M (x^E,0) + \frac{\gamma}{1-\beta} \right) \right] \geq \tau^f_A
\]

\[
(\tau^f_A + p\phi + p\beta W^E_0 (x^E,0) + (1-p) \beta V - pk (1-k + \phi) - pk\beta W^E_0 (x^E,0) - (1-pk) \beta V) \geq 0 \\
\Leftrightarrow \tau^f_A \geq p (1-k) \left[ k - \phi + \beta V - \beta W^E_0 (x^E,0) \right]
\]

where \( W^I_0 (x^E,0) \) (for \( I = E, M \)) takes into account that, depending on whether \( l \leq l^* \) or not, in case of future high-risk wars, \( E \) may or may not participate. So, for the monarch, there is a continuation value (with a misaligned foreign policy) only in case of victory while for \( E \) continuation values are represented by \( W^E_0 (x^E,0) \) in case of victory and \( V \) in case
of defeat. Transfers that satisfy these two constraints exist whenever
\[
p(1-k) \left[ \rho^f + \beta \left( W^M_{-a} (x^E, 0) + \frac{\gamma}{1-\beta} \right) \right] \geq p(1-k) \left[ k - \phi + \beta V - \beta W^E_{-a} (x^E, 0) \right]
\]
\[
\iff W^M_{-a} (x^E, 0) + W^E_{-a} (x^E, 0) + \frac{\gamma}{1-\beta} + \frac{\phi + \rho^f - k}{\beta} \geq V
\]
\[
\iff \left\{ \begin{array}{ll}
\frac{1}{1-\beta} \left[ p (\pi + k - \pi k) r + \phi - \pi l (1-p) + (1-k) (1-\pi) + \gamma \right] + \frac{\phi + \rho^f - k}{\beta} \geq V & \text{if } l \geq l^* \\
\frac{1}{1-\beta} \left[ prk + \phi - \pi l (1-pk) + (1-k) + \gamma \right] + \frac{\phi + \rho^f - k}{\beta} \geq V & \text{if } l < l^*
\end{array} \right.
\]
Whenever feasible this gives us transfers
\[
\tau^f_{-A} = \frac{1}{2} p (1-k) \left( \beta \left( V + W^M_{-a} (x^E, 0) - W^E_{-a} (x^E, 0) + \frac{\gamma}{1-\beta} \right) + k + \rho^f - \phi \right)
\]
If multiply the conditions for transfers \(\tau^f_{-A}\) and \(\tau^f_{-A}\) to be possible by \((1-\beta)\) and then take the limit as \(\beta \to 1\) we then get that the conditions above become
\[
\Gamma = pR + \phi - \pi l (1-p) \geq v
\]
and
\[
\Delta = \left\{ \begin{array}{ll}
p (\pi + k - \pi k) r + \phi - \pi l (1-p) + (1-k) (1-\pi) + \gamma & \text{if } l \geq l^* \\
prk + \phi - \pi l (1-pk) + (1-k) + \gamma & \text{if } l < l^* \geq v
\end{array} \right.
\]
respectively, where \(v = \lim_{\beta \to 1} (1-\beta) V\). Note that \(\Gamma\) is constant in \(k\) and \(\gamma\) while \(\Delta\) is increasing in \(\gamma\) and - it is easy to see - linearly decreasing in \(k\). As we shall see below, \(v\) is also a function of \(k\) but not of \(\gamma\). So we have two cases:

1. Fix \(k \in [0,1]\) and assume \(\Gamma \geq \Delta (k)\). Then, if \(v(k) > \Gamma\) then \(E\) will not participate in the extreme-risk war under any circumstances. If \(\Gamma \geq v(k) > \Delta (k)\) then \(E\) will participate in the extreme-risk war if and only if future foreign policy is aligned. Finally, if \(\Delta (k) \geq v (k)\) then \(E\) will participate in the extreme-risk war regardless of future foreign policy.

2. Fix \(k \in [0,1]\) and assume \(\Gamma < \Delta (k)\). Then, if \(v(k) > \Delta (k)\) then \(E\) will not participate in the extreme-risk war under any circumstances. If \(\Delta (k) \geq v(k) > \Gamma\) then \(E\) will participate in the extreme-risk war if and only if future foreign policy is misaligned. Finally, if \(\Gamma \geq v (k)\) then \(E\) will participate in the extreme-risk war regardless of foreign policy.

In case 2., \(E\) might prefer a misaligned foreign policy to an aligned one because the transfers that can be obtained from \(M\) in an extreme-risk period are so large that it makes this

\[43\text{Note that for sufficiently high } \beta \text{ these conditions are independent of current foreign policy } f.\]
worthwhile.

We now consider \( v \). For generic parameters, \((q, \zeta)\) replacing \((p, \gamma)\) we have that

\[
v = \left\{ \begin{array}{ll}
\pi \left[ \phi - (1 - q) l + \frac{1}{2} (1 - k) \left( q \rho^f + 1 - q l \right) \right] + (1 - \pi) \left[ \phi + \frac{1}{2} (1 - k) (q \rho^f + 1) \right] & \text{if } q \rho^f \geq 1 \\
\pi \left[ \phi - (1 - q) l + \frac{1}{2} (1 - k) \left( q \rho^f + 1 - q l \right) \right] + (1 - \pi) (1 - k + \phi) & \text{if } q \rho^f < 1 \text{ and } l \geq l^* (q, \rho^f) \\
\pi \left[ 1 - k + \phi - (1 - q k) l \right] + (1 - \pi) (1 - k + \phi) & \text{if } q \rho^f < 1 \text{ and } l < l^* (q, \rho^f)
\end{array} \right.
\]

It is immediate to notice that

\[ v (k = 1) = \phi - \pi (1 - q) l \]

while, for any \( l \)

\[
\Gamma = p R + \phi - \pi (1 - p) l \\
\Delta (k = 1) = p r + \phi - \pi (1 - p) l
\]

We then have \( v (k = 1) \) is smaller than \( \Gamma \) and smaller than \( \Delta (k = 1) \) for any \( \gamma \geq \max (0, \pi l (q - p) - pr) \). In other words, for sufficiently large \( k \) and \( \gamma \), \( v (k) < \min (\Gamma, \Delta (l)) \).

Since \( \Delta \) is a decreasing function of \( k \) while \( \Gamma \) is constant, we can define a \( k^* \) such that \( \Delta (k^*) = \Gamma \) with \( \Delta (k) < \Gamma \) for \( k > k^* \) and \( \Delta (k) > \Gamma \) for \( k < k^* \). In particular,

\[
k^* = \left\{ \begin{array}{ll}
\frac{\gamma - (R p - 1) - \pi (1 - p r)}{(1 - p r)(1 - \pi)} & \text{if } l \geq l^* \\
\frac{\gamma - (R p - 1) - \pi p l}{1 - p r - \pi p l} & \text{if } l < l^*
\end{array} \right.
\]

which is obviously increasing in \( \gamma \).

We can also define \( k_T \) to be such that \( v (k_T) = \Gamma \) with \( v (k) > \Gamma \) for \( k < k_T \) and \( v (k) > \Gamma \) for \( k > k_T \)

\[
k_T = \left\{ \begin{array}{ll}
1 - 2 \frac{R p + \pi l (p - q)}{q (\rho^f - \pi l) + 1} & \text{if } q \rho^f \geq 1 \\
1 - 2 \frac{\pi q \rho^f - \pi - \pi q l + 2}{\pi q \rho^f - \pi - \pi q l} & \text{if } q \rho^f < 1 \text{ and } l \geq l^* (q, \rho^f) \\
\frac{R p}{1 - \pi q l} & \text{if } q \rho^f < 1 \text{ and } l < l^* (q, \rho^f)
\end{array} \right.
\]

\[ ^{44} \text{It is easy to see that } \Delta (\gamma = \gamma^* (1), k = 1) = \Gamma \]

so that if we impose \( \gamma \geq \gamma^* \) then

\[ \Delta (\gamma, k = 1) > v (k = 1) \]
Since \( k_\Gamma < 0 \) whenever \( q\rho \Gamma < 1 \) and \( l < l^* (q, \rho^f) \) then we ignore the last case. Finally, we define \( k_\Delta \) to be such that \( v(k_\Delta) = \Delta(k_\Delta) \) with \( v(k) > \Delta(k) \) for \( k < k_\Delta \) and \( v(k) > \Delta(k) \) for \( k > k_\Delta \). We have

\[
k_\Delta = \left\{ \begin{array}{ll}
1 - 2\frac{\gamma + pr + \pi l(p-q)}{\pi + 2pr + \pi q p - \pi l q - 1} & \text{if } q\rho \Gamma \geq 1 \text{ and } l \geq l^*
1 - 2\frac{q\rho \Gamma + 2pr + 2\pi l p - 2\pi l q - 1}{\pi + 2pr + \pi q p - \pi l q - 2\pi r - \pi l q} & \text{if } q\rho \Gamma < 1, \ l \geq l^* (q, \rho^f) \text{ and } l \geq l^*
1 - 2\frac{\gamma + pr + \pi l(p-q)}{\pi + 2pr + \pi q p - \pi l q - 1} & \text{if } q\rho \Gamma < 1, \ l \geq l^* (q, \rho^f) \text{ and } l < l^*
1 - 2\frac{\gamma + pr + \pi l(p-q)}{\pi + 2pr + \pi q p - \pi l q - 1} & \text{if } q\rho \Gamma < 1, \ l < l^* (q, \rho^f) \text{ and } l \geq l^*
1 - 2\frac{\gamma + pr + \pi l(p-q)}{\pi + 2pr + \pi q p - \pi l q - 1} & \text{if } q\rho \Gamma < 1, \ l < l^* (q, \rho^f) \text{ and } l < l^*
\end{array} \right.
\]

We can finally define \( \hat{\gamma} \) the value of \( \gamma \) such that \( k^*(\hat{\gamma}) = k_\Gamma \) with \( k^*(\hat{\gamma}) < k_\Gamma \) for \( \gamma < \hat{\gamma} \) and \( k^*(\hat{\gamma}) > k_\Gamma \) for \( \gamma > \hat{\gamma} \). This is

\[
\hat{\gamma} = \left\{ \begin{array}{ll}
\gamma^* + (1 - pr)(1 - \pi)k_\Gamma & \text{if } l \geq l^*
\gamma^* + (1 - pr - \pi pl)k_\Gamma & \text{if } l < l^*
\end{array} \right.
\]

We now have all the ingredient to consider two possibilities:

I. \( \gamma \geq \hat{\gamma} \). In this scenario, \( k^* \geq k_\Gamma \) and this in turn implies \( k_\Gamma \geq k_\Delta \). Then we have that

(a) If \( 0 < k_\Delta \leq k_\Gamma \leq 1 \) then \( v(k) > \max(\Gamma, \Delta) \) for all \( k < k_\Delta \), \( \Delta \geq v(k) \geq \Gamma \) for all \( k \in [k_\Delta, k_\Gamma] \) and \( v(k) < \min(\Gamma, \Delta) \) for all \( k > k_\Gamma \). Thus, there will be no participation from \( E \) for all \( k \leq k_\Delta \), participation iff a misaligned foreign policy will be pursued in future periods for all \( k \in [k_\Delta, k_\Gamma] \) and participation from \( E \) for all \( k > k_\Gamma \).

(b) If \( k_\Delta \leq 0 \leq k_\Gamma \leq 1 \) then \( \Delta \geq v(k) \geq \Gamma \) for all \( k \leq k_\Gamma \) and \( v(k) < \min(\Gamma, \Delta) \) for all \( k > k_\Gamma \). Thus there will be participation from \( E \) iff an aligned foreign policy will be pursued in future periods for all \( k \in [0, k_\Gamma] \) and participation from \( E \) for all \( k > k_\Gamma \).

(c) If \( k_\Gamma < 0 \) then \( v(k) < \min(\Gamma, \Delta) \) for all \( k \). In this case \( E \) will always participate.

II. \( \hat{\gamma} > \gamma \geq \max(0, p\ell (q - p) - pr) \). In this scenario, \( k^* < k_\Gamma \) so that \( k_\Gamma < k_\Delta \). Then we have that

(a) If \( 0 < k_\Gamma < k_\Delta \leq 1 \) then \( v(k) > \max(\Gamma, \Delta) \) for all \( k < k_\Gamma \), \( \Gamma \geq v(k) > \Delta \) for all \( k \in [k_\Gamma, k_\Delta] \) and \( v(k) \leq \min(\Gamma, \Delta) \) for all \( k \geq k_\Delta \). Thus, there will be no participation from \( E \) for all \( k < k_\Gamma \), participation iff an aligned foreign policy will be pursued in future periods for all \( k \in [k_\Gamma, k_\Delta] \) and participation from \( E \) for all \( k \geq k_\Delta \).
Recalling from proposition 1’s proof that \( \hat{\gamma} \) define a \( \gamma \) and in particular, we can show that letting

\[
\hat{\gamma} = \gamma > \gamma \quad \text{and} \quad \hat{\gamma} = \gamma \quad \text{for all } k > k_\Delta
\]

The above implies that if \( \hat{\gamma} \leq \gamma^* \) then RBP will never be possible. We need to check under what conditions \( \hat{\gamma} > \gamma^* \). One can rewrite

\[
\gamma^* = \begin{cases} 
\gamma^* (0) + \frac{1}{2} k (pR - pr (2 - \pi) + 1 - \pi) & \text{if } l \geq l^* \\
\gamma^* (0) + \frac{1}{2} k (pR - 2pr + 1 - \pi lp) & \text{if } l < l^*
\end{cases}
\]

and

\[
\hat{\gamma} = \begin{cases} 
\gamma^* (0) + \frac{1}{2} (pR - 1 + (1 - pr) \pi) + (1 - pr) (1 - \pi) k_\Gamma & \text{if } l \geq l^* \\
\gamma^* (0) + \frac{1}{2} (pR - 1 + \pi pl) + (1 - pr - \pi pl) k_\Gamma & \text{if } l < l^*
\end{cases}
\]

Recalling from proposition 1’s proof that \( \gamma^* \) is increasing in \( k \) while \( \hat{\gamma} \) is constant, we can define a \( \hat{k} \) such that \( \gamma^* (\hat{k}) = \hat{\gamma} \) and \( \gamma^* (k) > \hat{\gamma} \) for all \( k > \hat{k} \) and \( \gamma^* (k) < \hat{\gamma} \).

\[
\hat{k} = \begin{cases} 
\frac{pR - 1 + (1 - pr) \pi + 2 (1 - pr) (1 - \pi) k_\Gamma}{pR - pr (2 - \pi) + 1 - \pi} & \text{if } l \geq l^* \\
\frac{pR - 1 + \pi pl + 2 (1 - pr - \pi pl) k_\Gamma}{pR - 2pr + 1 - \pi lp} & \text{if } l < l^*
\end{cases}
\]

and in particular, we can show that letting \( y = \max (k_\Gamma, 0) \) then

\[
\hat{k} - y = \begin{cases} 
\frac{(pR - 1 + (1 - pr) \pi) (1 - y)}{pR - pr (2 - \pi) + 1 - \pi} & \text{if } l \geq l^* \\
\frac{(pR - 1 + \pi pl) (1 - y)}{pR - 2pr + 1 - \pi lp} & \text{if } l < l^*
\end{cases}
\]

which is strictly positive for any \( y < 1 \) and equal to zero for \( y = 1 \). This shows that there is always an interval \( \left[ \max (0, k_\Gamma), \hat{k} \right] \) such that \( \hat{\gamma} > \gamma^* \) in that interval. So, given the analysis above we have that if \( M \) chooses a misaligned foreign policy under absolutism (i.e. \( \gamma \geq \gamma^* \)) so that \( k \in \left[ 0, \hat{k} \right] \).

i. Suppose \( k_\Gamma > 0 \) and \( \gamma < \hat{\gamma} \). Then, \( M \) will concede RBP in exchange for \( E \)'s participation whenever \( k \in \left[ k_\Gamma, \min \left( k_\Delta, \hat{k} \right) \right] \). If \( k < k_\Gamma \) then \( M \) will not concede RBP and \( E \) will not participate in the war. If \( k_\Delta < \hat{k} \) then \( E \) will participate in the war and \( M \) will not concede RBP whenever \( k > k_\Delta \).

ii. Suppose \( k_\Gamma \leq 0 \) but \( k_\Delta > 0 \) and \( \gamma < \hat{\gamma} \). Then, \( M \) will concede RBP in exchange for \( E \)'s participation whenever \( k \in \left[ 0, \min \left( k_\Delta, \hat{k} \right) \right] \). If \( k_\Delta < \hat{k} \) then \( E \) will participate in the war and \( M \) will not concede RBP whenever \( k > k_\Delta \).
iii. If $k_\Delta < 0$ then there will be no RBP concession from $M$ and $E$ will always participate in the extreme-risk war.
Appendix B - Additional Empirical Results
### Table B1: Lagged Territorial Battles

<table>
<thead>
<tr>
<th></th>
<th>1350-1700</th>
<th>1350-1700</th>
<th>1350-1700</th>
<th>1350-1700</th>
<th>1350-1700</th>
<th>1350-1700</th>
<th>1350-1700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag1 Parliament</td>
<td></td>
<td>0.36</td>
<td>0.23</td>
<td>-</td>
<td>0.36</td>
<td>0.23</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>(0.05)**</td>
<td>(0.05)**</td>
<td>(0.05)**</td>
<td>(0.05)**</td>
<td>(0.05)**</td>
<td>(0.05)**</td>
<td>(0.05)**</td>
</tr>
<tr>
<td>Territorial</td>
<td>-0.05</td>
<td>-0.04</td>
<td>-0.01</td>
<td>-0.06</td>
<td>-0.04</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(0.09)</td>
<td>(0.06)</td>
<td>(0.05)</td>
<td>(0.08)</td>
<td>(0.06)</td>
<td>(0.05)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Territorial defeat</td>
<td>0.33</td>
<td>0.30</td>
<td>0.26</td>
<td>0.32</td>
<td>0.27</td>
<td>0.25</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>(0.10)**</td>
<td>(0.09)**</td>
<td>(0.08)**</td>
<td>(0.09)**</td>
<td>(0.09)**</td>
<td>(0.07)**</td>
<td>(0.08)**</td>
</tr>
<tr>
<td>Lag1 Territorial</td>
<td>-0.06</td>
<td>-0.04</td>
<td>0.01</td>
<td>-0.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.08)</td>
<td>(0.08)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lag1 Territorial defeat</td>
<td>0.07</td>
<td>-0.05</td>
<td>-0.06</td>
<td>-0.06</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(0.11)</td>
<td>(0.11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward1 Territorial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.02</td>
<td>-0.04</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.12)</td>
<td>(0.09)</td>
<td>(0.08)</td>
<td>(0.08)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward1 Territorial defeat</td>
<td>0.09</td>
<td>0.09</td>
<td>0.03</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.14)</td>
<td>(0.13)</td>
<td>(0.12)</td>
<td>(0.13)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.38</td>
<td>0.25</td>
<td>0.47</td>
<td>0.38</td>
<td>0.24</td>
<td>0.47</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td>(0.04)**</td>
<td>(0.03)**</td>
<td>(0.05)**</td>
<td>(0.04)**</td>
<td>(0.03)**</td>
<td>(0.05)**</td>
<td>(0.05)**</td>
</tr>
<tr>
<td>Other battles dummies</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Country dummies</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Century dummies</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.01</td>
<td>0.14</td>
<td>0.22</td>
<td>0.01</td>
<td>0.14</td>
<td>0.22</td>
<td>0.22</td>
</tr>
<tr>
<td>Number of observations</td>
<td>1404</td>
<td>1404</td>
<td>1404</td>
<td>1404</td>
<td>1404</td>
<td>1404</td>
<td>1404</td>
</tr>
</tbody>
</table>

**Note:** England, France, Portugal, Spain (parliaments of Leon-Castile and Catalonia from 1469). Standard errors clustered by king. *p < 0.1 **p < 0.05 ***p < 0.01
Table B2: Robustness - Probit, Logit, Monach fixed effects

<table>
<thead>
<tr>
<th>Dependent Variable: Parliament held in a given year: 1350-1700</th>
<th>Logit</th>
<th>Probit</th>
<th>Linear Prob.</th>
<th>Linear Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag1 Parliament</td>
<td>1.03</td>
<td>0.63</td>
<td>0.14</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.13)**</td>
<td>(0.06)**</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Territorial</td>
<td>-0.05</td>
<td>-0.03</td>
<td>-0.05</td>
<td>-0.05</td>
</tr>
<tr>
<td></td>
<td>(0.29)</td>
<td>(0.17)</td>
<td>(0.04)</td>
<td>(0.06)</td>
</tr>
<tr>
<td>Territorial defeat</td>
<td>1.46</td>
<td>0.86</td>
<td>0.27</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>(0.39)**</td>
<td>(0.24)**</td>
<td>(0.06)**</td>
<td>(0.06)**</td>
</tr>
<tr>
<td>Unusual precipitation</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(0.04)*</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.12</td>
<td>-0.09</td>
<td>0.11</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>(0.24)</td>
<td>(0.15)</td>
<td>(0.01)**</td>
<td>(0.21)**</td>
</tr>
<tr>
<td>Other battles dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Country dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Century dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Monarch dummies</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.18</td>
<td>0.18</td>
<td>0.29</td>
<td>0.38</td>
</tr>
<tr>
<td>Number of observations</td>
<td>1400</td>
<td>1400</td>
<td>1400</td>
<td>822</td>
</tr>
</tbody>
</table>

Note: England, France, Portugal, Spain (parliaments of Leon-Castile and Catalonia from 1469). Standard errors clustered by king. * p < 0.1 ** p < 0.05 *** p < 0.01
Table B3: Battle defeats and the calling of Parliaments - by country - Monarch fixed effects

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>France</th>
<th>Portugal</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag1 Parliament</td>
<td>-0.08</td>
<td>0.27</td>
<td>0.09</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td>(0.06)***</td>
<td>(0.04)**</td>
<td>(0.03)*</td>
</tr>
<tr>
<td>Territorial</td>
<td>-0.04</td>
<td>-0.05</td>
<td>0.03</td>
<td>-0.17</td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td>(0.03)*</td>
<td>(0.19)</td>
<td>(0.28)</td>
</tr>
<tr>
<td>Territorial defeat</td>
<td>0.29</td>
<td>0.18</td>
<td>0.61</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>(0.07)***</td>
<td>(0.08)**</td>
<td>(0.24)**</td>
<td>(0.31)</td>
</tr>
<tr>
<td>Naval</td>
<td>0.13</td>
<td>-0.05</td>
<td>0.84</td>
<td>-0.45</td>
</tr>
<tr>
<td></td>
<td>(0.10)</td>
<td>(0.05)</td>
<td>(0.04)***</td>
<td>(0.15)**</td>
</tr>
<tr>
<td>Naval defeat</td>
<td>-0.14</td>
<td>0.04</td>
<td>-</td>
<td>0.67</td>
</tr>
<tr>
<td></td>
<td>(0.07)*</td>
<td>(0.06)</td>
<td>-</td>
<td>(0.17)***</td>
</tr>
<tr>
<td>Abroad Europe</td>
<td>-0.23</td>
<td>0.05</td>
<td>-</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>(0.19)</td>
<td>(0.07)</td>
<td>-</td>
<td>(0.08)</td>
</tr>
<tr>
<td>Colonial</td>
<td>-0.25</td>
<td>-0.03</td>
<td>-0.03</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.01)**</td>
<td>(0.07)</td>
<td>(0.04)***</td>
</tr>
<tr>
<td>Internal</td>
<td>0.23</td>
<td>0.09</td>
<td>-</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>(0.13)*</td>
<td>(0.13)</td>
<td>-</td>
<td>(0.41)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.31</td>
<td>0.08</td>
<td>0.11</td>
<td>-0.07</td>
</tr>
<tr>
<td></td>
<td>(0.03)***</td>
<td>(0.01)***</td>
<td>(0.00)***</td>
<td>(0.04)*</td>
</tr>
<tr>
<td>Monarch dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.25</td>
<td>0.20</td>
<td>0.25</td>
<td>0.24</td>
</tr>
<tr>
<td>Number of observations</td>
<td>350</td>
<td>350</td>
<td>350</td>
<td>350</td>
</tr>
</tbody>
</table>

Note: England, France, Portugal, Spain (parliaments of Leon-Castile and Catalonia from 1469). Standard errors clustered by king. * p < 0.1 ** p < 0.05 *** p < 0.01