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# STANCE

State-Making and the Origins of Global Order  
in the Long Nineteenth Century and Beyond

## Investing in Fiscal Capacity: Legislative Debates, Military Pressures and Taxation in the United Kingdom (1817- 1939)

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Oriol Sabaté

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# Investing in Fiscal Capacity: Legislative Debates, Military Pressures and Taxation in the United Kingdom (1817-1939)<sup>1</sup>

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# Abstract

Bellicist theories of the fiscal state argue that war and the preparation for war foster long-term fiscal development because they put pressures on public finances while also reducing societal resistance to higher levels of taxation. This paper examines these two claims using fine-grained legislative data from the United Kingdom. To this effect, we introduce a new dataset that includes the text and metadata of more than 2.45 million interventions by members of the British Parliament (MPs) from over 22,000 parliamentary debates between 1817 to 1939. Using different tools for automated text analysis, we first evaluate whether taxation was more prominent in parliamentary debates when military concerns were also present and to what extent those debates occurred at the time of intense international wars. In the second part of the paper, we rely on sentiment analysis to calculate the dispersion in the tone (more positive or more negative) among the interventions in a parliamentary sitting. We then evaluate whether fiscal debates were more likely to display lower levels of parliamentary conflict when military issues were also mentioned. Our analyses support both claims about the mechanisms that may link military pressures to the development of fiscal states.

**Keywords:** Taxation, military rivalries, parliamentary debates, nineteenth century, France, United Kingdom

# I Introduction

One of the dominant explanations for the development of fiscal capacity emphasizes the role of war and the preparation for war on the expansion of tax revenues collected by the central state (e.g., Besley & Persson, 2009; Scheve & Stasavage, 2016; Tilly, 1990). Most of these “bellicist theories” of state formation rest on empirical claims about the association between military pressures and key institutional reforms (e.g., fiscal centralization, the introduction of new modern efficient taxes, the professionalization of tax agencies) or fiscal outcomes (e.g., direct taxes as a share of total revenues, taxes as a share of GDP, or public revenues per capita). However, this literature also makes distinct claims about the mechanisms that link external military pressures with the development of fiscal capacity. First, all of these studies assert that military threats put pressure on public finances and create the need to expand tax revenues (Finer, 1975; Gennaioli & Voth, 2015; Hintze, 1975; Karaman & Pamuk, 2013; Tilly, 1985, 1990). Second, many of them also argue that external military threats can reduce resistance to higher levels of fiscal extraction and facilitate collective investments in fiscal capacity (Besley & Persson, 2009, 2011; Scheve & Stasavage, 2010, 2012, 2016).

This paper examines these two claims using fine-grained legislative data from the United Kingdom. To this effect, we introduce a new dataset that includes the text and metadata of more than 2.45 million interventions by members of the British Parliament (MPs) from over 22,000 parliamentary debates between 1817 to 1939. During those years, the United Kingdom engaged in numerous military conflicts and introduced fiscal reforms that would leave a profound imprint in future tax systems. If the mechanisms outlined above were present during the build-up of modern states, we would expect them to reveal themselves in our case of study.

Using different tools for automated text analysis, we first measure the presence and salience of military and fiscal matters in each parliamentary sitting. This allows us to evaluate whether taxation was more prominent in parliamentary debates during periods in which military concerns were also present and to what extent these periods coincided with intense international wars. In the second part of the analysis, we evaluate the claim that external military pressures facilitate collective investments in fiscal capacity as state and societal actors rally-around-the-flag of external defence. To do this, we rely on sentiment analysis to calculate the dispersion in the tone (more positive or more negative) among the interventions in a parliamentary sitting. This allows us to explore whether fiscal debates were more likely to display low levels of parliamentary conflict when military issues were also mentioned.

Our analyses support both claims about the mechanisms that may link military pressures to the development of fiscal states. First, we find consistent evidence that debates in which military considerations were recurrently



mentioned tended to focus more on taxation. We also find that these debates were more likely to occur during periods of intense interstate wars. Second, our models also show that fiscal debates in which military issues were present tended to be less contentious, as measured by the dispersion in sentiment analysis scores.

The paper makes theoretical, empirical, and methodological contributions to research in political development. At a theoretical level, we specify certain mechanisms that may link military pressures to the development of fiscal states. In particular, we introduce the distinction between issue presence and issue salience to describe how certain matters may influence the salience and divisiveness of debates on other policy areas, even when such matters are not the main issue at stake.

Empirically, we collect and analyse a wealth of data from an influential case during the years of most dramatic fiscal development to test the mechanisms that underpin much of the bellicist literature. By bringing parliamentary data to the study of fiscal capacity, this paper seeks to complement other indicators centred on fiscal institutions, outputs, and outcomes. Our indicators of legislative presence and salience of military issues also complement existing measures of external military pressures based on interstate wars and rivalries.

Finally, at a methodological level, we propose a new approach to study the historical drivers of state building using legislative data. The measurements of legislative salience and contestation that we present in this paper offer several advantages for future research. First, they allow us to directly observe how different factors proposed in the literature shaped the content and framing of political negotiations around the expansion or retrenchment of fiscal capacity. Second, these measures offer the opportunity to identify not only instances of state development, but also failed attempts of tax reform as well as periods of intense fiscal activity that were not associated to discreet institutional changes or higher tax revenues. These instances must be taken into account if we want to understand the development of fiscal capacity in the long run.

In what follows, we first summarize the two mechanisms that bellicist theories typically propose as the links between military pressures and fiscal development. We then present, in the third section, concrete hypotheses about what we should observe in the content and tone of parliamentary debates if those claims are correct. The fourth section presents the data. In the fifth section, we discuss patterns in the legislative salience of taxation in the UK from shortly after the Congress of Vienna (1817) to the eve of World War II (1939) and present the results of statistical models that evaluate the impact of military pressures on those fluctuations. The sixth section then analyses the relationship between external military pressures and the intensity of parliamentary conflicts around taxation. The seventh section concludes and takes stock of these results, discussing what they tell us about the development of the British fiscal state during this period.

## II Wars, rivalries, and fiscal capacity during the nineteenth century

Bellicist theories of state formation famously argue that interstate wars and rivalries have been a major force behind the development of fiscal states. According to these theories, war or the preparation for war with foreign enemies facilitates fiscal centralization, the introduction of more efficient taxes, and the implementation of higher tax rates (e.g., Dincecco, 2009, 2015; Scheve & Stasavage, 2016). These arguments typically rest on two claims about the causal mechanisms linking military pressures to fiscal development.

A first claim that all bellicist arguments share is that military threats create pressures on public finances that states address by increasing tax revenues, especially if they do not have access to other sources of revenue (Queralt, 2019). Changes in the nature of war are associated with the development of costly standing armies (Downing, 1992; Tilly, 1990), increases in military spending (Eloranta, 2007), higher investments in technological development (Hoffman, 2015), major infrastructural projects such as fortresses, railroads, ports, and bridges (Gennaioli & Voth, 2015), greater spending in public education (Aghion et al., 2019), the expansion of public services to take care of war veterans and their families (Scheve & Stasavage, 2016), and the professionalization and expansion of the administrative apparatus of the state (Ertman, 1997; Teorell & Rothstein, 2015). These investments tend to strain public finances and thus push state actors to increase tax revenues by centralizing tax collection, introducing new taxes, broadening the tax base, and increasing tax rates.

However, these fiscal reforms are likely to trigger strong resistance from societal actors. Therefore, the second claim that runs through many bellicist arguments is that interstate wars and rivalries also facilitate the coordination of collective action necessary for social investments in fiscal capacity. Wars impose very visible collective costs in the form of territory losses and the destruction of lives and property and consequently highlight common interests among state and societal actors (Besley & Persson, 2009, 2011). External threats may also reinforce national identities in ways that foster solidarity and rally-around-the-flag dynamics (Gibler, 2010). As a result, in the face of war, citizens may be willing to accept higher levels of taxation in exchange for greater investments in external defense (Bates & Lien, 1985; Besley & Persson, 2009; Levi, 1988; Peacock & Wiseman, 1961) and even to accept redistributive fiscal policies to compensate those who paid the brunt of the costs of the war effort (Scheve & Stasavage, 2016).

Most of the studies cited above examine the relationship between military pressures and taxation by looking at the effects of wars on tax reforms or on tax revenues, leaving these mechanisms as a black-box that is rarely empirically scrutinized. Few studies have directly tested if these mechanisms indeed link the causal chain between external military pressures and fiscal capacity. It could be the case that while wars and rivalries have a positive impact in some of these

processes, they have a negative impact on the others. Financial pressures resulting from a war effort may trigger heated political discussions about the need for tax reform, but the stakes of those debates could be so high that they would trigger higher levels of conflict. Wars may also cause severe political crises that shift the relative power of different factions and empower pro-tax coalitions to impose their reforms despite strong resistance from other actors.

### III Using parliamentary debates to analyse investments in fiscal capacity

Parliamentary debates offer a rich source of empirical material to examine the political mechanisms proposed by the bellicist literature. Parliamentary debates are institutionalized practices of public deliberation and negotiation between elected representatives aimed at reaching agreements, making policy decisions, and communicating policy positions to other members of parliament and the general public (Ilie, 2018). Since at least the early nineteenth century, parliaments have been the main institutional forum for the negotiation of taxation and public finances. In some countries, such as France, the parliament had direct control over public revenue and expenditure. In the case of the United Kingdom, the areas of responsibility of parliament were more limited. It was the executive who designed and proposed new tax measures, while MPs were commissioned to control and eventually approve or reject the reforms (Daunton, 2001). This did not preclude intense debates and discussions in the two chambers on the appropriateness of the measures and on their specific design, and parliament remained a vital actor in the political process of fiscal reform.

Therefore, if wars and external threats had an impact on the development of fiscal capacity, we expect to find evidence of those effects in the content, structure, and language of parliamentary debates at the time. In particular, we can derive some testable hypotheses from the bellicist literature about the impact of external military pressures on the salience and divisiveness of debates on taxation.

The first of the bellicist claims is that greater military pressures should make fiscal issues a more salient topic in parliamentary debates. In the face of foreign military threats, state actors may be forced to make extraordinary investments in external defense, and therefore they will need to discuss how those investments will be financed. As a result, we expect that during periods of external threat, military considerations will affect policy debates by shaping the content and framing of those discussions. We can thus derive a first hypothesis that we can test empirically:

H1. The presence of military concerns should be associated with higher levels of fiscal salience in parliamentary debates.

The second claim of bellicist theories argues that wars and rivalries not only make investments in fiscal capacity more pressing but that they also facilitate the coordination of collective action among state and societal actors that makes possible those investments. In other words, this version of the bellicist argument asserts that interstate wars and rivalries should reduce the intensity of political conflicts around fiscal policies. Hence,

H2. The presence of military concerns should be associated with lower levels of contestation in fiscal debates.

## IV Measuring legislative attention through parliamentary debates

To evaluate these hypotheses, we have collected and analysed the transcripts of parliamentary debates held in the lower and upper chambers in the United Kingdom from 1817, the first year for which we have parliamentary data after the Congress of Vienna, to 1939, since the onset of World War II is often seen as a turning point in the relationship between war and fiscal capacity (Chowdhury, 2017; Jackson & Rosberg, 1982). During this period, the UK was at the forefront of several fiscal innovations, most notably the introduction of a temporary income tax in 1799 amid the Napoleonic Wars, abolished soon thereafter but reintroduced on a permanent basis in 1842 by Conservative Prime Minister Robert Peel (O'Brien, 2011; Schremmer & Stern, 2008). Other tax reforms also triggered intense political conflicts, such as the debates to abolish the income tax in the 1850s and 1860s or to establish the so-called "super-tax" in 1909 (Daunton, 2001). At the same time, its role as the world power placed the United Kingdom at the centre of military competition for control over new colonial territories and naval superiority (Black, 2010). Even at the turn of the twentieth century, when the state assumed new social responsibilities and the political landscape witnessed the spread of progressive ideas (Steinmo, 1993), the enduring armed race against Germany kept military issues at the top of the political agenda (Eloranta, 2007). The UK is thus an ideal case study to explore in detail the relationship between the fiscal and military spheres and the role that military pressure played in legislative attention to taxation.

Hansard has digitalized and made publicly available the text of parliamentary sittings from the beginning of the nineteenth century to the present. Those publications were initially a summary of the debates, and moved progressively towards a verbatim record of the sessions, only adapted to a formal written language (Slembrouck, 1992). These texts were collected in volumes that typically cover two or three months of parliamentary activity. Therefore, a first step of the analysis was to separate the text for each parliamentary sitting in each

chamber, which gives us around 22,000 sessions from the Congress of Vienna to the onset of World War II. We then identified each time an MP spoke in a debate (a speech or intervention) and assigned it a unique ID number. The resulting dataset thus contains over 2.45 million observations with individual speeches as the unit of analysis. Each intervention is linked to its unique identifier, the name of the actor speaking, the text of the speech, and the date and chamber of that parliamentary sitting.

Building on recent applications of Natural Language Processing (NLP) that study parliamentary dynamics (e.g., Chinn et al., 2020; Eggers & Spirling, 2014; Motolinia, 2020), we rely on automated text analysis to produce measures for (1) the *salience* of taxation in legislative debates; (2) the *presence* of military considerations in legislative debates; (3) the extent to which military and fiscal issues were mentioned together when MPs spoke (*co-occurrences*); and (4) the intensity of discursive *contestation* in each debate. Let us explain each of these measures in more detail.

First, in line with the previous literature, we define legislative *salience* as the level of attention to specific policy issues by members of parliament (Sulkin, 2009; Thomas, 1991). To measure the salience of taxation, we assume that a higher proportion of keywords related to taxation signals greater attention to these matters relative to other issues. It seems reasonable to expect that, for instance, the keywords “tax”, “taxable” and “taxation” will be mentioned more times in debates about fiscal issues than in debates on other topics. Based on this idea, we identify every time certain keywords related to taxation were mentioned in a parliamentary sitting, using the *Quanteda* package in R (Benoit et al., 2018). In order to minimize the impact of rhetorical changes over time, we use a variety of keywords for each policy issue (see Appendix A for the list of keywords). We then divide the number of times our fiscal keywords were mentioned in a parliamentary sitting over the total number of words uttered in that session.

Second, to measure the *presence* of military considerations in parliamentary debates, we code each intervention (each time an MP spoke) as a “military intervention” if at least one of a predefined set of military keywords was mentioned. We then calculate the ratio of conflict interventions as a share of the total number of interventions in the debate. These intervention ratios thus measure how present military concerns were in a debate even if the discussion was primarily about other issues. For example, we would expect military considerations to be constantly mentioned by MPs during wartime even in debates that discussed policies that were not directly related to the war effort.

The distinction between our measures for the salience and presence of fiscal and military issues in parliamentary debates is inspired in the distinction between “explicit” and “implicit” attention in cognitive psychology (see, for example, Simons 2000). On the one hand, our measure of salience captures the extent to which debates focused on a particular issue, in a way similar to how cognitive psychologists describe situations in which a specific stimulus or task absorbs the “explicit attention” of an individual. The more a debate focuses on a particular issue the less we expect it to focus on other matters, even if other topics

are also mentioned during the debate. On the other hand, our measure of issue presence resembles processes of “implicit attention”, that is, instances in which external stimuli enter an individual’s awareness and affect their performance on an unrelated task that is the main focus of “explicit attention”. Consequently, in this paper we hypothesize that the *presence* of military issues will affect the *saliency* of fiscal issues and the intensity of *contestation* in legislative debates on taxation. By contrast, we would expect the saliency of military issues to exert the opposite effect: almost by design, high saliency of military concerns should prevent the chamber from devoting a lot of attention to other policy issues, including taxation.

Table 1 illustrates how our measures of presence and saliency of military concerns capture different properties of parliamentary debates. A typical parliamentary sitting covers motions on private bills, petitions, returns, reports, and other matters, but generally only one or two topics capture the bulk of the debate. The last column in Table 1 lists those topics for the ten debates with the highest values for our indicators of military presence and saliency. We focus on debates with more than twenty interventions by MPs to ensure that there was substantive discussion in that parliamentary sitting. We find that the ten debates with the highest values in military *saliency* were explicitly devoted to the discussion of military matters, especially related to armament, army supplies, and organization. Instead, we observe that two of the debates with the highest values for military *presence* were devoted in fact to fiscal issues (excise duties and income and expenditure), while other debates focused on issues that were tangentially related to military conflict, such as army administration, education, and surgeons, or foreign policy (the peace treaty after the War of Crimea). Only two debates with high values of military presence focused explicitly on army supplies and navy estimates.

*Table 1. Debates with more than 20 interventions and highest values in military presence and saliency*

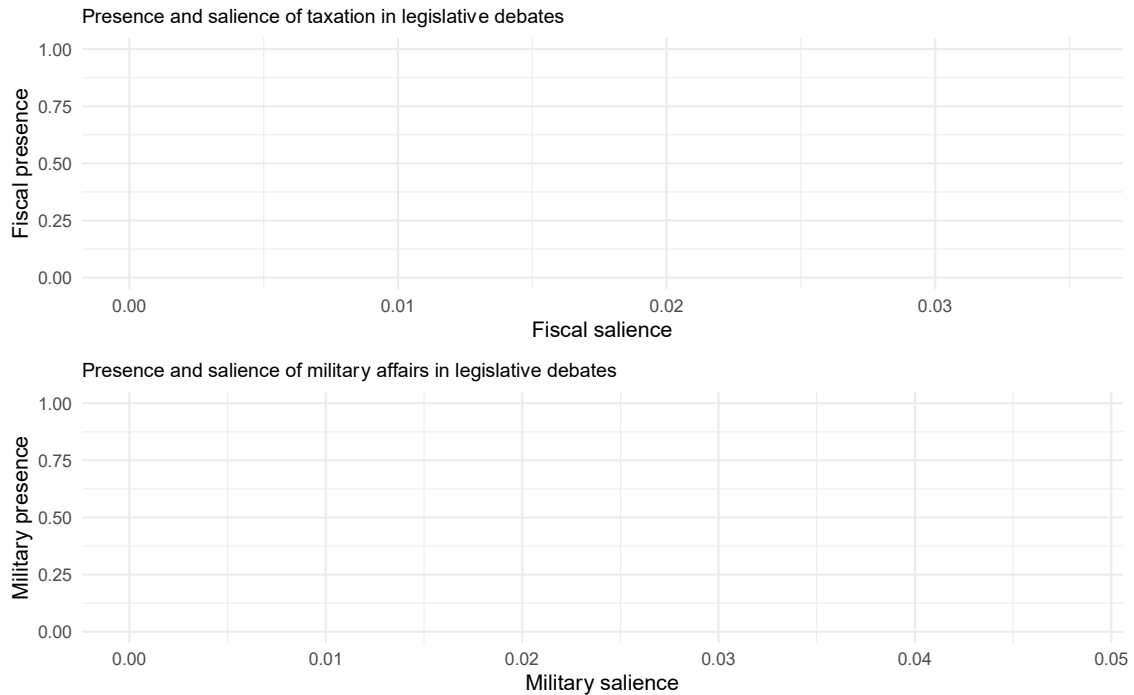
<b>Ten debates with more than 20 interventions and highest values in military saliency</b>				
<i>Date</i>	<i>Chamber</i>	<i>Military presence</i>	<i>Military saliency</i>	<i>Main topic of discussion</i>
1918-06-06	Lords	0.556	0.036	Madsen Gun
1871-05-05	Lords	0.476	0.026	Artillery
1865-03-02	Commons	0.478	0.025	Armstrong Guns for Foreign Governments, Chaplain General of the Navy
1903-03-05	Lords	0.688	0.020	Army Organisation
1903-02-23	Commons	0.322	0.020	Army Organisation
1887-03-14	Commons	0.286	0.019	Supply - Army Estimates, 1887-1888; Defences of the Empire - Coast defences of Great Britain; Coast Defences and coaling stations
1888-08-04	Commons	0.372	0.017	Navy Estimates, Army Estimates
1875-04-05	Commons	0.504	0.017	Supply - Army Estimates; Army - Artillery - The Woolwich System of Rifling; Army - Artillery Officers in India

1865-03-20	Commons	0.606	0.017	Supply - Army Estimates, Guns for Coast Defences, Navy - Greenwich Hospital, Army - The Rifle Brigade and Whitworth Rifles
1888-06-29	Lords	0.560	0.017	Imperial Defence - Organization of our Naval and Military System - Possibility of Invasion
1898-02-28	Commons	0.436	0.016	Army Estimates
<b>Ten debates with more than 20 interventions and highest values in military presence</b>				
<i>Date</i>	<i>Chamber</i>	<i>Military presence</i>	<i>Military salience</i>	<i>Main topic of discussion</i>
1871-03-28	Lords	0.857	0.010	Army-Military Education
1871-07-14	Lords	0.840	0.010	Army Regulation Bill (237)
1871-07-17	Lords	0.840	0.010	Army Regulation Bill (237)
1855-07-19	Commons	0.826	0.008	The Army in the Crimea - Sebastopol Committee
1848-02-25	Commons	0.826	0.006	Income and Expenditure, Caffre War
1827-02-12	Commons	0.816	0.007	Navy estimates
1854-12-15	Lords	0.800	0.010	Vote of Thanks to the Army and the Navy in the Crimea, The Treaty between Austria and the Allies, Enlistment of Foreigners Bill
1847-04-12	Commons	0.788	0.010	Supply - Navy Estimates, Supply - The Slave Trade, Supply - The Army
1821-03-12	Commons	0.773	0.008	Army Estimates
1854-02-17	Commons	0.759	0.006	Assistant-Surgeons in the Royal Navy
1854-05-15	Commons	0.750	0.006	Excise Duties Bill

Sources: see text.

From this line of reasoning, it follows that our measures of salience and presence in military and fiscal issues (and, for that matter, in any other issues) should be correlated but not identical. To clarify this point, Figure 1 shows the correlation between our measures of legislative salience and presence for both fiscal and military matters. Salience and presence are indeed highly correlated: when issues are highly salient, they also tend to be present in most interventions in a debate. However, the opposite is not always the case: there are numerous debates in which fiscal or military issues were present in a large number of interventions but they were not very salient, which suggests that they were not the main topic of discussion.

Figure 1. Comparing measures of issue presence and salience



Sources: see text.

While other NLP techniques, such as correlated, dynamic, or structural topic modelling, could provide similar measures of legislative salience, we opt for this measurement approach to be able to produce conceptually and empirically distinct measures of issue presence and salience. Our conceptualization of issue presence means that certain issues may influence the overall content and structure of the debate not because they are very prominent in each intervention, but because they repeatedly come up in a discussion. This means that an issue may not be among the top ten or twenty topics in any intervention but nonetheless come up in many of them. While topic models are powerful tools to identify the salience of different topics in longer texts, in many cases legislative speeches were very short, which meant that they lacked sufficient lexical complexity for the algorithm to detect a large number of topics. Our measurement strategy imposes fewer requirements on the data, allowing us to produce distinct estimates of issue salience and presence for every intervention in the corpus regardless of its length or lexical complexity.

Our estimates of military presence and salience in legislative debates are not only well suited for our purposes, but they also provide a new way of measuring external military pressures that complements existing data on interstate wars (e.g., Sarkees & Wayman, 2010; Wimmer & Min, 2009) and rivalries (Klein et al., 2006; Thompson, 2001). Cross-national data on interstate wars and rivalries have been central to identify broad patterns in the relationship between war and political development (e.g., Besley & Persson, 2009; Queralt, 2019; Thies, 2005). However, by taking country-year observations as the unit of analysis, data on wars and rivalries is not sufficiently fine-grained for within-country analyses of the political mechanisms that may link external military pressures to the



development of fiscal capacity. Additionally, the literature has assumed that the presence of a military conflict or rivalries with other countries put pressure on policy-makers, but this may not be necessarily the case (for instance, limited conflicts could go largely unnoticed if other pressing issues were on the agenda). Our measurement strategy contributes to address these gaps, allowing us to observe directly when external military pressures weighted on the policy-making process.<sup>2</sup>

Beyond the two indicators on military presence and fiscal salience, the third measure presented in this paper is concerned with the extent to which military and fiscal issues are discussed together in a debate. To this effect, we detect those interventions that mentioned at least one of our fiscal keywords *and* one of our conflict keywords, and calculate the ratio of those fiscal-conflict interventions as a share of the total number of interventions in a debate. Such measures of *fiscal-military co-occurrences* allow us to examine whether debates on taxation displayed lower levels of contestation when military concerns were discussed in tandem with fiscal issues.

Finally, to estimate the intensity of *contestation* in each parliamentary sitting, we produce a measure of the dispersion of the tone (more positive or more negative) among parliamentary interventions. To do so, we follow a two-step procedure: firstly, we use the package *sentimenter* in R (Rinker, 2019) to identify the tone of each intervention in all debates. The method tags all polarized words with +1 (positive words) or -1 (negative words) based on a pre-defined dictionary, and weights them using valence shifters (negations, amplifiers and de-amplifiers). For instance, the use of a negator in front of a positive word (say, “I do *not* like”) would flip the sign of the polarized word (in this case, “like”) from positive to negative. The use of amplifiers (such as “I *really* like”) would give extra weight to the positive polarized word. All the weighted context clusters are summed and divided by the square root of the word count at the sentence level, and each intervention is given the weighted average score of all sentences. We restrict this exercise to interventions with at least 20 words to ensure that they contain a minimum level of grammatical complexity.

As a second step, we calculate the standard deviation of the score of all interventions in a parliamentary sitting. In this way, we capture the dispersion in the tone (more positive or more negative) between interventions in each debate. Even if this indicator does not provide us with information on the specific issues that were being discussed, we believe that it does identify different argumentative strategies of MPs, and therefore can be used as a reasonable proxy for the overall level of contestation. It is unlikely that a debate with conflicting positions on a contested issue would yield a low level of sentiment dispersion; similarly, we do not expect high levels of consensus among parliamentarians to be associated with very different tones in the debate. In some of the models below

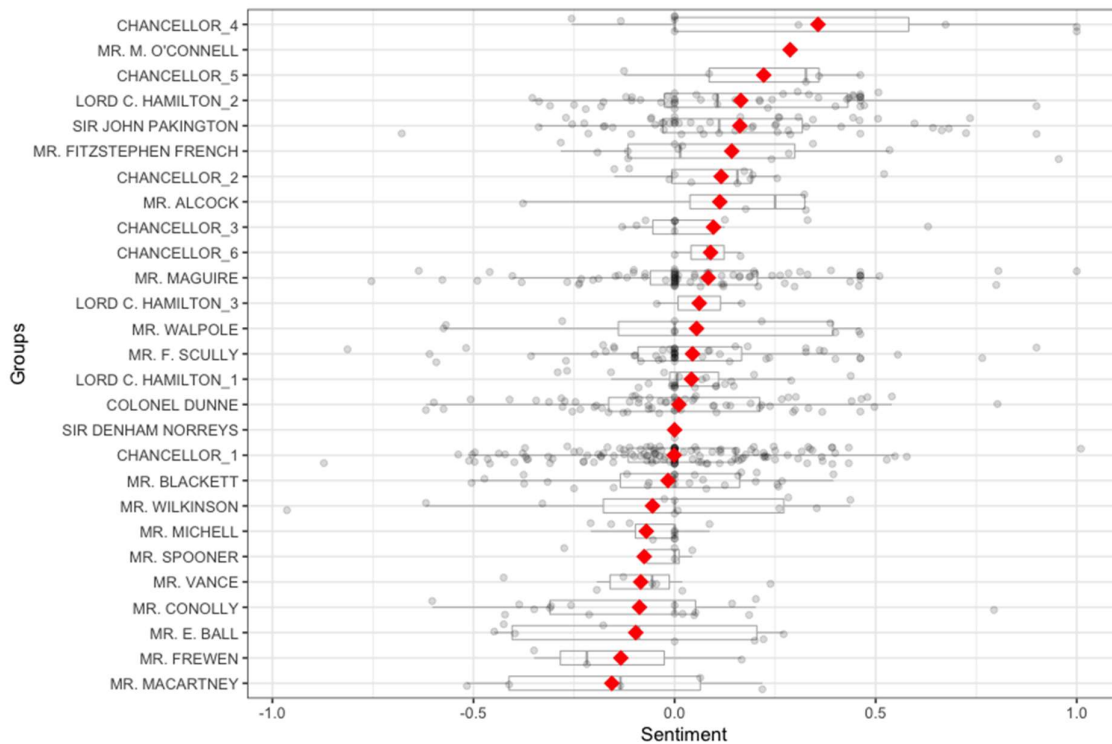
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<sup>2</sup> The larger dataset includes measures of the presence and salience of foreign powers in legislative debates, which we analyse in other work in progress. These measures give us direct information about the prominence of specific rivalries in the policy-making process.

we also present a variant of this indicator in which we only take into account those interventions that mention at least one of our fiscal keywords (and disregard the rest).

Figure 1 illustrates the working of the method in a debate of the Chamber of Commons held on 23th May 1853. The debate revolved around the extension of the income tax to Ireland, and confronted the Chancellor of the Exchequer with several Irish MPs that opposed the bill. While not being verbatim, the documentation records the speech put forward by the MPs in front of the chamber. For consistency with some of the models presented below, we have restricted the debate to those interventions where our fiscal keywords appeared at least one time. The figure presents the average sentiment score (x-axis) for each intervention (y-axis), as well as the score for each sentence and the corresponding boxplot displaying their distribution. The Chancellor of the Exchequer's interventions were generally among the most positive ones, whereas the Irish MPs, such as Mr. Macartney (Antrim), Mr. Conolly (Donegal), or Mr. Vance (Dublin), belong to the opposite extreme of the indicator.

Figure 2. Co-occurrences and sentiment diversity (income tax debate, 23th May 1853)



Notes: sentiment scores for all fiscal interventions in a debate on the Income Tax Bill in the Chamber of Commons held on 23th May 1853. Source: <https://hansard.parliament.uk>

The most negative intervention belongs to Mr. Macartney, who “thought it the height of injustice in any Government to come forward with such a proposition as this, which must be regarded as an aggravation of the financial oppressions under which Ireland had suffered.” In the most positive one, the Chancellor of the

Exchequer expanded on the reasons behind the extension of the tax, stating: “I only wish to remind the Committee that the main objects which the Government have in view in proposing the renewal of the income tax for a considerable time are these two. In the first place, to give stability to our system of finance; and, in the second place, to put the tax upon such a footing, and so regulate its provisions by a progressive descent of the rate as may bring it to a point in which it will probably be in the power of Parliament to part with it altogether, if so disposed.” Overall, the average tone of the debate appeared to be slightly positive (the amendments to defer the bill were indeed rejected by the house that day), with a standard deviation of 0.13 points.

## V Military pressures and legislative salience of taxation in the United Kingdom

To what extent did military pressures increase the salience of taxation in parliamentary debates? Figure 2 provides a first approximation to this question by plotting the yearly salience and presence of fiscal and military issues in the United Kingdom from 1817 to 1939. The top panel is based on our measure of issue salience as captured by the ratio of fiscal (green line) or military keywords (red line) over the total number of words for all parliamentary sittings that year. The bottom panel displays instead the presence of fiscal (green line) and military issues (red line) as measured by the ratio of fiscal or military interventions over the total number of interventions for that year.

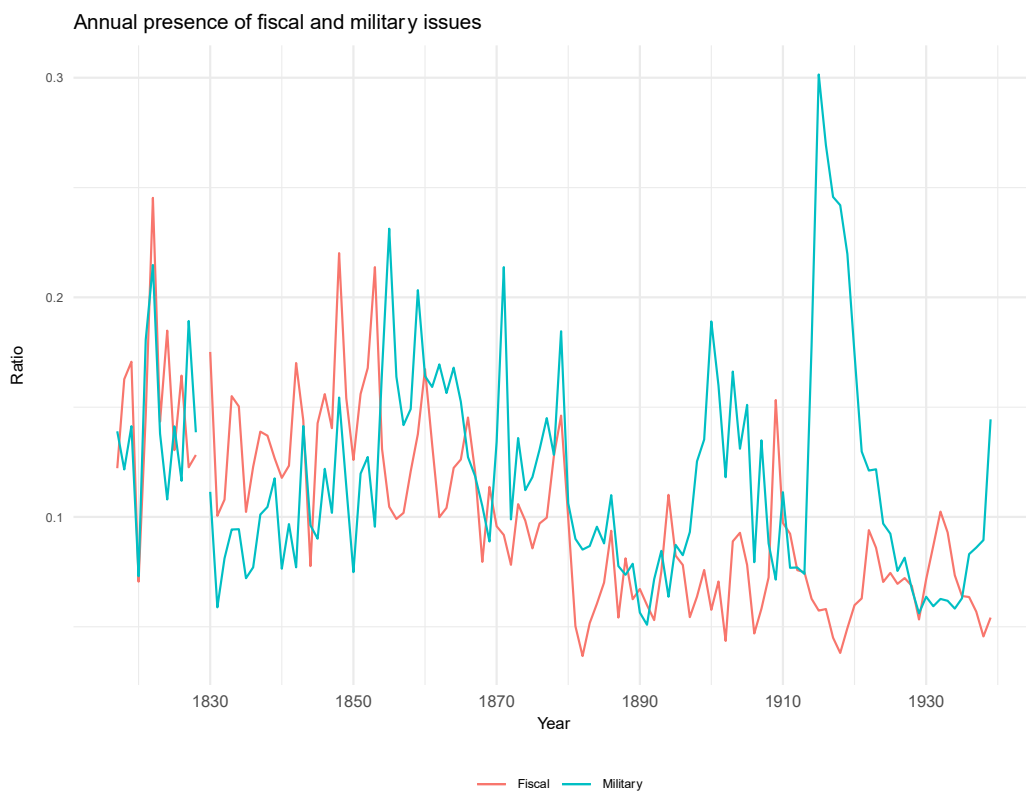
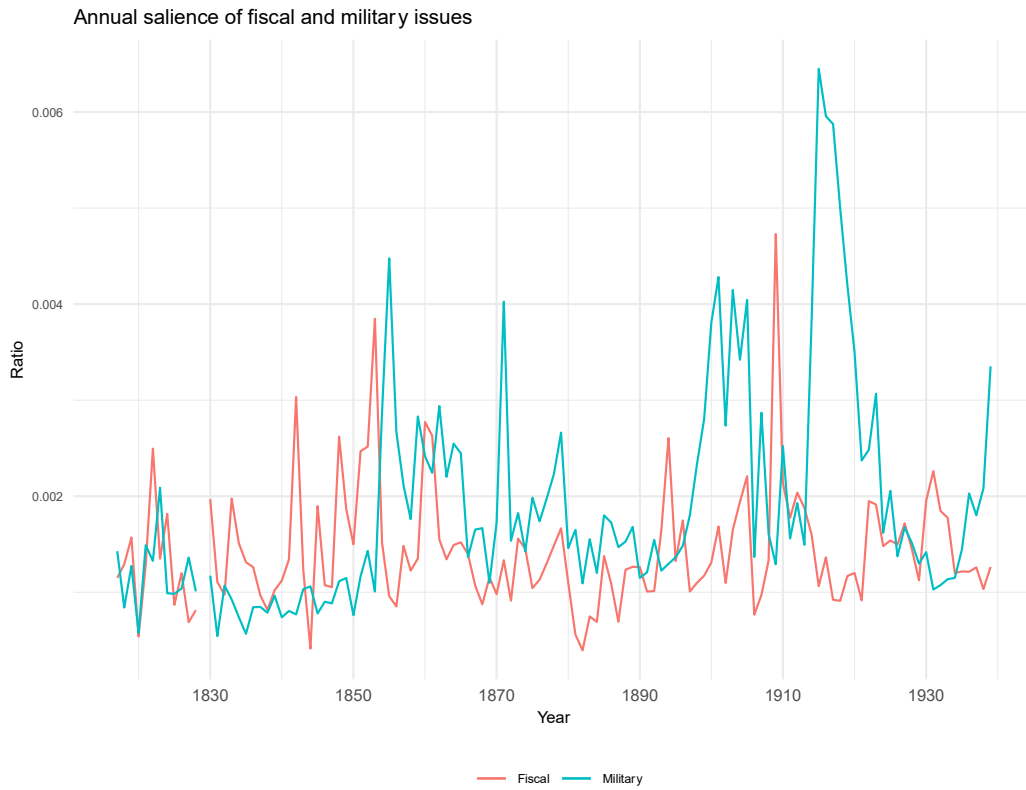
The red lines coincide in both panels with periods in which the UK was involved in major foreign wars. We observe peaks during the War of Crimea (1853-1856), around the time of the Second Boer War (1899-1902), and, of course, World War I (1914-1918) and the beginning of World War II (1939). There is also fairly constant parliamentary activity on military issues during periods of relative peace, such as the years between the late-1850s to the 1880s, when the British Navy changed its entire fleet for ironclads. The indicators of military presence and salience, however, differ significantly in their long-term trends. While military salience (in the top panel) does not seem to display a clear trend, the presence of military concerns (bottom-panel) declined from an average of 10 to 15% before the 1860s to roughly 5 to 10% after the 1890s. This drop may reflect the fact that the number of interventions per debate and per year dramatically increased during the second half of the nineteenth century, possibly due to institutional reforms that changed the composition of parliament, as well as due to the growing number of areas that the British state began to regulate. These two indicators combined suggest that, even though intense legislative activity on military issues continued to occur at a similar pace up until the end of our period, military concerns were less present in other debates compared to the first half of the nineteenth century.

Turning now to the measures of fiscal presence and salience, we also observe that the green lines in both panels follow somewhat similar patterns. We find peaks during years in which controversial taxes were introduced (such as the income tax in 1842) as well as in periods in which unsuccessful tax reforms were discussed.<sup>3</sup> The attempts to abolish the income tax during the two decades that followed its reintroduction are well-reflected in the relatively high levels of salience observed in the late-1840s and the early-1850s. At a time when the two most prominent supporters of the tax (Prime Ministers Robert Peel and William Ewart Gladstone) considered it only a temporary measure aimed at rationalizing and making the fiscal system more efficient, the political conflict over this fiscal tool was on the cards (Biagini, 1991; Daunton, 2001; Matthew, 1979). We also observe a peak in fiscal salience in 1909 related to the “People’s Budget” and the introduction of new progressive taxes on income and land. Finally, the bottom panel in Figure 2 shows that the presence of fiscal matters also tended to decline from the 1860s to the 1890s, which further indicates that institutional changes and the state’s broader sphere of action somehow eclipsed the importance of both fiscal and military affairs over time.

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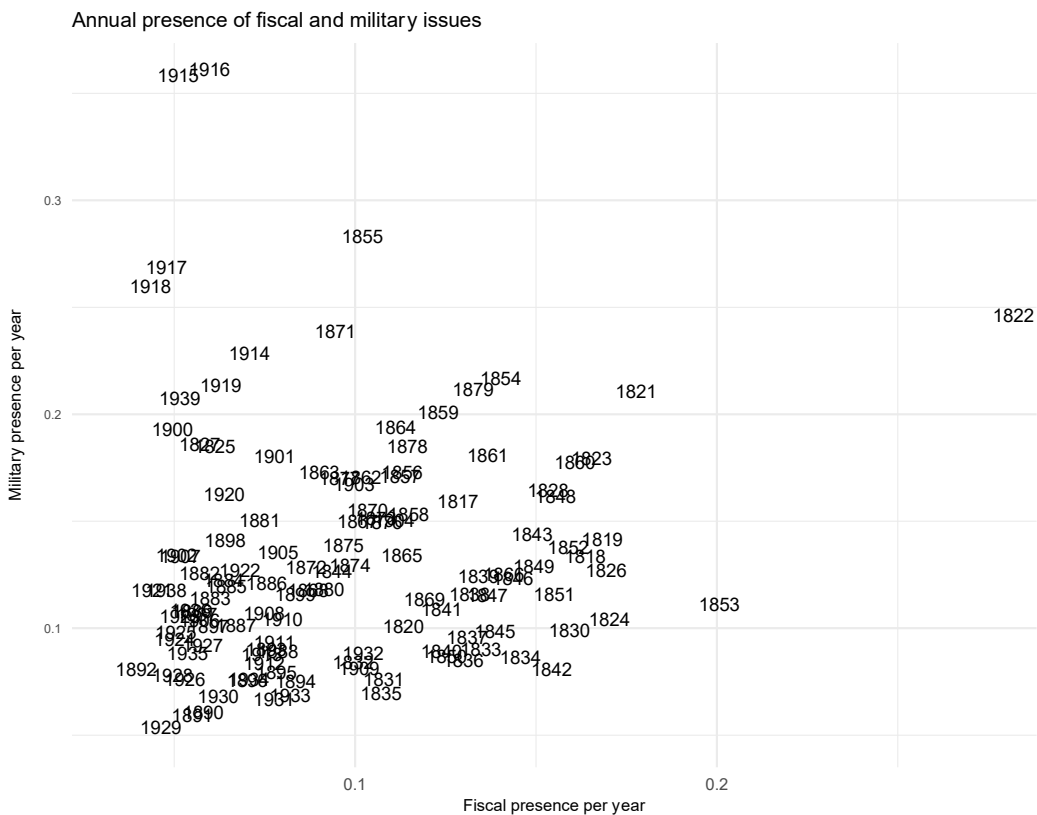
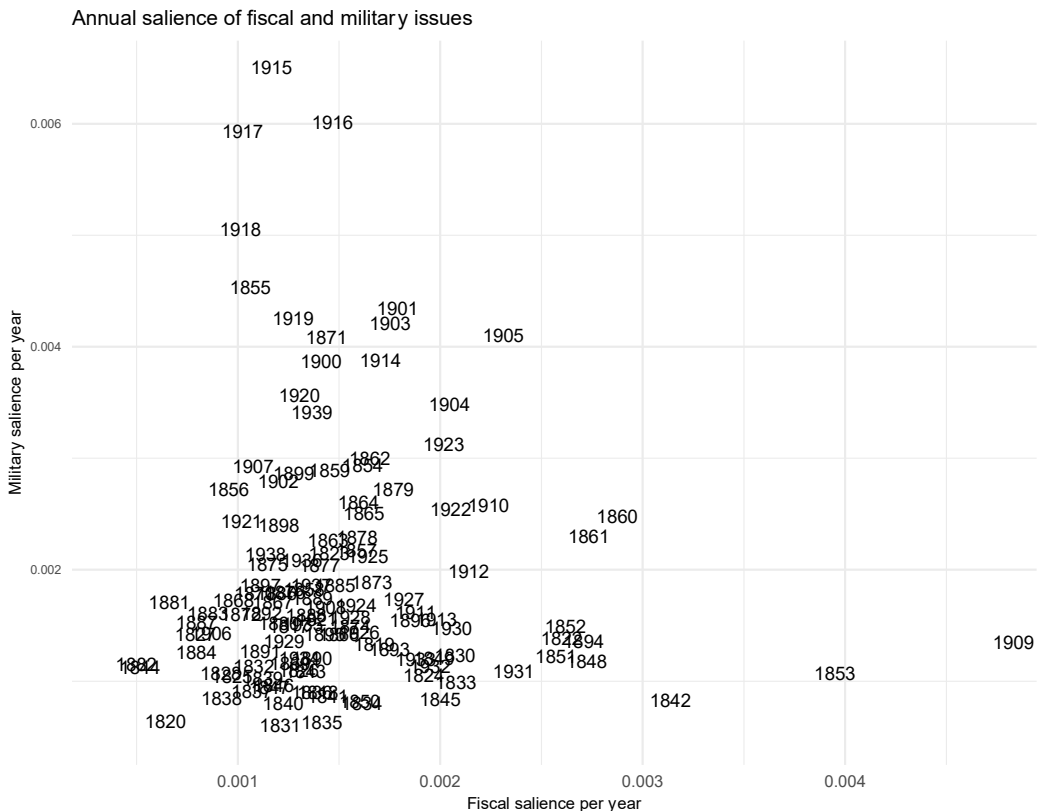
<sup>3</sup> Unfortunately, we do not capture the first introduction of the income tax in 1799 or its first repeal in 1816, since our data only begins in 1817 (there are no parliamentary transcripts available from Hansard for either of those years).

Figure 3. Annual presence and salience of fiscal and military issues in parliamentary debates



Sources: see text.

Figure 4. Correlation of annual measures of fiscal and military salience and presence



Sources: see text.

Even though the lines in the top and bottom panels tend to follow similar patterns, suggesting that our measures of fiscal and military salience and presence are strongly correlated, we find periods in which they depart from each other. This can be clearly observed in Figure 3. The bottom panel plots the yearly means of our indicators of fiscal and conflict presence. It shows several years in which fiscal and military issues were both highly present, as was the case between 1821 to 1823 (probably as the result of the Austrian War debt), the Crimean War (particularly in 1854, when income tax rates were significantly raised), or the military campaigns against the Afghans and Zulus in 1878 and 1879, respectively. Instead, we observe higher levels of divergence between fiscal and military salience in the top panel. On the one hand, fiscal debates were rather inconspicuous during periods in which military issues were extremely salient, such as during World War I (something that can be also perceived, albeit in a lower degree, in the bottom panel). But, above all, we also observe that years in which taxation attracted a lot of legislative attention tended to happen in peacetime and devoted less time to discussions about military concerns. For instance, the debates regarding the introduction of the income tax in 1842, the efforts to repeal it in 1853, and the fiscal reforms that expanded the progressivity of the tax regime in 1909, barely referred to military affairs.

To summarize, Figures 2 and 3 suggest that fiscal issues were not salient—that is, did not represent the main focus of parliamentary sessions—in periods when military concerns absorbed parliamentary debates. Similarly, periods of very intense fiscal reform were not accompanied by similar levels of attention to military affairs. It is important to note, however, that these figures display yearly values, and we cannot exclude the possibility that military and fiscal salience were strongly associated at the level of individual debates even if those debates represented a small share of all parliamentary sessions in a year. To examine this possibility, table 2 presents the results of a series of statistical models that estimate the association between the presence and salience of military concerns on fiscal salience with individual debates as the unit of analysis.

All the models are cross-sectional OLS regressions, with our measure of fiscal salience (the ratio of fiscal keywords over the total number of words in that debate) as the dependent variable. Models 1 to 3 examine the impact of military salience, Models 4 to 6 evaluate in turn the impact of the presence of military issues in the debate, as measured by the share of interventions that featured one of our military keywords over the total number of interventions in the debate. The models build up in complexity, presenting first simple bivariate regressions (Models 1 and 4), adding year fixed effects (models 2 and 5), and controlling for a temporal trend, a dummy variable that takes a value of 1 if the debate occurred in the House of Commons and 0 if it occurred in the House of Lords, and different measures of the length of the debate based on the total number of words and the total number of interventions (Models 3 and 6). Finally, Model 7 includes both independent variables and all the controls in the regression.

The results are in line with our expectations and the patterns observed in the descriptive figures. Models 1 to 3 show that debates that explicitly focused on

military issues were less likely to also focus explicitly on taxation (Models 1 to 3). If anything, the sign is negative in Model 3, suggesting that the debates devoted to military affairs left less room for discussion of other issues. This makes sense since, as we explained in the previous section, the more a debate focuses on one single issue, such as military affairs, the less it should discuss other topics, including taxation.

However, our first hypothesis (H1) predicts that the presence —and not the salience— of military concerns should make fiscal issues more salient. Models 4 to 6 indicate that, indeed, debates in which military issues were not the main focus of attention but were nonetheless frequently mentioned tended to focus more on fiscal issues. Finally, model 7 regresses fiscal salience on both measures of military salience and presence. We find even stronger results than in the previous models. These results are quite substantial: in Model 7, a move from a debate that did not mention military issues at all to one in which military issues were mentioned in every intervention is associated with a 0.001 increase in the explicit salience of taxation (which corresponds to about half of one standard deviation).

*Table 2. Effects of military presence and salience on fiscal salience*

	Fiscal salience (fiscal keywords / total keywords)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Military salience	0.001 (0.006)	0.010 (0.006)	-0.023*** (0.006)				-0.071*** (0.009)
Military presence				0.0001 (0.0001)	0.0003* (0.0001)	0.0004*** (0.0001)	0.001*** (0.0002)
Chamber (commons = 1)			0.001*** (0.00004)			0.001*** (0.00004)	0.001*** (0.00004)
Year (trend)			-0.00000 (0.00000)			-0.00000 (0.00000)	-0.00000 (0.00000)
Total words			0.00000*** (0.000)				0.000*** (0.000)
No. of interventions						0.00000*** (0.00000)	0.00000* (0.00000)
Constant	0.001*** (0.00002)	0.001*** (0.0002)	0.007 (0.004)	0.001*** (0.00002)	0.001*** (0.0002)	0.004 (0.004)	0.004 (0.004)
Year FE's	NO	YES	YES	NO	YES	YES	YES
Observations	22,832	22,832	22,832	20,658	20,658	20,658	20,658
Adjusted R <sup>2</sup>	-0.00004	0.027	0.084	0.00000	0.030	0.070	0.075

Notes: Significance codes: 0.001 '\*\*\*' 0.01 '\*\*' 0.05 '\*'

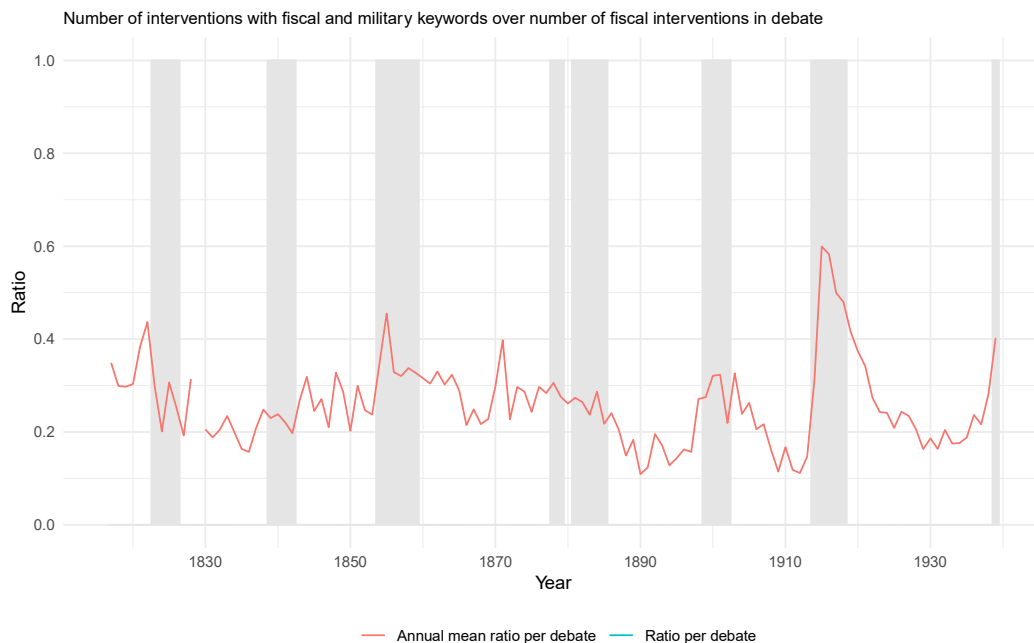


In the supplementary materials (Appendix B), we report several robustness checks, including models with fiscal presence as the dependent variable and models restricting the sample to debates before WWI, debates with more than 3000 words, and debates with more than twenty interventions. All the results hold.

It is worth noting that these models do not tell us much about the direction of causality. It could be the case, as bellicist theories claim, that external military pressures are making fiscal issues more salient. However, the relationship could also work the other way around: when MPs discuss fiscal issues, they may be more likely to refer to military considerations, perhaps because they see it as an effective rhetorical strategy to defend their position or simply because public finances during part of this period were still primarily dominated by military spending.

Figure 4 provides some descriptive evidence suggesting that even if the second of these possibilities could have been at play, MPs were also more likely to discuss military and fiscal issues *together* during periods in which the UK was involved in intense international wars. Each dot in Figure 4 represents a debate. The y-scale shows the ratio of interventions that mentioned both military and fiscal keywords as a share of all fiscal interventions in a debate. The gray bars mark years in which the UK experienced at least 10,000 war-related battle-deaths according to data from Goenaga et al. (2018) plus the years of the two World Wars (not part of the time period of this dataset). The red line represents the mean of the co-occurrence ratios for all the debates in a year. We observe that co-occurrence ratios were higher during wartimes, especially during the War of Crimea (1853-1856), the Second Boer War (1899-1902) and World War I (1914-1918). This suggests that while military considerations might have been used by MPs as a mere rhetorical strategy in certain occasions, military pressures during wartimes also introduced fiscal concerns to the political agenda.

*Figure 5. Co-occurrences of fiscal and military keywords as a share of fiscal interventions*



Sources: see text.

Table 2 carries out a similar analysis in a regression setting. We examine whether MPs were more likely to refer to both fiscal and military issues in the same intervention during wartime. The dependent variable in Models 1 and 2 is the number of interventions in which both fiscal and conflict issues were mentioned as a share of all the fiscal interventions in a debate, while the dependent variable in Models 3 and 4 is the number of fiscal-military co-occurrences over the total number of interventions in the debate. We again control for the total number of words, since co-occurrences are more likely to happen in longer debates; the number of interventions, since debates with more interventions have larger denominators and thus would depress co-occurrence ratios; the legislative chamber, and a year trend.

Table 3. Effects of major interstate wars on fiscal-military co-occurrences

	Fiscal-conflict ints. / fiscal ints.		Fiscal-conflict ints. / total ints	
	(1)	(2)	(3)	(4)
Total words	0.00001*** (0.00000)	0.00001*** (0.00000)	0.00000*** (0.00000)	0.00000*** (0.00000)
No. of interventions	-0.001*** (0.00003)	-0.001*** (0.00003)	-0.0002*** (0.00001)	-0.0002*** (0.00001)
Chamber (commons = 1)	-0.122*** (0.006)	-0.116*** (0.006)	-0.008*** (0.001)	-0.008*** (0.001)
Year (trend)	0.0004*** (0.0001)	0.00002 (0.0001)	-0.0002*** (0.00001)	-0.0002*** (0.00002)
Wars	0.085*** (0.005)		0.003*** (0.001)	
Wartime (1823-1826)		0.037* (0.017)		0.008** (0.003)
Wartime (1839-1842)		-0.039** (0.012)		-0.003 (0.002)
Wartime (1854-1859)		0.079*** (0.010)		0.006*** (0.002)
Wartime (1878-1879)		0.014 (0.017)		0.004 (0.003)
Wartime (1881-1885)		-0.021 (0.012)		-0.016*** (0.002)
Wartime (1899-1902)		0.088*** (0.013)		0.003 (0.002)
Wartime (1914-1918)		0.306*** (0.013)		0.015*** (0.002)
Wartime (1939)		0.230*** (0.020)		0.021*** (0.004)
Constant	-0.582*** (0.165)	0.204 (0.174)	0.433*** (0.028)	0.467*** (0.030)
Year FE's	NO	NO	NO	NO
Observations	15,563	15,563	20,658	20,658
Adjusted R <sup>2</sup>	0.121	0.150	0.138	0.144

Notes: Significance codes: 0.001 '\*\*\*' 0.01 '\*\*' 0.05 '\*'

In models 1 and 3 we focus on the average effects of being at war. As expected, we find that fiscal and military issues were more likely to be mentioned together during wartime. Models 2 and 3 include instead a separate categorical variable for each period in which the UK suffered over 10,000 battle deaths in a year. These models show that several war periods were associated with higher co-occurrence ratios, with the exception of 1839-1842 (First Anglo-Afghan War and the First Opium War), 1881-1885 (several colonial wars in Africa and Asia), and to a lesser extent 1878-1879 (Second Anglo-Afghan War and the Anglo-Zulu War). Similarly, we also find the largest coefficients for the periods of the two world wars, which have been often associated with major fiscal reforms (e.g., Scheve & Stasavage, 2016).

In sum, the models presented in this section support Hypothesis 1: debates in which military concerns were present were more likely to focus on fiscal issues, and such debates were more likely to occur during wartime. We now turn to analyze the second claim posed by bellicist theories: to what extent did military pressures reduce political conflict around taxation?

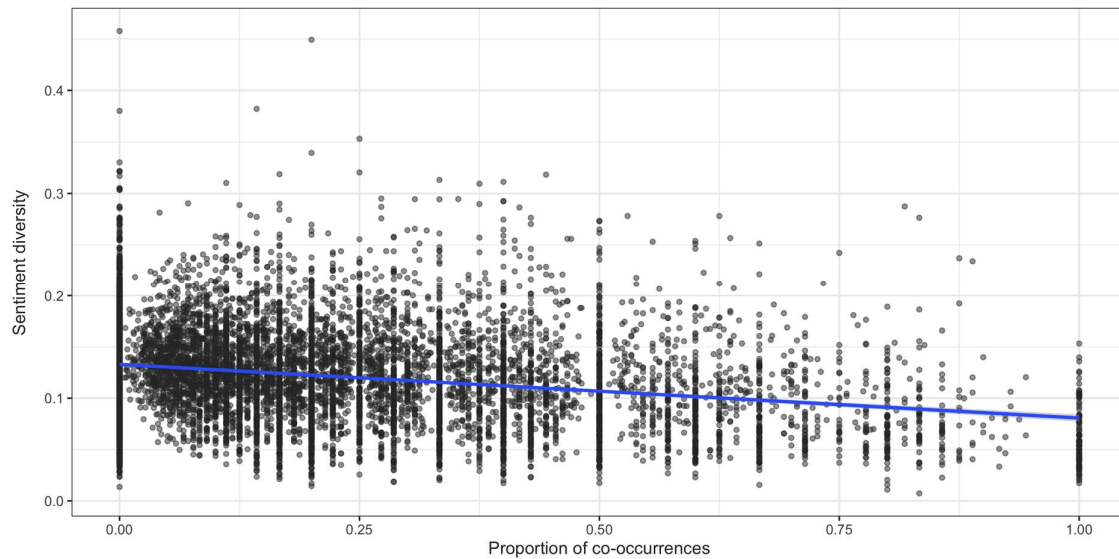
## VI External military pressures and legislative conflict on taxation

As mentioned above, a strand of bellicist theory posits that wars and military pressures tend to foster consensus among societal actors in favour of new investments in fiscal capacity. In this section we explore the relationship between the presence of military concerns and parliamentary contestation by looking at the dispersion in the tone of parliamentary debates on taxation. We specifically expect to find low levels of contestation in fiscal debates that take place in a context of military pressure; by contrast, fiscal debates that do not feature military issues should, on average, lack this critical rally-around-the-flag effect.

As a first visual inspection, Figure 6 plots the average level of contestation (measured as the standard deviation of the sentiment score in fiscal interventions) in the y-axis, against the proportion of co-occurrences for all debates in which fiscal issues were part of the debate (i.e., when our fiscal keywords were mentioned at least once) in the x-axis. In order to avoid extreme values in the standard deviation driven by debates with very few fiscal interventions, we restrict the sample to debates with at least 5 fiscal

interventions.<sup>4</sup> The figure indicates that debates in which more fiscal interventions also mentioned military issues were less likely to experience high levels of confrontation than those with fewer co-occurrences. This suggests that fiscal debates tended to be more contested when military issues were less present in the discussion. Figure C1 in the Appendix shows a similar pattern based on a slightly different operationalization of the variables, as it restricts the sample to debates in which our fiscal keywords were particularly salient. Specifically, Panel A includes only debates in the upper quartile of the fiscal salience indicator (i.e., 75% of debates had lower values of fiscal salience), while Panel B looks only at debates in the upper decile (i.e., 90% of the debates had a lower ratio). This allows us to observe the relationship between fiscal-military co-occurrences and parliamentary contestation specifically in debates where taxation was a key subject of discussion. The results are very much consistent with those of Figure 6.

*Figure 6. Fiscal-military co-occurrences and sentiment diversity in parliamentary sittings with at least 5 fiscal interventions, 1816-1939*



Sources: see text.

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<sup>4</sup> As it will become clear in the following paragraphs, our results do not hinge on this restriction.

In Table 4 we test this relationship in a formal regression setup. Models 1 to 3 regress the standard deviation of the sentiment score among fiscal interventions on the proportion of fiscal-military co-occurrences (restricting again the exercise to debates with at least 5 fiscal interventions). Model 1 displays the bivariate correlation between these two variables, while Model 2 includes year fixed effects, and Model 3 adds a battery of control variables: the total number of fiscal interventions in each parliamentary sitting, the average sentiment score for all interventions, a dummy variable for the Chamber of Commons, and a yearly trend. The results are in line with our previous findings: fiscal interventions that featured military issues were less confrontational than those that framed the debate in other terms. According to our models, increasing the proportion of co-occurrences from 0 to 100% is associated with a fall in the standard deviation of the sentiment score of 0.05 (which roughly corresponds to the standard deviation of the variable). The control variables also depict the expected effect: a higher number of fiscal interventions is associated with more contestation, probably as a result of a mechanical effect (the more interactions between members of parliament, the more opportunities to express dissent). Contestation was also higher in the House of Commons, where legislative acts were first discussed and approved and its members were directly accountable to their constituencies. Finally, a more positive tone in the debate (average sentiment) was also associated to lower levels of contestation. As one would expect, high levels of confrontation (meaning, the clash of positive and negative interventions) draw downwards the average tone of the debate. Hence, an overall positive debate reflects a rather calm exchange of opinions.

*Table 4. Effect of fiscal-military co-occurrences and military presence on the levels of contestation*

	Sd. sentiment score (fiscal)			Sd. sentiment score (all ints.)		
	(1)	(2)	(3)	(4)	(5)	(6)
Co-occurrences	-0.052*** (0.002)	-0.054*** (0.002)	-0.050*** (0.002)			
Ratio military ints.				-0.061*** (0.007)	-0.062*** (0.007)	-0.054*** (0.007)
Total interventions <sup>a</sup>			0.0001** (0.00003)			0.0001*** (0.00001)
Commons			0.024*** (0.002)			-0.001 (0.003)
Average sentiment <sup>a</sup>			-0.102*** (0.010)			-0.039* (0.024)
Trend			0.0002** (0.0001)			-0.0001 (0.0001)
Constant	0.133*** (0.001)	0.128*** (0.009)	-0.253* (0.147)	0.168*** (0.001)	0.186*** (0.011)	0.313 (0.221)
Year FE's	NO	YES	YES	NO	YES	YES
Observations	8,781	8,781	8,781	1,864	1,864	1,864
Adjusted R <sup>2</sup>	0.061	0.158	0.184	0.040	0.129	0.149

Notes: Models 1 to 3 restrict the sample to parliamentary sittings with at least 5 fiscal interventions, whereas Models 4 to 6 narrow down the sample to debates with salient fiscal discussions (i.e., the level of the ratio “fiscal keywords / total words” was in its highest quartile). The dependent variable in the first three models measures the standard deviation in the tone of fiscal debates, while in the last three models it captures the standard deviation in the tone of all interventions in a parliamentary sitting. a) In Model 3, the variables “Total interventions” and “Average sentiment” are only related to fiscal interventions, whereas in Model 6 these variables refer to all interventions in a parliamentary sitting. Significance codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’

In Models 4 to 6 we employ a different operationalization of the variables. This time we regress the standard deviation of the sentiment score for all interventions in a debate (and not just those that mentioned fiscal keywords) on our measure of military presence. We restrict the sample to debates in the upper quartile of fiscal salience (as in Panel A in Figure C1 in the Appendix). This allows us to explore how military presence affects the intensity of contestation in debates that were very much devoted to fiscal issues. The results are consistent with our previous findings. Military presence is negatively correlated with the level of contestation and the control variables display similar results as before (except for the role of the chamber and the year trend, which become insignificant).

In the Appendix we further show that our results do not hinge on our preferred model specifications, presenting models with different samples and

alternative operationalization strategies of the independent and dependent variables. The results are consistent with our previous findings: higher presence of military issues is associated with lower levels of contestation.

## VII Conclusions

This paper has empirically examined two claims that bellicist theories of state formation commonly make about the mechanisms that connect external military pressures with the development of fiscal capacity: 1) military threats put fiscal matters on the agenda, since rulers need to find new sources of revenue to meet the military needs, and 2) these threats reduce at turn resistance to tax reform and facilitate collective investments in fiscal capacity. The analysis of the content and tone of over 22,000 parliamentary sittings in the United Kingdom from 1817 to 1939 provides evidence consistent with both claims. On the hand, fiscal matters tended to be more salient in parliament when military concerns were also present. Second, our analyses also show that fiscal debates in which military issues were frequently mentioned tended to be less contentious. These findings provide fine-grained empirical evidence of the mechanisms that may underpin Charles Tilly's famous dictum that "wars make states and states make wars."

At a theoretical level, this paper seeks to contribute to the literature on political development by specifying the mechanisms whereby military pressures facilitate investments in fiscal capacity. In particular, we introduce the concepts of issue presence and salience as new theoretical devices to explain how military pressures could have changed the salience of fiscal issues and altered the intensity of political conflicts around taxation. We hope to explore this in more detail in future research by pairing our data on MP's interventions with information about their social background and constituency-level data. Empirically, this paper provides fine-grained evidence that supports two of the core claims of bellicist theories. It also introduces a new dataset of British legislative debates disaggregated at the level of individual speeches or interventions, which offers an important source of empirical material that will allow researchers to directly observe political conflicts related to investments in state capacity.

We conclude with some reflections about what the extent to which these mechanisms contributed to key fiscal reforms in the United Kingdom. While this will occupy us in the future, we can briefly speculate at this point that the association between higher military presence and lower fiscal salience and



contestation did not always lead to relevant and permanent fiscal changes. While military affairs featured prominently in some of the major fiscal debates of the nineteenth century, it was not until the third quarter of the century that tax ratios began to increase in a steady (but moderate) pace. Most of the nineteenth century was in fact characterized by a long-term decrease in the tax effort. The relatively high proportion of tax-related keywords prior to the 1850s was not always meant to increase revenues, but to reorganize the fiscal system inherited after the war episodes that characterized the turn of the nineteenth century (Daunton, 2001).

Debates on direct taxation dominated legislative attention during most of this period, particularly after the re-introduction of the income tax in 1842, but it was not until the fiscal reforms amid the Second Boer War (1899-1902), the Lloyd George's "People's Budget", and, of course, World War I, that we observe major boosts in direct tax extraction. Indeed, direct taxes (above all, income, corporation and inheritance taxes) raised to unmatched levels during the two world wars, when progressive taxation was reinforced in order to meet the unprecedented military needs and to implement fairer fiscal policies (Scheve & Stasavage, 2016; Steinmo, 1993). The period saw top income tax rates skyrocketing, at the same time that the tax base widened and incorporated middle and low incomes into the tax scheme (Broadberry & Howlett, 2005; Torregrosa-Hetland & Sabaté, 2019). At the same time, some indirect taxes, such as stamp duties, progressively lost their significance during the second half of the nineteenth century as modern direct taxation stepped in. Taxes on consumption goods and custom duties, for instance, fell from 64% of all tax revenue in 1843 to around 39% in 1913 (Schremmer & Stern, 2008).

In sum, not all periods of intense legislative activity on taxation lead to discreet fiscal reforms or to immediate changes in levels of tax collection. In fact, some of the debates in which we observed high levels of fiscal-military co-occurrences occurred in the context of proposals that sought to repeal taxes and erode the fiscal capacity of the state (as was the case in the 1853 parliamentary sitting discussed in the text). In those instances, external pressures could have contributed to preserve what had already been achieved rather than increase fiscal capacity. We thus envision exploring in future projects under what circumstances the presence of military concerns in legislative debates had noticeable effects on fiscal outcomes. In addition, we plan to extend this kind of analysis to other cases and other areas of state capacity as part of a broader research agenda.

## VI References

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