Strategy of the Commons: How Politicians Reach High Office

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Abstract

How do politicians secure top government positions? We exploit a natural experiment in the UK House of Commons, where Members of Parliament (MPs) submit their names to a ballot to win the opportunity to present and likely debate a bill of their choosing. We find that MPs that win the ballot are 71% (10.7 percentage points) more likely to hold high ranking jobs five years after the ballot, compared to MPs that submitted to the ballot but lost. Using their position in the ballot as an instrument, we provide causal evidence that this is not driven by ballot winners successfully converting bills into laws. Motivated by a simple model of political capital, we analyse the content of the bills using Natural Language Processing methods, to see if MPs are rewarded for using their bill to advance their party's objectives. In line with our model's predictions, we find that MPs presenting bills less similar to their previous speeches in Parliament are more likely to be young and, conditional on age, are more likely to have a high ranking job five years later.

1 Introduction

Do politicians who randomly gain control over parliamentary time have a greater chance of getting government and opposition jobs? Through which channels do parliamentarians exploit this luck to enhance their careers? We exploit a natural experiment in the UK House of Commons, where MPs submit their names to a ballot to win the opportunity to present and likely debate a bill of their choosing. We assess whether this opportunity leads to better career outcomes for the selected MPs.

Most bills that gain Royal Assent in the House of Commons are Government Bills[1]. Private Members' Bills (PMBs) are bills that are introduced by individual MPs or members of the Lords[2]. They play an important part of the lawmaking process in the House of Commons, as they are the only mechanism for backbench and opposition Members of Parliament to enact changes in the law.

There are four channels through which PMBs can be introduced: Ordinary Presentation Bills, Ten Minute Bills, Ballot Bills, and bills originating in the House of Lords. Ordinary Bills and Ten Minute Bills do not have any pre-allocated time for second readings, which are essential for any bill to achieve Royal Assent, but any backbench MP can apply for these. Ballot Bills can only be presented by the 20 winners of the Ballot for Private Members' Bills, where backbench MPs submit their names to the Ballot Book to be eligible. Ballot Bills have 13 Fridays that are pre-allocated in the Parliamentary session for second readings, vastly increasing the probability that these bills are debated in the House of Commons. Finally, PMBs can originate in the House of Lords.

One topical PMB with significant media attention is the *Terminally Ill Adults (End of Life) Bill*. This bill was introduced by Kim Leadbeater, who notably came first in the 2024-25 Ballot. This bill had its second reading on 29th November 2024, and passed its second reading on a free vote[3]. This bill's progression benefited from

[1] https://www.parliament.uk/site-information/glossary/public-bills/?id=32625

[2] https://www.parliament.uk/site-information/glossary/private-members-bills/

[3] A free vote is one where (typically) every party allows MPs to vote without any influence from

the guaranteed second reading provided by the Ballot Bill procedure.

The pre-allocated time for second readings makes the Ballot the best opportunity for backbench MPs to get a PMB turned into law. The House of Commons provides statistics on the number of each type of PMB introduced in each Parliamentary session since 1997, as well as the number of bills that gain Royal Assent. Despite only representing 13% of all PMBs introduced, Ballot Bills account for 76% of all PMBs that achieve Royal Assent. 29% of all Ballot Bills introduced achieve Royal Assent, compared to 0.5% of Ten Minute Bills, 1.7% of Ordinary Presentation Bills and 2.5% of Bills originating from the House of Lords.

There are several explanations for why this guaranteed opportunity could lead to better career outcomes for lucky MPs. First, ballot winners have the opportunity to help draft, debate, and organize support for a bill. This opportunity allows ballot winners to signal their competence and accumulate skills. This is important for jobs in Government, where Cabinet members and Government Ministers are regularly involved with drafting bills. Second, ballot winners have the freedom to present bills that other parliamentarians wish to be converted into law. Even the current government of the day, which may have limited parliamentary time to push through all the legislation it wishes, may provide Ballot Bill winners with *Handout Bills*. We suggest that politicians who choose to accept a *Handout Bill* make this decision to gain some form of benefit in the future, such as Ministerial or Cabinet jobs. We describe this attempt to build a positive reputation within a party as *political capital* accumulation. Finally, MPs that introduce Ballot Bills may gain both media attention and attention within the House of Commons. This visibility may keep these MPs in the minds of senior politicians when considering candidates for Government jobs.

These benefits to winning a Ballot Bill assume that MPs wish to have Cabinet and Ministerial jobs. There are several reasons to support this assumption. First, members of the government are able to introduce Government Bills related to their departmental brief which are very likely to achieve Royal Assent, barring the unlikely

the Party Whips. A free vote is sometimes also referred to as a conscience vote.

event of defiance by the governing party's MPs to the Whip. Therefore, these jobs provide the primary channel through which MPs can affect the law. Second, MPs with government jobs are paid more than the basic salary of an MP[4]. Most Cabinet members are entitled to an additional £72,454 above the basic MP salary, while Ministers of State are entitled to an additional £34,742 above the basic MP salary[5]. In addition, there are benefits to Opposition party MPs to being awarded Shadow Cabinet and Shadow Minister jobs. While only the Leader of the Opposition is paid an official salary, should the Opposition win an election and form a government, the vast majority of those MPs that were part of the Shadow Cabinet assume the position of Secretary of State (or equivalent) when entering government[6].

We build a simple model describing the relationship between MPs and their party in the context of Ballot Bills. We show the conditions under which MPs benefit from winning the ballot. In addition, we use the model to highlight potential factors that could determine the extent to which MPs choose to present bills that align with the objectives of their party.

Next, we exploit the natural experiment in the House of Commons to quantify the causal effect of winning the Ballot on the probability of having a Government or Opposition (Cabinet or Ministerial) job 1 through 5 years in the future. We find that MPs that win the ballot are 10.7 percentage points (71%) more likely to hold high ranking jobs 5 years after the ballot, compared to MPs that submitted to the ballot but lost. We also consider heterogeneous treatment effects, finding that young MPs have larger treatment effects than their older peers.

Finally, we explore two potential channels through which this positive treatment effect works. Firstly, using position in the ballot as an instrument for their bill pass-

[4]From 1st April 2024, the basic MP's salary is £91,346. Source: https://www.parliament.uk/about/mps-and-lords/members/pay-mps/

[5]The latest published Ministerial salaries available are for the 2022-23 financial year. Source: https://www.gov.uk/government/publications/ministerial-salary-data

[6]Of the 29 MPs in Keir Starmer's Shadow Cabinet prior to the July 2024 General Election, 25 attend Cabinet in Keir Starmer's Government.

ing, we provide causal evidence that this effect is not driven by MPs successfully converting bills into laws. Secondly, we consider the choice of Ballot Bills presented by MPs. Using Natural Language Processing methods, we find suggestive evidence that MPs presenting bills less similar to their previous speeches in Parliament (relative to other MPs in their party) are more likely to be young and, conditional on age, are more likely to have a government or opposition job five years later.

We contribute to several strands of literature. We add to the literature using text analysis to explore decisions made by politicians (Gentzkow et al., 2019; Kumar et al., 2024). We also contribute to the literature on political connections. This literature has mainly focused on the relationships between politicians and firms (Fisman, 2001; Fisman and Wang, 2015; Fisman et al., 2020), and politicians with the public (Campbell, 2021). We broaden the scope of the political connections literature, by considering the relationships among politicians. We contribute to the existing political science literature that exploit similar natural experiments to address a range of topics (Williams and Indridason, 2018; Kumar et al., 2024).

The remainder of the paper is organized as follows. Chapter 2 presents a simple model of political capital. Chapter 3 describes the setting for our study and presents descriptive statistics. Chapter 4 presents the quantitative results of the natural experiment. Chapter 5 explores how MPs choose the Ballot Bills they present and provides suggestive evidence for the relevant mechanisms for career advancement. Chapter 6 concludes and discusses open questions.

2 A Model of Political Capital

In this section, we present a model describing the preferences and decisions of Members of Parliament (MPs) and their Party regarding the allocation and consumption of Ballot Bills and political capital. The structure of this model is organized as follows:

2.1 Players and Action Space

There are two types of agents in this model: MPs and the Party. The MP can take the following actions:

- If endowed with a unit of Ballot Bill (denoted by $\epsilon = 1$), consume a fraction of their Ballot Bill b for immediate utility, where $b \in [0, 1]$.
- Sell the remaining fraction $1 - b$ of their Ballot Bill to the Party in exchange for political capital $i = \Delta k$ at a price ϕ, which the MP takes as given.

The Party's action is to allocate its endowment of one unit of political capital to purchase Ballot Bills from MPs to maximize its period utility. The Party consumes the fraction of the bill from the MP not consumed by the MP, denoted by b^P, such that $b^P = 1 - b$. The Party also chooses a price that converts political capital to bill consumption, where $\phi > 0$ represents the price of one unit of a Ballot Bill in terms of units of political capital. Hence, $k^P = \phi b^P$.

2.2 Payoffs

The utility of MPs depends on two factors:

- The immediate utility from consuming a fraction b of their Ballot Bill.
- The future utility derived from the political capital k' accumulated by selling a fraction $(1 - b)$ of their Ballot Bill.

The payoff of a young MP who wins a Ballot Bill is represented by:

$$V^y(k, \epsilon = 1) = \ln(b) + \beta \ln(k'), \tag{1}$$

This is subject to the MP's political capital constraints:

$$k' = k + i, \quad i = \phi\,(1 - b). \tag{2}$$

where $b \in [0, 1]$ is the proportion of the Ballot Bill consumed, $\beta \in [0, 1]$ is the intertemporal discount factor, $k > 0$ is initial political capital and $k' > 0$ is the political

capital carried forward.

This simple structure of the young MP's value captures several concepts. MPs trade off the ability to consume their bill today with potential future benefits. These future benefits could come in different forms. First, greater political capital in the future may increase the likelihood of getting government jobs, which may involve introducing government bills. Second, greater political capital may improve the probability that the MP can get future Ballot Bills passed.

The payoff of an old MP who wins a Ballot Bill can be recovered by setting $\beta = 0$:

$$V^o(k, \epsilon = 1) = \ln(b) \tag{3}$$

The Party's utility W is given by:

$$W = \max_{\phi, \mathbf{b^P}} \sum_{j=1}^{N} b_j^P, \tag{4}$$

where b_j^P is the fraction of each MP's Ballot Bill consumed by the Party, and N is the number of MPs in the party with Ballot Bills. This is subject to the Party's political capital expenditure constraint:

$$\sum_{j=1}^{N} k_j^P = 1. \tag{5}$$

2.3 Information Structure

MPs and the Party operate under the following information:

- At the start of the period, MPs observe whether they have won a Ballot Bill ($\epsilon = 1$) or not ($\epsilon = 0$). The Party also observes which MPs have won the Ballot.
- MPs know their initial political capital k and the price ϕ set by the Party.
- The Party observes the distribution of political capital across MPs and the cohort of the MP (young or old). The Party sets a single price ϕ that applies to all MPs.

2.4 Timing

The sequence of events in each period is as follows:

1. MPs are born (becoming young MPs) with an initial level of political capital k.
2. MPs learn whether they have won a Ballot Bill.
3. The Party observes how many MPs in their Party have won a Ballot Bill, consider the best responses of these MPs and set a price ϕ to maximise their period utility.
4. MPs who win a Ballot Bill observe ϕ and decide the fraction b to consume and sell the remaining fraction $(1-b)$ to the Party in exchange for political capital.
5. Old MPs die and young MPs become old.

2.5 Solution Concept

Given a distribution of political capital among MPs $\mathbf{k}$ and a number of young MPs N_y, an equilibrium in this model is a set of choices $(\mathbf{b}, \phi, \mathbf{b^P})$ such that:

- MPs choose b to maximize their expected lifetime utility V, subject to their Ballot Bill and political capital constraints:

$$k' = k + i, \quad i = \phi\,(1-b). \tag{6}$$

- The Party chooses ϕ (and by extension $\mathbf{b^P}$) to maximise its utility W, subject to its political capital constraint:

$$\sum_{j=1}^{N} k_j^P = 1. \tag{7}$$

- The Ballot Bill market clears.

2.6 MP's decision

The decision of the MP takes the price as given. Notice that old MPs gain no utility from future political capital, as $\beta = 0$. The result of this is that an old MP fully consumes their Ballot Bill: $b_o^* = 1$, so necessarily $b_o^P = 0$.

Therefore, the Party can only convince young MPs to part with some fraction of their bill. Turning to the decision of young MPs:

Proposition 1 *The optimal choice of b_y is increasing in k_y, decreasing in ϕ and decreasing in β.*

The first order necessary condition for the MP is given by:

$$\frac{d\,V^y(k_y, \epsilon = 1)}{d\,b_y} = \frac{1}{b_y} - \frac{\phi\beta}{k_y + \phi(1 - b_y)} \tag{8}$$

Setting to zero and solving for b_y, the MP's optimal choice of b_y is:

$$b_y^* = \frac{k_y + \phi}{\phi(1 + \beta)} \tag{9}$$

2.7 Simplified model with common k_y

To build some simple intuition for the model, assume that all young MPs are born with the same initial level of political capital:

Assumption 1 $k_y = \bar{k}_y$

The Party takes the decision rule of MPs as given. The Party only maximizes its utility when it uses up all of its political capital. Hence, using the decision rules of the MPs, the Party simply needs to find the price ϕ that fully utilizes its political capital:

$$\frac{1}{\phi} = \sum_{j=1}^{N} b_j^P = \sum_{j=1}^{N_y} b_j^P = \sum_{j=1}^{N_y} \left(1 - \frac{\bar{k}_y + \phi}{\phi(1 + \beta)}\right) \tag{10}$$

Where N represents the total number of Ballot winners in the party and N_y represents the number of young winners. Notice the Party only needs to consider the choices of young MPs, as old MPs fully consume their bills.

Proposition 2 *The optimal price ϕ^* set by the Party is decreasing in β, decreasing in N and increasing in $\bar{k}_y$.*

The common initial political capital $\bar{k}_y$ means that we can extract a simple expression for the optimal price ϕ^*:

$$\phi^* = \frac{1}{\beta}\left[\bar{k}_y + \frac{1+\beta}{N_y}\right] \tag{11}$$

The price ϕ that must be offered by the Party is increasing in the existing political capital of MPs, as the relative benefit they gain from more political capital is smaller. In addition, the Party can offer a lower price ϕ to young MPs when more young MPs have a Ballot Bill (higher N_y), because the Party can gain more bills for a fixed price ϕ when N_y is greater. Finally, a higher β leads to a lower equilibrium price. If an MP had a smaller chance of survival (lower β), they would need greater compensation to part with their Ballot Bill today.

Proposition 3 *Each young MP gains $\frac{1}{N_y}$ units of political capital from the Party in equilibrium, and the MP's choice of ballot bill being sold in an equilibrium is decreasing in both N_y and β.*

Because all young MPs are identical, each must gain the same proportion $\frac{1}{N_y}$ of the one unit of political capital offered by the Party. Given optimal price ϕ^*, the MP's optimal choice of the fraction of the bill to sell is equal to:

$$1 - b_y^* = \frac{\beta}{N_y\bar{k}_y + 1 + \beta} \tag{12}$$

Notice that this fraction of the bill sold is guaranteed to be between 0 and 1. Recall that any old MP receiving a Ballot Bill will consume it entirely and so will sell no units of the bill:

Hypothesis 1 *Younger MPs will sell more of the Ballot Bill to the Party than older MPs.*

In an equilibrium, where N_y is greater, the lower price ϕ^* ensures that MPs sell a smaller fraction of their bill to the party. This provides another testable prediction that we can take to the data:

Hypothesis 2 *The more young MPs that gain a Ballot Bill within the Party, the smaller the increase in probability of getting a government job in the future.*

3 Context & Data

3.1 Private Members' Bills

In the UK House of Commons individual MPs who are not government ministers can introduce public bills - these are know as Private Members' Bills (PMBs). There are three channels through which PMBs can be introduced by MPs in the House of Commons: Presentation, Ten Minute Rule, and the Ballot. Any member may introduce a bill via Presentations or Ten Minute Rule, however these do not have any pre-allocated time and rarely become law. Ballot Bills can only be presented by the 20 winners of the Ballot for Private Members' Bills. This is a process in which MPs can submit their name to a ballot where 20 winners are randomly drawn. Ballot Bills have 13 Fridays that are pre-allocated in the Parliamentary session for second readings, vastly increasing the probability that these bills are debated in the House of Commons.

Table 1: Pass rate and proportion of all PMBs, by PMB type, 1997-2024

	% Successfully Pass	% of PMB Introduced
Ballot	29.1%	15%
Presentation	1.7%	39%
Ten-minute Rule	0.5%	46%

Table 1 shows the percentage of bills that become law when submitted, and the percentage of total bill PMB submissions for each bill type. Ballot Bills are by far the most likely form of PMB to become law: from 1997-2024, 29.1% of ballot bills have achieved Royal Assent and became law. This is significantly higher than the percentage of Presentation, and Ten Minute Rule bills that become law (1.7% and 0.5% respectively). In total only 15% of the bills introduced by private members in the House of Commons were Ballot Bills, but 83% of Commons' PMBs that became law were introduced via the ballot. This demonstrate that Ballot Bills offer MPs a uniquely effective opportunity to pass legislation.

3.2 Ballot Bills

There is a standard procedure in each Parliamentary session by which the Ballot for PMBs is conducted[7]. All MPs that are not currently government ministers are able to enter the ballot for PMBs. The Ballot is drawn on the second sitting Thursday in the session. On the fifth sitting Wednesday of the session, Ballot winners present the title of their Ballot Bill and nominate a date for a second reading[8]. There are 13 Fridays set aside for PMBs in the Parliamentary session. The first 7 of these Fridays are set aside for second readings, while the other 6 Fridays are prioritised for later stages of the process of turning bills into laws (report stage and third readings).

The order in which dates are nominated are determined by the position in the Ballot the MPs are drawn. Once a Ballot winner chooses a date, they are added to the end of the order of second readings for that particular Friday. Consequently, those MPs drawn in the top 7 of the Ballot will likely choose to have their bills debated first on each of the first 7 Fridays, while the other 13 Ballot winners ranked 8 to 20 will only have their second reading once the second reading of a top 7 Ballot winner has concluded. Therefore, there is an advantage to coming in the top 7 of Ballot winners in terms of the progression of the bill past a second reading and towards

[7]https://guidetoprocedure.parliament.uk/collections/yeRi50lc/private-members-bill-ballot

[8]A second reading is where the bill is debated in the Commons chamber.

gaining Royal Assent[9].

The Ballot Bills that MPs can introduce cannot be laws to enact major changes to government taxation and spending, but otherwise can address any topic[10]. MPs are free to choose a bill of their choosing. Some MPs choose to present a bill related to personal causes they champion, such as prescription exemptions for diseases like for cystic fibrosis. Alternatively, Ballot winners can accept ideas for bills suggested by other MPs or lobbyists[11]. Finally, the government may offer what is known as a 'Handout Bill' to Ballot winners. Handout Bills often receive government assistance and support throughout the process of converting the bill into law.

We combine several sources for information on: MPs that submitted to the ballot, MPs that won the ballot, and the content of the bills the winning MPs submitted. The list of MPs that submitted their names to the ballot is available from 2016 onward in the House of Commons Business Papers[12]. A report published in the House of Commons Library documents the 20 winners of the ballot in each parliamentary session since 1997/98[13]. This report also includes the title of each of bill as presented. We download the full text of each bill (as presented) from the parliamentary bills website[14].

3.3 MP Characteristics and Outcomes

To supplement the information about MPs who submit their names to the Ballot, we compile additional data on MP characteristics and career outcomes from a variety of sources. These characteristics include gender, date of birth, ethnicity, and roles within government and opposition.

[9] https://commonslibrary.parliament.uk/research-briefings/sn04055/

[10] https://guidetoprocedure.parliament.uk/collections/F8ne28KA/rules-on-private-members-bills

[11] MPs may be 'contacted by pressure groups, other organisations and their own colleagues who will suggest subjects and offer draft bills'. Source: https://www.parliament.uk/globalassets/documents/commons-information-office/l02.pdf

[12] commonsbusiness.parliament.uk/search?SearchTerm=ballot

[13] commonslibrary.parliament.uk/research-briefings/sn04055

[14] bills.parliament.uk

Gender and date of birth data are obtained from the Members' Names Information Service, which provides basic biographical details for all MPs. Ethnicity data for MPs is not directly available. We code each MP as either BAME or white using their photos and surnames. First, we analyze the official portraits of MPs hosted on the UK Parliament website to predict ethnicity using AI image recognition software. We then cross-check this with a model that predicts ethnicity based on MPs' last names. If the results from these two methods conflict, the ethnicity is manually coded. While this approach potentially introduces measurement error, on aggregate our approach matches closely to diversity reports.

We use reports from the House of Commons Library to identify which MPs were in the Cabinet from 1997 onward. For government and opposition positions we collect data from the UK Parliamentary Data Platform, accessed using the pdpr package in R. This provides the full job titles for each role, as well as the start and end dates of their roles. Using this information, we identify MPs who served in government as ministers, and in the opposition as shadow ministers and shadow cabinet. Specifically, we classify shadow cabinet members by matching their positions to the names of role in the Shadow Cabinet, e.g., "Leader of the Opposition." Similarly, ministers are identified by whether their job title contains "Minister of State."

Table 2 shows descriptive statistics of the MPs submitting to the Ballot for PMBs for the 2016-17, 2017-19, 2019-21, 2021-22 and 2022-23 Parliamentary sessions, sorted into treatment (Ballot winners) and control (those that submitted to the Ballot but did not win). We find no statistically significant differences in the characteristics of these groups.

3.4 Hansard

The House of Commons transcribes all speeches made in the Commons chamber, in a series of records known as Hansard. The speeches made are recorded and stored on

Table 2: Characteristics of MPs that submit to the Ballot for PMB (2016-2022)

Variable	Control	Treated	Difference
Labour	0.365	0.350	-0.015
	(0.010)	(0.048)	(0.049)
Conservative	0.511	0.500	-0.011
	(0.011)	(0.050)	(0.051)
BAME	0.070	0.070	0.000
	(0.005)	(0.026)	(0.026)
Female	0.342	0.310	-0.032
	(0.010)	(0.046)	(0.049)
Age	50.139	51.687	1.548
	(0.245)	(1.144)	(1.168)
Previously Cab or Min	0.363	0.420	0.057
	(0.010)	(0.050)	(0.049)
N	2184	100	

the website of the UK Parliament[15].

4 The Effect of Winning the Ballot for Private Members' Bills

Here we look at whether MPs had high-ranking jobs in the years following their submission to the ballot. Figure 1 plots the percentage of MPs who are in the (shadow) cabinet (a) or have (shadow) minister jobs (b). Initially, there is no difference between MPs that win the ballot and those that submit and do not win. On the date that they submit to the ballot, 10% of both ballot winner and losers are in the (shadow) cabinet or have (shadow) minister jobs, with less than 1% for both groups in the (shadow) cabinet. Given the random assignment of the ballot the lack of a difference is unsurprising.

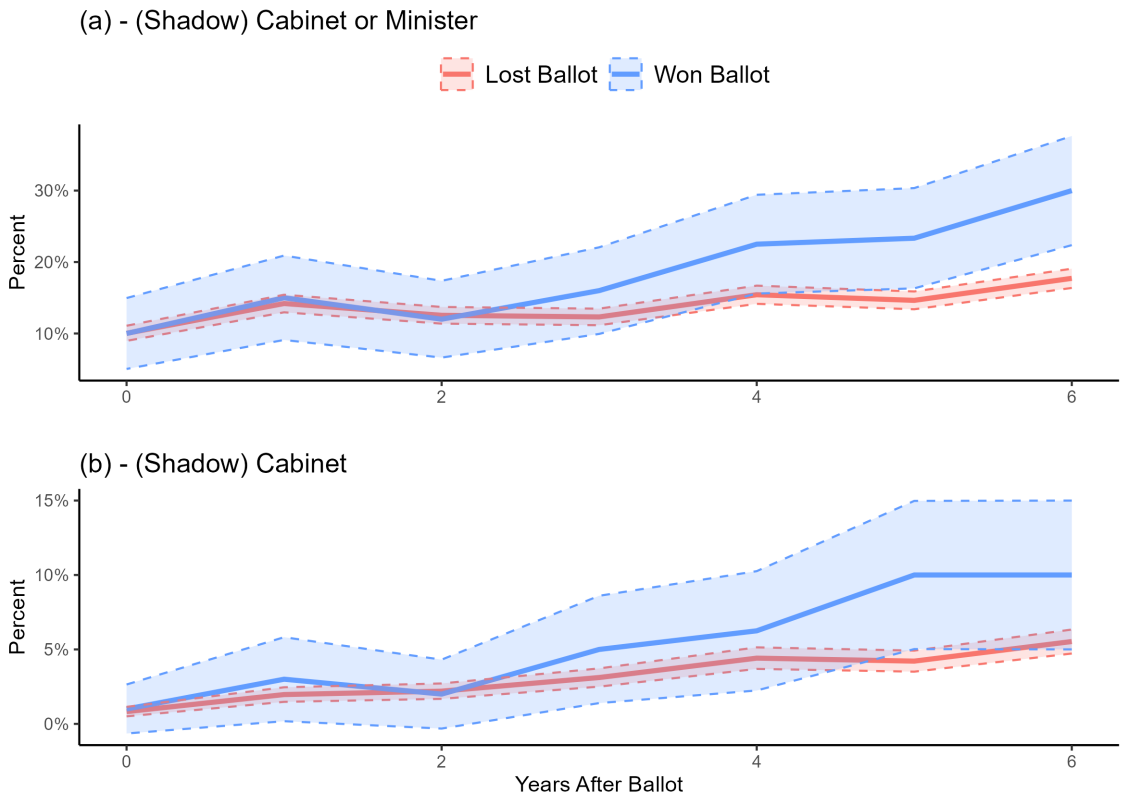
Over time, the difference in the percentage of ballot winners and losers holding high-ranking jobs increases. Noticeable differences in means do not seem appear until at least three years after the ballot. This lagged effect could be for several reasons. Firstly, it may take time for job vacancies to emerge. Secondly, the skills demonstrated from the opportunity to present a bill may take time to accumulate and signal.

To test the causal effect of winning the ballot on the probability of holding a high-ranking job we use OLS regression models. Our outcome variables are equal to 1 if MP i held one of these jobs five years after they submitted to the ballot and zero otherwise. We choose to look at five year outcomes as this guarantees a general election has taken place since the MP submitted to the ballot[16]. The use of 5 year outcomes means that we can only use the 2016, 2017 and 2020 ballots as data for estimating the causal effect. We provide a restricted balance table (Table A.1) for these three treatment years in the appendix. The OLS models we estimate are

[15]https://hansard.parliament.uk/search

[16]This is because the maximum term of a parliament is five years, and a general election must take place before each parliamentary term begins

Figure 1: Percentage of MPs with high-ranking jobs



outlined in Equation 13.

$$\text{Job}_i = \beta\, WonBallot_i + \boldsymbol{\delta} X_i + \boldsymbol{\gamma}\text{Year} \cdot \text{Party} + \epsilon_i \tag{13}$$

$WonBallot_i$ is equal to 1 if MP i won the ballot and was randomly selected for a PMB. We control for MP characteristics (X_i), including: gender, age, age squared, ethnicity, and if they have previously held a high-ranking job. We also include fixed effects for the interaction between the MPs party and the year that the MP submitted to the ballot ($\gamma Year \cdot Party$). Since the same MP can submit to the ballot in multiple years, we cluster standard errors at the MP level.

To analyze the difference in treatment effect by different groups we estimate Equation 14:

$$\begin{aligned}\text{Job}_i = {} & \beta_1\, WonBallot_i + \beta_2\, Characteristic_i + \\ & \beta_3\, WonBallot_i \cdot Characteristic_i + \delta X_i + \gamma \cdot Year \cdot Party\end{aligned} \tag{14}$$

Here β_3 is our coefficient of interest which shows the differential treatment effect between MPs with $Characteristic_i$ equal to 1, compared to MPs with this equal to 0. We also remove related covariates depending on $Characteristic_i$. For example, we remove age and age^2, when looking at heterogeneity, between the youngest 25% of MPs and the oldest 75%. Figure A.1 shows the value of β_3 for different characteristics.

Table 3: OLS regression measuring the effect of winning the ballot on probability of having a government or opposition cabinet or minster job 5 years after ballot

	Dependent variable:			
	Cabinet or Minister 5 years after ballot			
	(1)	(2)	(3)	(4)
Won Ballot	0.087	0.089*	0.098**	0.107**
	(0.055)	(0.052)	(0.050)	(0.047)
White		−0.116**		−0.097*
		(0.054)		(0.057)
Prev. Cab or Min		0.103***		0.038
		(0.025)		(0.024)
Age		−0.002		0.005
		(0.006)		(0.006)
Age2		−0.00005		−0.0001**
		(0.0001)		(0.0001)
Female		0.010		−0.011
		(0.023)		(0.024)
Controls	No	Yes	No	Yes
Year x Party FE	No	No	Yes	Yes
Control Group Mean	0.15	0.15	0.15	0.15
N	1365	1349	1357	1345

Note: *p<0.1; **p<0.05; ***p<0.01

Table 4: OLS regression measuring the effect of winning the ballot on probability of having a government or opposition cabinet job 5 years after ballot

	Dependent variable:			
	Cabinet 5 years after ballot			
	(1)	(2)	(3)	(4)
Won Ballot	0.058	0.059	0.062	0.063*
	(0.038)	(0.038)	(0.038)	(0.037)
White		−0.064		−0.068
		(0.042)		(0.043)
Prev. Cab or Min		0.042**		0.033**
		(0.017)		(0.016)
Age		−0.001		0.0002
		(0.004)		(0.004)
Age2		−0.00001		−0.00003
		(0.00003)		(0.00003)
Female		−0.009		−0.008
		(0.014)		(0.015)
Controls	No	Yes	No	Yes
Year x Party FE	No	No	Yes	Yes
Control Group Mean	0.04	0.04	0.04	0.04
N	1365	1349	1357	1345

Note: *p<0.1; **p<0.05; ***p<0.01

5 Mechanisms

In this section we explore potential mechanisms that could drive the effect of winning the ballot for PMBs on MP's career outcomes.

5.1 Passing a Bill

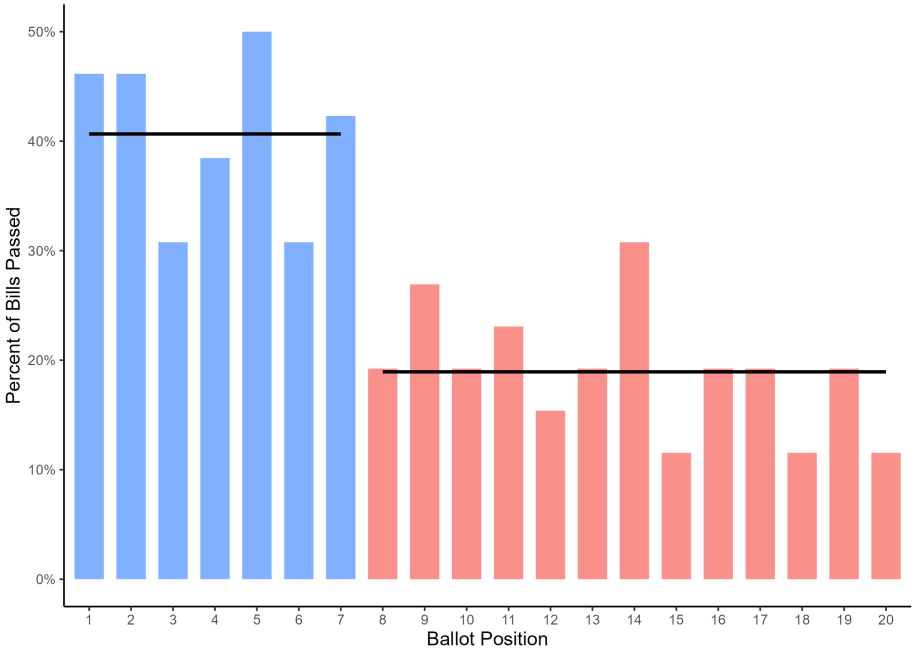
Evidence of successfully passing legislation could be one mechanism for the career boost observed for ballot winners. Passing legislation may demonstrate to party leadership skills that are required for ministerial positions. Furthermore, the process of passing a bill may facilitate interactions between the MP and party leadership. Given this, the career boost associated with winning the ballot may be driven by MPs whose bills pass. However, testing the effect of passing a bill on career outcomes is empirically challenging. The probability of an MP's bill becoming law is likely to be driven by factors that also affect career outcomes. For example, MPs that are higher ability or have more political capital may be more likely to pass a bill and also more likely to be in a ministerial role in the future.

To address this endogeneity issue, and estimate the causal effect of passing a bill on MPs career outcomes, we use an instrumental variable. MPs that are randomly drawn in the first seven positions of the ballot are much more likely to have their bill pass. This is because bills drawn in the top seven of the ballot are guaranteed parliamentary time for their second readings. Ballot Bills by MPs that ranked lower than seventh will have their second readings scheduled on Fridays where they will not be the first to be debated[17], meaning that if there is not time, their bill may not be debated at all.

The first stage of this instrument is visualized in Figure 2. This plots the percentage of Ballot Bills that have passed from 1997-2024 for each position in the ballot. There is a clear discontinuity in terms of bills passing between those proposed by MPs in the top seven in the ballot compared to those in the bottom thirteen. MPs

[17]https://www.parliament.uk/documents/commons-information-office/l02.pdf

Figure 2: First Stage: Bill Pass % by position in the Ballot



placed in the top seven of the ballot are 20 percentage points (100%) more likely to have their bill become law. The first stage is set out in equation 15.

$$\text{First stage:} \quad \text{PassBill}_i = \pi_0 + \pi_1 \text{Top7}_i + \nu_i \tag{15}$$

$$\text{Second stage:} \quad \text{Job}_i = \beta_0 + \beta_1 \widehat{\text{PassBill}}_i + u_i \tag{16}$$

The second stage is set out in Equation 16. Results for estimating β_1 are show in Table 5 for two binary outcomes: having a (shadow) cabinet *or* minister job five years after the ballot, and having a (shadow) cabinet job five years after the ballot. The estimates for the effect of passing their Ballot Bill on career outcomes is not statistically significantly different from 0, suggesting that the career boost seen for ballot winning MPs is not driven by those that pass bills.

Table 5: 2SLS Results: The effect of passing a Bill on Career outcomes

	Dependent variable:	
	Cabinet/Minister	Cabinet
Bill Passed (IV)	−0.062	−0.025
	(0.141)	(0.085)
Constant	0.124***	0.043*
	(0.041)	(0.024)
First-stage F-statistic	30.2	30.2
Observations	520	520

Note: *p<0.1; **p<0.05; ***p<0.01
Standard errors clustered at MP level

One key assumption underlying this instrumental variable approach is that MPs do not react to their position in the ballot when choosing what bill to submit. As there are several weeks between the ballot being drawn, and when MPs need to submit the title of their bill, it is possible that MPs who are drawn lower than seventh in the ballot choose to present a different bill than if they were in the top seven. To validate this assumption, we compare the topics of all the Ballot Bills introduced, comparing whether the topics of bills submitted by those in the top seven of the ballot systematically differ from those drawn lower than seven. We use LDA topic modeling on the cleaned[18] text of ballot bills from 1997-2024 to categorize each bill into latent topics. The top words in each topic is show in Figure A.2. Table A.4 shows that topic scores for all of the four topics is balanced between MPs who placed in the top seven of the ballot, and those who placed lower than seventh. This suggests that MPs do not react to their place in the ballot in terms of content of their bill.

[18]Details of text cleaning are explained in the appendix.

5.2 Selling a Bill

Another potential mechanism for the career boost for ballot winning MPs is that they may *sell* their bill to their party. Given the opportunity to propose a piece of legislation of their choosing, MPs may choose to propose legislation that advances the goals of their party. In the three weeks between MPs winning the ballot, and submitting the title of their bill documentation produced by the House of Commons[19] suggests that MPs may choose to take so-called *Handout Bills*, and that "*they will be contacted by their own colleagues who will suggest subjects and offer draft bills*". Motivated by our model of Political Capital, we suggest that MPs that decide to sell their bill to their party (rather than proposing legislation that aligns more closely with their preferences) may be rewarded by their party with ministerial jobs.

To assess whether MPs use ballot bills to advance personal priorities or to push party goals, we measure how closely each MP's prior parliamentary speeches resemble their submitted bill relative to speeches by other members of their party. For each Ballot Bill, we calculate cosine similarity scores between the bill text and all parliamentary speeches delivered since 1990. Focusing on the 5-year period before the ballot draw (to avoid capturing speeches about the bill), we identify the most similar speech to the bill for every member of the submitting MP's party. The submitting MP is then assigned a percentile rank based on where their highest similarity speech falls within the distribution of their party colleagues' highest similarities. A high percentile indicates the bill aligns with the MP's own prior speeches (suggesting a personal priority), while a low percentile implies alignment with existing party rhetoric or other MPs' priorities (suggesting a high degree of selling the bill).

Take for example the bill "*Cystic Fibrosis (Exemption from Prescription Charges)*" proposed by Conservative MP John Hayes after he placed 14^{th} in the ballot of the 2006-07 session. The speech with the highest cosine similarity to this bill made in the 5 years before the ballot draw in 2006-07 was by John Hayes himself, two years prior, where he talked in parliament about making cystic fibrosis medication exempt

[19] https://www.parliament.uk/documents/commons-information-office/l02.pdf

from prescription charges. This means that for this Bill John Hayes' percentile is 100. Evident from his speeches in Parliament, the topic of cystic fibrosis prescription charges is one that he personally cares about, more than anyone in his party.

Table 6 shows the relationship between the youngest and oldest age quartiles with our measure of 'selling' the bill (the closeness percentile rank of the MP's choice of bill relative to other MPs in their party). Hypothesis 1 predicts that young MPs will sell more of the Bill to the Party, as $b_o^* = 1$ and $b_y^* < 1$ where $\beta > 0$. We find that the youngest quartile are more likely to 'sell' the bill than the other three quartiles, whereas the oldest quartile are more likely to choose a bill closer to previous speeches they have made, relative to their party's MPs.

Table 6: Younger MPs are more likely to Sell their bill

	Dependent variable: Percentile	
	(1)	(2)
Young (Bottom 25%)	-6.858^{*}	
	(3.600)	
Old (Top 25%)		7.938^{**}
		(3.800)
Constant	73.871^{***}	65.909^{***}
	(1.818)	(3.362)
Observations	345	345
R^2	0.010	0.013
Adjusted R^2	0.008	0.010

Note: *p<0.1; **p<0.05; ***p<0.01

We also assess the relationship between our measure of 'selling' the bill and career outcomes. We acknowledge that this relationship is by no means causal, but may indicate the role of political capital in this setting. Table 7 shows that our measure of 'consuming' the bill is negatively correlated with the probability of getting any government or opposition job. We interpret this as suggesting that MPs that sell

Table 7: MPs that sell their bill are more likely to have jobs 5 years later

	Dependent variable:		
	Any Job	Cabinet or Minister	Cabinet
	(1)	(2)	(3)
Percentile	−0.0016**	−0.0005	0.0005
	(0.0007)	(0.0006)	(0.0004)
Age	−0.0408**	−0.0030	−0.0007
	(0.0174)	(0.0147)	(0.0093)
Age^2	0.0003	−0.00005	−0.00003
	(0.0002)	(0.0001)	(0.0001)
White	0.1427	0.0822	0.0325
	(0.1271)	(0.1070)	(0.0678)
Constant	1.5390***	0.3346	0.0428
	(0.4834)	(0.4069)	(0.2580)
Observations	345	345	345
R^2	0.3707	0.3587	0.2130
Adjusted R^2	0.2586	0.2445	0.0728

Note: *p<0.1; **p<0.05; ***p<0.01

their bill entirely are 16 percentage points more likely to have any government or opposition job 5 years after the Ballot.

6 Discussion & Conclusion

We exploit random variation in MPs' opportunities to propose legislation, to estimate the causal effect that this has on their career outcomes. MPs randomly drawn in the ballot for Private Members' Bills are significantly more likely to be in high ranking political jobs five years later than their peers who submit to the ballot but do not win. Using position in the ballot as an instrument, we provide causal evidence that this effect is not driven by passing legislation. By comparing the text of the bills to MPs' speeches, we provide exploratory evidence that the boost to MPs' careers may

be related to our notion of political capital.

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A Appendix

Table A.1: Balance Table with 3 treatment years (2016, 2017 and 2020)

Variable	Control	Treated	Difference
Labour	0.393	0.367	-0.027
	(0.014)	(0.063)	(0.065)
Conservative	0.487	0.467	-0.021
	(0.014)	(0.065)	(0.066)
BAME	0.070	0.050	-0.020
	(0.007)	(0.028)	(0.034)
Female	0.341	0.333	-0.008
	(0.013)	(0.061)	(0.063)
Age	49.645	50.133	0.489
	(0.314)	(1.598)	(1.494)
Previously Cab or Min	0.343	0.400	0.057
	(0.013)	(0.064)	(0.063)
N	1305	60	

Table A.2: Logistic regression measuring the effect of winning the ballot on probability of having a government or opposition cabinet or minister job 5 years after ballot

	Dependent variable:			
	Cabinet or Minister 5 years after ballot			
	(1)	(2)	(3)	(4)
Won Ballot	0.574*	0.676**	0.748**	0.861**
	(0.310)	(0.326)	(0.318)	(0.347)
White		−0.607**		−0.541
		(0.289)		(0.337)
Prev. Cab or Min		0.903***		0.213
		(0.195)		(0.208)
Age		0.178**		0.205***
		(0.075)		(0.079)
Age2		−0.003***		−0.003***
		(0.001)		(0.001)
Female		0.031		−0.131
		(0.190)		(0.216)
Controls	No	Yes	No	Yes
Year x Party FE	No	No	Yes	Yes
Control Group Mean	0.15	0.15	0.15	0.15
N	1365	1349	1357	1345

Note: *p<0.1; **p<0.05; ***p<0.01

Table A.3: Logistic regression measuring the effect of winning the ballot on probability of having a government or opposition cabinet job 5 years after ballot

	Dependent variable:			
	Cabinet 5 years after ballot			
	(1)	(2)	(3)	(4)
Won Ballot	0.926**	1.050**	1.063**	1.122**
	(0.440)	(0.452)	(0.454)	(0.474)
White		−0.822*		−0.924*
		(0.464)		(0.495)
Prev. Cab or Min		1.082***		0.791**
		(0.346)		(0.383)
Age		0.277**		0.273*
		(0.136)		(0.149)
Age2		−0.004***		−0.004**
		(0.001)		(0.002)
Female		−0.308		−0.251
		(0.340)		(0.365)
Controls	No	Yes	No	Yes
Year x Party FE	No	No	Yes	Yes
Control Group Mean	0.04	0.04	0.04	0.04
N	1365	1349	1357	1345

Note: *p<0.1; **p<0.05; ***p<0.01

Figure A.1: Heterogeneity Analysis

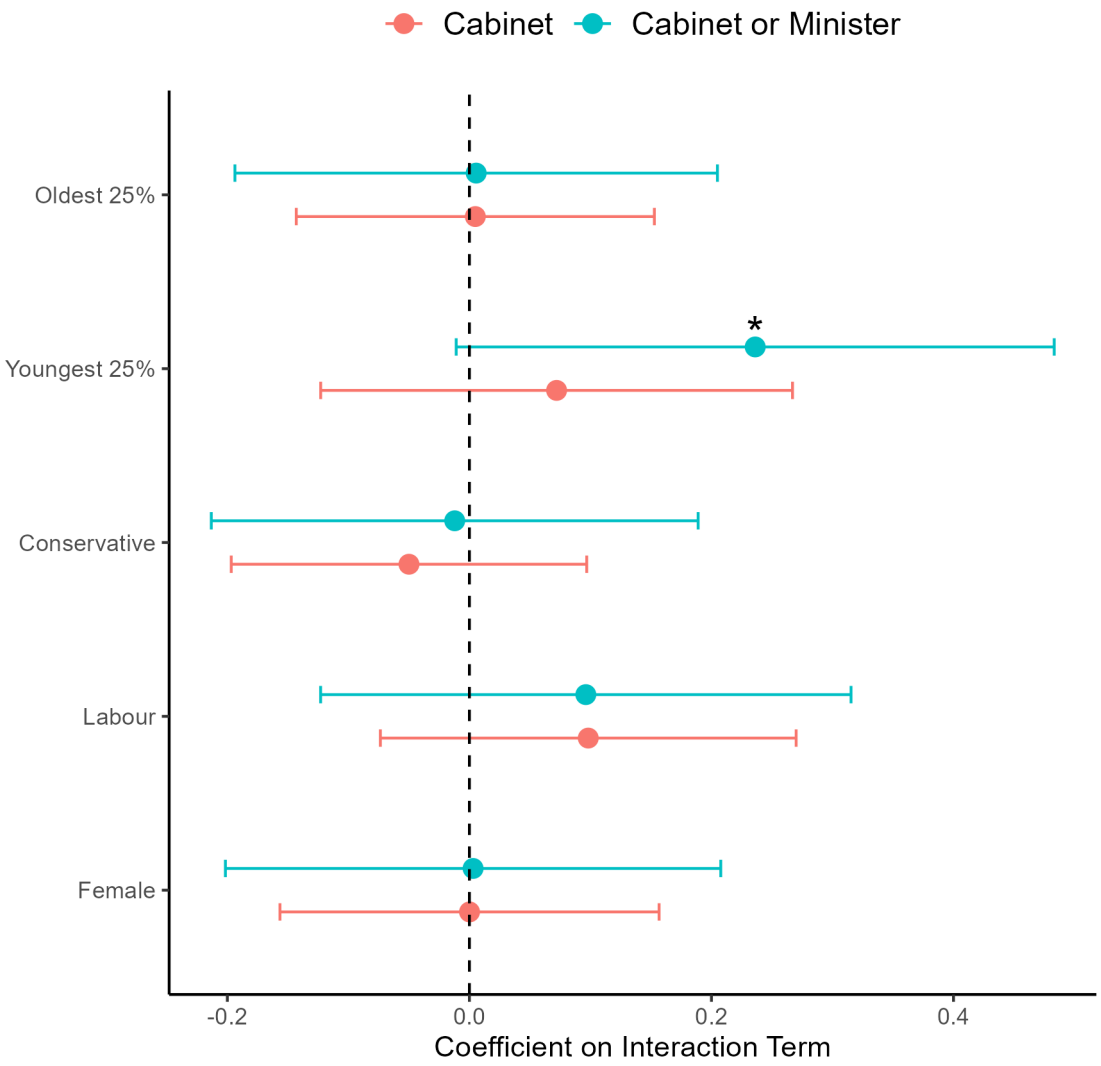

Table A.4: Are Bills from MPs in the Top 7 different in topic?

	Dependent variable:			
	Social	Legal	Employment	Land
	(1)	(2)	(3)	(4)
Top 7	−0.020	−0.018	0.020	0.018
	(0.038)	(0.034)	(0.033)	(0.032)
Constant	0.392***	0.248***	0.188***	0.172***
	(0.023)	(0.021)	(0.019)	(0.019)
Observations	376	376	376	376
R^2	0.001	0.001	0.001	0.001
Adjusted R^2	−0.002	−0.002	−0.002	−0.002

Note: *p<0.1; **p<0.05; ***p<0.01
Standard errors in parentheses

Figure A.2: LDA Topics for Ballot Bills