Does Transparency Improve Politician Performance? Evidence from the UK Parliamentary Expenses Scandal*

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Abstract

We study the impact of the 2009 revelations of expense-account misuse by UK Members of Parliament (MP) on legislator performance. Our difference-in-differences design combines the timing of the scandal with predetermined cross-constituency variation in independently audited MP misconduct. We find that MP performance in affected constituencies improved across several distinct margins — questions to ministers, motions filed, participation in divisions — as well as an aggregate index. We trace this improvement to political turnover and selection, as implicated MPs were less likely to retain their seat in the next election and the gains in performance are concentrated in these seats. Performance effects are also concentrated and persist where misconduct was reported by the media, suggesting that publicity activated accountability. Sitting MPs did respond to the scandal, but only by cutting the expense claims at its center in the short run, while seats with turnover experience a persistent decrease.

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1 Introduction

Transparency ranks among the most widely adopted governance reforms of recent times. Freedom-of-information laws, asset-disclosure rules, and open-data mandates rest on the premise that revealing what officials do will improve how they govern. But the evidence for that premise mostly concerns whether better-informed voters punish misconduct and reward competence (Ferraz & Finan 2008, Banerjee et al. 2011), or whether monitoring deters misconduct on the very margin being monitored (Olken 2007, Avis et al. 2018). Whether disclosure improves the broader quality of representation — how well politicians do the job they were elected to do — is far less well understood. The answer to this question is theoretically ambiguous, as making one dimension of conduct observable can pull effort away from other dimensions (Holmstrom & Milgrom 1991). This paper empirically examines whether revealing legislator misconduct leads to better performance.

The 2009 United Kingdom parliamentary expenses scandal offers an ideal setting to answer this question. Detailed records of the expense claims of Members of Parliament (MPs) had been sought for years under the Freedom of Information Act. *The Daily Telegraph* obtained access to the full unredacted set and began publishing them on May 8, 2009. The revelations dominated national coverage for weeks and provoked widespread anger as the public learned that MPs had used their second-home allowance to claim on multiple properties, sought reimbursement for expenses never incurred, and tried to bill the public for luxuries such as a floating duck house or the cleaning of a moat. Then Prime Minister Gordon Brown called it "the biggest parliamentary scandal for two centuries."[1] Yet the retrospective verdict has largely been that little changed, with the scandal's mark on public attitudes described as "surprisingly limited" and short-lived.[2] Whether it left any more lasting mark on how Parliament itself works is the question we take up.

Several features make the episode well suited to our question. First, the disclosure was unanticipated and MPs had no opportunity to adjust conduct in advance, unlike the scheduled audits and disclosures studied elsewhere (Bobonis et al. 2016, Banerjee et al. 2024). Second, in the aftermath of the scandal an independent review led by Sir Thomas Legg audited the earlier claims of every sitting MP and assigned individual repayment amounts, yielding an objective, comparable, and predetermined measure of misconduct for the universe of legislators. Third, a pre-established general election followed within a year of the scandal, allowing us to disentangle political turnover and selection from sanctioning. Furthermore, this episode took place in a consolidated democracy with competitive elections and salient party labels, so results are not influenced by weak electoral

[1] Katharine Viner, "Gordon Brown Interview: 'It's a Strange Life, Really'," *The Guardian*, 20 June 2009.
[2] Wright (2014, p. 56); Allen & Birch (2014, p. 132); Heath (2011, p. 133).

integrity or limited state capacity (Grossman & Michelitch 2018).

Legislator performance is multidimensional and can prove difficult to measure (Dal Bó & Rossi 2011, Fouirnaies & Hall 2022). Legislators rarely control policy outcomes directly – unlike executives – and contribute instead through a bundle of activities such as voting, questioning ministers, and raising issues. We measure legislative performance using administrative records that capture four observable margins: spoken contributions in debate, questions submitted to ministers, participation in divisions (votes), and the filing of Early Day Motions. We report results for each measure separately and aggregate them into an inverse-covariance-weighted index (Anderson 2008), which provides a more comprehensive outcome and guards against multiple hypothesis testing.

We assemble the data into a panel of 485 constituencies observed annually from 2002 to 2023, which we harmonize to account for redistricting. We classify a constituency as affected by the scandal if the repayment charged to its 2009 incumbent by the Legg inquiry ranks in the upper quartile, but we verify that our results are robust to using alternative thresholds or the continuous measure. We also observe MPs' expense claims, the focus of the scandal and the one margin covered by the Legg audit, so that we can compare responses where conduct came under scrutiny with responses where it did not. We observe as well electoral outcomes and, separately from the Legg audit, the intensity of expenses-related press coverage each MP received (Eggers 2014).

Our difference-in-differences research design combines the cross-constituency variation in revealed misconduct with time variation around the scandal. We use as our baseline estimator Synthetic Difference-in-Differences (SDID) following Arkhangelsky et al. (2021) but also report conventional Two-Way Fixed Effects (TWFE) estimates. We use event studies to provide evidence in support of the parallel trends assumption and explore the dynamics of the effects.

We find that MP performance improved in affected constituencies after the expenses scandal. For the 2010-14 Parliamentary term, the performance index rises by 0.16 points on average, roughly 0.3 of a standard deviation. Three of the four component margins move: questions submitted to ministers increase by roughly 33 log points, the probability of filing an Early Day Motion rises by 9.5 percentage points (pp), and participation in divisions increases by 4.6 pp. Spoken contributions in debate show no response. Event-study estimates are close to zero up to 2009 and diverge sharply afterwards. Pooling the full post-scandal period leads to smaller effects, with the performance index increasing by only 0.08 points, though still marginally significant.

We trace the improvement in performance to political turnover after the 2010 general election. Incumbent MPs in affected constituencies were 12 pp less likely to run in 2010 and 8 pp less likely to retain their seat (unconditionally) — roughly 19 and 14 percent of their respective means. The larger impact on incumbent MPs not running indicates that this is the main driver behind the drop in re-election, with parties playing an important role in this process (Larcinese & Sircar 2017). The party itself lost nothing. Neither its vote share nor its probability of holding the seat

changed, so the scandal removed the individual member while the party retained the constituency with a new candidate. While the wedge in re-election rates for the 2009 incumbent persists through 2019, whoever holds the seat thereafter wins at normal rates. This indicates a durable, one-time compositional swap, rather than a temporary acceleration of retirements or ongoing churn.

We provide three pieces of evidence showing that performance tracks turnover. First, a monthly-level analysis reveals that the boost in performance coincides with the start of the new Parliament in May 2010. Second, the performance effect collapses toward zero when we introduce MP fixed effects and only leverage within-MP variation. Third, the gains concentrate in the seats that changed hands and there is no effect among affected incumbents who remained in office. This evidence suggests that the scandal led to better performance by replacing people rather than reforming them. We further show that the estimated impact of scandal-induced turnover is much larger than the ordinary OLS association, plausibly because misuse of expense accounts correlates with performance and the information shock from the scandal facilitates the removal of particularly ineffective MPs. We also find a larger turnover and performance response where seats are contestable, consistent with accountability operating most where the seat is at stake (Besley et al. 2010).

We probe the role of the media using an index developed by Eggers (2014) of how prominently each MP was reported by the press as implicated in the expenses scandal. While media coverage is less objective than the Legg report, a further difference is that the Legg inquiry focused narrowly on the Additional Costs Allowance (ACA)—mostly second-home expenses—and could not seek repayment for claims seen as excessive but falling within the rules. The media faced no such restrictions in its coverage. We document that MPs heavily reported as implicated but with low Legg repayment — unaffected according to our measure — systematically engaged in misconduct outside the scope of the Legg review (e.g., "flipping" the designation of their second home).

We then show that the performance response is ordered by how much *reported* misconduct a seat carried. The improvement in performance is largest where the incumbent was both flagged by Legg and reported by the media, still present in seats with high media implication but no substantive Legg findings, and indistinguishable from zero where audited misconduct went unreported. The gains in performance persisted where the scandal was transmitted, but they did not last where it was not transmitted. These results must be interpreted with caution, as media implication is potentially endogenous and does not permit a causal interpretation, but we read these patterns as heterogeneity consistent with transmission activating accountability.

Importantly, even the durable, transmission-linked improvement in legislator performance is compositional and associated with MP turnover. Incumbent removal follows the same ordering as performance, concentrated in the seats with high repayment and media implication, and absent where the misconduct stayed out of the press. Moreover, the gains in MP performance also vanish under MP fixed effects within these informational cells, pointing to a lasting change in who holds

the seat rather than sustained effort by those who stayed as the main mechanism.

One key feature of our analysis is that the scandal exposed one dimension of MP conduct, expense claims, while performance is measured on dimensions that were not the object of scrutiny. We look at expenses as the final set of outcomes and find a noisy reduction in total expenses, but a significant drop in the claims for living expenses at the heart of the scandal, which fell by about £2,100 on average after 2009, or 9% of the mean. The improvement in performance therefore did not come with any expansion of resources. The drop in living expenses is largest in 2009 and survives the introduction of MP fixed effects, suggesting a short-term sanctioning effect on sitting MPs, but only on the margin directly covered by the information shock. In the long-run, we find suggestive evidence that retained MPs increasingly shifted expenses towards operations, with a net zero effect on total expenses, while seats with turnover show a persistent decrease in living and total expenses, with no evidence of offsetting increases in operational expenses. Hence, the same seats that exhibit the gains in performance are the ones that concentrate the reduction in expenses.

Our paper speaks to several important questions on political accountability. Through its many variations, the workhorse political agency model asks if the electorate can use the vote to solve the agency problem inherent in delegating power to elected officials (Besley 2007, Ashworth 2012). Because voters can only act on what they observe, information about how politicians behave is the precondition for the whole chain. The model's ultimate promise is not just that voters use information to hold politicians accountable, but that governance actually improves as a result. Yet relatively little is known about whether making conduct observable improves the quality of representation. Our main contribution is to show that transparency can produce a broad improvement in politicians' performance that extends beyond the conduct made visible.

Previous literature on political accountability mostly stops at the ballot box, asking whether voters who learn about misconduct punish it at the polls. Seminal studies show that voters can use timely information to hold politicians accountable (Ferraz & Finan 2008, Banerjee et al. 2011). Subsequent experimental work has found the relationship far less reliable (Dunning et al. 2019). More recent work helps reconcile these findings by highlighting that a revelation informs only to the extent that it departs from prior beliefs (Arias et al. 2022).[3] Our setting speaks to this literature but locates accountability at incumbents' decision to stand for re-election, operating mostly through deselection and anticipatory withdrawal.[4] Grossman et al. (2024) model this chain, from incumbents' running decisions through parties' nomination strategies, but they argue that transparency must be sustained to be effective. Previous studies also typically focus on the single election following disclosure. We follow the affected seats for a decade and show that an acute

[3]Related research documents a gap between stated disapproval of malfeasance and voting behavior (Boas et al. 2019), and finds that corruption information can depress engagement rather than redirect it (Chong et al. 2015).

[4]In the US, politicians implicated in scandals leave office through several paths, including retirement in anticipation of a primary challenge (Groseclose & Krehbiel 1994, Jacobson & Dimock 1994, Hirano & Snyder 2012).

information shock can have a persistent electoral impact over multiple election cycles.

Existing research has also shown that the effect of disclosure depends on whether information reaches voters. This makes the news media the operative link between disclosure and any electoral response (Larreguy et al. 2020). A broader literature establishes that media presence makes the government more responsive to the governed (Besley & Burgess 2002, Strömberg 2004). Snyder & Strömberg (2010) trace the full chain from press coverage, through voter knowledge and engagement, to legislator behavior.[5] What these designs typically vary, however, is the *capacity* to transmit (i.e., whether a radio station or a newspaper market exists). Media infrastructure of this kind is slow-moving and largely cross-sectional. We observe instead whether misconduct by a specific MP was actually reported. We find that objective misconduct alone does not move performance. The response is concentrated and durable only where the misconduct was reported.

A key object of interest in unpacking the mechanics of accountability is the distinction between sanctioning, in which the threat of removal disciplines incumbents, and selection, in which elections replace bad types with better ones (Fearon 1999, Ashworth 2012). The two are difficult to separate empirically, and a number of studies have used designs that hold one channel fixed to isolate the other (Alt et al. 2011, Gagliarducci & Nannicini 2013, Fouirnaies & Hall 2022). Our evidence points squarely to selection. The performance gains in affected constituencies kick in precisely with the new Parliament in 2010 and disappear once we introduce MP fixed effects. There is no detectable improvement among implicated incumbents who remained in office. Notably, this selection operated through anticipatory retirement rather than through the voter.

A few studies connect transparency directly to government performance, mostly focusing on audits (Olken 2007, Bobonis et al. 2016, Avis et al. 2018). Two features set our work apart. First, audit findings carry legal consequences, and deterrence plausibly operates through the anticipation of prosecution rather than through the electorate. Second, the disciplining device in the audit literature is a forward-looking threat: the politician behaves because he expects to be evaluated again. Our shock was unanticipated and never repeated, so no comparable threat was operating on the performance margins we study. Other closely related work disseminates performance information directly to voters using scorecards (Grossman & Michelitch 2018, Banerjee et al. 2024). Here the difference lies in the mechanics. In those studies, incumbents respond to the information provided to voters by improving their conduct in anticipation of an upcoming election, so that behavior changes first and selection follows from it, if at all. In ours, the information produced turnover, and performance improved because of who subsequently held the seat.

A feature common to all previous work on performance is that the conduct disclosed and the conduct measured are the same object. Audits reveal misappropriation and then record misappropriation; scorecards report attendance and spending and then record attendance and spending.

[5] See Prat & Strömberg (2013) for a survey of this literature.

What such designs cannot detect is whether making one dimension of conduct visible changes behavior on the dimensions left unmonitored, which is precisely where Holmstrom & Milgrom (1991) suggests the effects may be adverse.[6] We observe both, and find a broad improvement in the quality of governance across margins the disclosure never touched, alongside a response on the one it did. Moreover, the gains in both margins are driven by the same seats experiencing turnover.

Finally, our paper also contributes to the literature on the 2009 expenses scandal (Pattie & Johnston 2012, Vivyan et al. 2012, Eggers 2014, Larcinese & Sircar 2017), which has focused on the electoral consequences but has not asked what the scandal did to legislative performance. We also differ methodologically. Existing work is largely cross-sectional, examining the 2010 election in isolation. We construct a constituency panel spanning more than two decades, which allows us to verify the absence of pre-trends and trace the long-term dynamics of turnover and performance within a single framework. We also take a more structured approach to the relationship between objective misconduct and its reporting, treating the Legg report as the source of identifying variation and media coverage as a channel of transmission rather than as a competing explanation. Substantively, this leads us to a different assessment of the short- and long-term impact of the scandal. In contrast to the prevailing view that little changed and things went back to politics as usual, we document meaningful and persistent effects on MP turnover, performance, and expenses.

The remainder of the paper proceeds as follows. Section 2 describes the institutional background. Sections 3 and 4 introduce the data and empirical strategy. Section 5 presents our main results on MP performance. Sections 6 and 7 discuss political turnover and media coverage as potential mechanisms. Section 8 presents results on MP expense claims. Section 9 concludes.

2 Institutional Background

The United Kingdom is a parliamentary democracy in which Members of Parliament (MPs) represent single-member constituencies in the House of Commons. MPs' formal responsibilities include debating and scrutinizing legislation, asking written and oral questions to ministers, participating in divisions (votes), and sponsoring or signing motions (including Early Day Motions). In addition, MPs engage in constituency-facing work, including casework and local advocacy. While the ultimate "output" of a legislator is difficult to measure directly, many parliamentary activities leave traces in administrative records, which we use to construct our performance outcomes.

MPs are expected at Westminster every week that parliament sits, usually from Monday to Thursday. Members also typically visit their constituency every week or two and will usually have offices and staff both there and in London. MPs receive reimbursements for the associated costs. Prior to 2010, the rules governing MPs' allowances were set out in the House of Commons

[6] Grossman & Michelitch (2018) explore this possibility by including one outcome outside the scorecard's scope.

Green Book. In broad terms, the system supported three categories that map closely into our later decomposition of expenses: (i) staffing and office costs, (ii) travel between Westminster and constituencies, and (iii) accommodation and subsistence for MPs who needed to stay away from their primary residence in order to attend Parliament. The accommodation component, officially called the Additional Costs Allowance (ACA) but often colloquially referred to as the 'second-home allowances', was introduced in 1971.[7] Constituencies in inner London were ineligible for ACA, but received a separate subsidy to compensate for the higher cost of living. Those in Outher London could choose between ACA and the London subsidy.

An important institutional feature of the pre-2010 regime is that administration and oversight were largely internal to Parliament. At the same time, the rules contained gray areas that, when combined with limited disclosure, created room for practices that later became highly controversial. Public reporting prior to 2009 often occurred in aggregated form and did not provide a transparent, comparable view of itemized claims for individual MPs. After the Freedom of Information Act (FOIA) came into force in January 2005, journalists and transparency advocates pursued disclosure of detailed expense claims. These efforts triggered a prolonged dispute over whether itemized claims should be released, including litigation and attempts to delay or limit disclosure. In May 2008, the UK High Court ruled against the House of Commons and ordered the disclosure of all information except sensitive private details. Parliamentary authorities announced plans to publish expenses with sensitive information redacted, which faced delays into 2009.

Before that planned release, a comprehensive set of expenses records was leaked to *The Daily Telegraph*, with the condition of non-partisan coverage (Winnett & Rayner 2009). Beginning on May 8, the newspaper published a sequence of investigative stories in daily installments. The revelations dominated British political coverage for weeks and generated widespread public anger. The allegations centered heavily on the ACA. One questionable practice involved switching the designation of 'second home' across properties to be able to claim costs (e.g., furnishing) across different ones. This practice came to be known as "flipping." Also uncovered were inconsistencies in second-home designation for ACA reimbursements versus tax purposes, which allowed MPs to save substantial amounts in Capital Gains Tax (CGT).[8] In some cases, it was found that MPs had claimed interest payments on 'phantom' mortgages that were fully paid off. Detailed receipts further brought to light questionable claims for maintenance and furnishing. Famous examples include the cleaning of a moat, the purchase of a duck house for a pond, and hundreds of sacks of horse manure. While many claims were formally within the rules, the disclosures highlighted the gap between the rules and public expectations about propriety, especially at a time when the

[7] ACA includes hotel bills, mortgage interest (since 1985), utilities, furnishings, cleaning, basic security, etc. A yearly cap on ACA expenses was regularly updated. In 2008, the ACA limit was £24,006 vs MP salary of £64,766.

[8] In the UK, a person must pay CGT after selling a property, except if it is their primary place of residence.

electorate was experiencing the consequences of the 2008 global financial crisis.

In the weeks that followed, Parliament published extensive expenses information, though not fully itemized. The immediate political consequences included public apologies, announced retirements, and heightened pressure on party leadership to discipline MPs. On May 19, Parliament commissioned an independent audit led by Sir Thomas Legg to review ACA claims for the financial years 2004/05-2008/09. The Legg review was limited in its scope, not only by its singular focus on ACA, but also because it exclusively concerned possible violation of the rules in the *Green Book*, disregarding the adequacy of the rules themselves, ignoring possible tax misconduct, and omitting MPs facing criminal investigation. A first draft was shared on December 19 and the final version, following an independent appeals process, was published on February 1, 2010. Crucially, the Legg report produced a comparable measure of revealed misconduct: the amount each MP was required to repay. The next UK general election took place on May 6, 2010.[9]

The scandal also accelerated institutional reforms. The Parliamentary Standards Act 2009 created the Independent Parliamentary Standards Authority (IPSA), an independent body responsible for regulating and administering MPs' expenses and setting clearer, externally monitored rules. IPSA began operations in 2010, fundamentally changing the institutional environment governing expenses claims. Importantly, IPSA has no influence over any of the performance outcomes we study (other than expenses) and holds all MPs to the same rules, irrespective of previous misconduct. At the same time, the creation of IPSA allows us to interpret post-2009 changes in living expenses below as responses on the margin most directly connected to the scandal, in a context where continued abuse of the old rules became harder.

3 Data and Measurement

For our main analysis, we construct a panel at the constituency - financial year level using data from multiple sources.[10] Our main sample on MP performance and expenses spans the years 2002-2023, while our elections sample covers the seven general elections between 1997 and 2019.

One important challenge for the construction of the panel is that the boundaries of parliamentary constituencies are updated at regular intervals to account for changes in population size.[11] Such boundary changes took effect throughout the UK at the general elections of 1997 and 2024. Additional redistricting took place in 2005/2010. Given that each wave of redistricting further

[9]The Septennial Act of 1715, last reformed in 1911, set a maximum parliamentary term length of five years. Having held the previous election in May 2005, an election had to take place by early June 2010.

[10]A financial year in the UK goes from April 1 until March 31 of the following calendar year.

[11]The most recent review in 2023 established a UK electoral quota of 73,393. The number of voters in each constituency (with the exception of islands) cannot deviate by more than 5% from this number. Boundary commissions cannot consider political outcomes when drawing lines.

complicates the analysis, we end the sample in 2023 (2019 for elections), such that we take as given the 1997 constituencies and must only adjust for redistricting in 2005 (Scotland) and 2010, ignoring the most recent wave in 2024. Very few constituencies remain entirely unchanged across redistricting years, so we reconstruct harmonized constituencies that remain largely unchanged based on geographic overlap.[12] Appendix A provides additional details. We drop harmonized constituencies with an overlap (Intersection Over Union - IOU) below 70%, but we verify as part of our robustness checks that the results are unaffected if we use alternative thresholds.[13] Our final panel includes 485 constituencies, equivalent to 74% of the 659 initial constituencies and 75% of the 44 million registered voters in 1997.

3.1 MP Misconduct

Our cross-sectional measure of MP misconduct is based on the Legg review, which reports the amount each MP was required to repay following an audit of Additional Costs Allowance (ACA) claims — essentially second-home and accommodation expenses — over the five financial years preceding the scandal (2004/05–2008/09). The review was confined to the ACA and sought repayment only where a claim breached the applicable rules, in some cases against limits applied retrospectively, such as annual caps on cleaning and gardening. It therefore measures explicit, recoverable rule-breaking on the single allowance at the center of the scandal, and by construction does not capture conduct that fell within the rules as written, however unsavory, nor misuse of other allowances. A number of Legg's initial recommendations were subsequently reduced on appeal. Our baseline measure of involvement is based on the amount owed net of these successful appeals, though we verify that our results are robust to using the gross amount originally recommended.

Within this scope, the repayment amounts have several advantages as an identifying measure. They derive from a uniform, rule-based audit of predetermined behavior by the universe of sitting MPs, and are therefore objective, comparable, and immune to manipulation in anticipation of the disclosure. Unlike realized press attention — which is plausibly shaped by partisanship, salience, and news values — they are free of the selection that makes coverage an unreliable index of underlying conduct. It is for this reason that we use the Legg amounts as our treatment and reserve press coverage for a distinct role in our analysis of mechanisms below: not as a rival measure of the audited misconduct, but as an index of how prominently each incumbent was publicly reported — which captures both whether the audited misconduct reached the public and, in some cases, questionable conduct that lay beyond the audit's reach.

[12] We verify below that results are unchanged if we harmonize constituencies based on shared voters (Denver et al. 2004, Rallings & Thrasher 2007). This information is not available for Northern Ireland.

[13] Figure A1 shows the distribution of IOU values for the full set of initial constituencies. Figure A2 shows the distribution of Legg repayment amounts for this full set and our restricted sample.

Our preferred measure of MP misconduct is a binary indicator equal to one for constituencies whose 2009 incumbent falls in the upper quartile of required Legg repayments (net of appeal). We complement the Legg report with the amount of misappropriated expenses determined through formal criminal proceedings for three MPs excluded from the Legg inquiry due to ongoing criminal investigations: David Chaytor, Jim Devine, and Elliot Morley. Our discrete treatment definition facilitates implementation of the SDID estimator introduced in the next section and yields coefficients with a straightforward interpretation. As robustness checks, we verify that results are similar when defining treatment using alternative percentile cutoffs and when using the continuous repayment amount as a treatment intensity measure.

The distribution of repayments is highly skewed. About half of the 2009 incumbents in our sample were required to repay some amount, but most sums are small. The median repayment is £110, and even among those asked to repay anything the median is only £1,363. A long right tail pulls the mean to £1,650 and places our upper-quartile threshold at £1,381. Table A1 reports the full distribution. The largest repayments are an order of magnitude greater and correspond to the cases that came to define the expenses scandal. The single largest amount (£42,458) was owed by Barbara Follett, mostly for private security patrols at her London home. Andrew MacKay and Julie Kirkbride, a married couple, each repaid around £30,000 after designating different properties as their second homes, so that both drew the second-home allowance. Other large repayments involved the upkeep of country estates: David Heathcoat-Amory's gardening supplies (including hundreds of sacks of manure), and the running costs of Douglas Hogg's manor, whose grounds famously included a moat. A separate group of the top repayments corresponds to the three MPs later convicted of criminal offenses for false or phantom claims, whom we assign the repayment amounts established in court.

Figure 1 illustrates the geographic distribution of constituencies affected by the scandal, which are located throughout the UK.[14] Table 1 reports cross-sectional regressions of our binary measure of MP misconduct on predetermined characteristics of the constituency and the 2009 sitting MP.[15] Three patterns are notable. First, London constituencies are significantly less likely to be classified as affected. For inner London this is largely mechanical, as those MPs were ineligible for the ACA and instead received an automatic London supplement, while members for outer London could choose between the ACA and the supplement. Taken together, this pattern serves as a validity check that our measure captures second-home claiming specifically, and we confirm below that our results are robust to excluding London constituencies. Second, misconduct is increasing in seniority: MPs with more years in office and those holding frontbench positions in 2009 are more

[14] Figure A2 plots CDFs of repay amounts for the full set of constituencies and our restricted sample with IOU $\geq$ 70%. The distributions are very similar and we fail to reject the null that the distributions are identical (p=0.814).

[15] Table A2 provides similar results using the continuous repayment amount instead.

likely to be implicated, while party leaders and deputy leaders are significantly less likely to be implicated. Third, MP misconduct is unrelated to which major party held the seat (Conservative is the omitted category) or to its competitiveness. We find little evidence that misconduct is correlated with MP demographic characteristics such as age, gender, or ethnicity.

3.2 MP Performance and Expenses

We measure multiple margins of legislator performance based on administrative records. Together these margins capture the main avenues through which an individual backbencher can be active in the Westminster system, where the government controls the legislative agenda: scrutinizing ministers, taking part in votes, and putting issues on the record.

Digitized transcripts of the universe of debates in the House of Commons since 1997 were obtained from the organization *TheyWorkForYou* based on the original Hansard records. We extract three key performance measures from these files: (i) the number of interventions (speeches), (ii) participation in votes (called divisions in the House of Commons), and (iii) the number of questions submitted to ministers. The debate transcripts contain information on questions that were answered orally during parliamentary debates, but *TheyWorkForYou* also provides information on questions that the government answered in writing.[16] We calculate the total number of questions by adding written and oral questions. Given the skewed distribution of the number of speeches and questions asked, we study the logarithmic transformation of these variables (plus one). For divisions, we use as outcome the share of votes in which the MP took part.

A fourth measure of performance is based on the Early Day Motions (EDMs) registered by an MP, which we source from the Library of the House of Commons. EDMs are proposals for debate topics, which are rarely successful but are used to raise awareness of a particular issue.[17] Given that many MPs never submit an EDM, we focus our analysis on the extensive margin and study an indicator equal to one if the MP submitted any EDMs during the year. Data on participation in divisions first become available in 2001, but coverage that year is thin — roughly a third fewer recorded divisions than in adjacent years — and written questions are not available until 2002, so we set the sample period for the performance outcomes to 2002–2023.

Given that our unit of observation is the constituency-year, in cases with multiple MPs serving in the same constituency in the same year (e.g., years with a general election or by-elections) we

[16] These written questions contain questions intended to be answered in writing as well as questions intended to be answered orally that ended up being answered in writing due to time constraints during debates.

[17] Unlike the United States Congress, where individual members routinely sponsor and co-sponsor legislation and bill sponsorship is a standard measure of legislative effort, the Westminster system gives the government near-complete control of the legislative agenda, and almost all bills that become law are government bills. Private Members' Bills exist but are few and rarely enacted, so there is no individual bill-sponsorship margin directly comparable to the one studied in the U.S. context. Early Day Motions are the closest available substitute — formal motions that are almost never debated but that allow an individual member to place an issue on the record and gather the support of colleagues.

aggregate outcomes across MPs. To address concerns about multiple hypothesis testing, we aggregate our four main outcomes of interest — log spoken times, log questions asked, participation in divisions (share), and EDMs submitted (any) — into an inverse-covariance-weighted performance index (Anderson 2008).

We compile data from several sources to measure MP expenses. *TheyWorkForYou* provides data for the period 2001-2008. The House of Commons' website has information from 2009 until mid-2010, when IPSA started operations and assumed control of MP expenses. IPSA provides data since its inception until the present day. We clean and harmonize the information from these different sources and construct a comprehensive measure of total expenses, which we can break down into disaggregate subtotals for living and operating expenses. The former includes accommodation and travel expenses (e.g., second homes, hotels, trains), while the latter includes office rent and staff. We express all money values in constant 2015 GBP.

3.3 Political Outcomes and Summary Statistics

Finally, we use information on election outcomes from Fouirnaies (2021), which records the candidates and results in each constituency at every general election from 1997 to 2019. From these records we build our measures of political turnover and selection at three levels. At the level of the individual member, we track, for each subsequent election, whether the MP who held the seat in 2009 stood again and whether they were returned to Parliament (unconditional on standing). We construct the analogous running and winning indicators for the sitting incumbent going into each election, which — in contrast to the 2009-specific measures — capture whether whoever holds the seat continues to be re-elected in later cycles rather than the fate of one particular member. Finally, at the party level, we measure the vote share of the party that held the seat in 2009 and an indicator for whether that party retained the seat. We complement this data with demographic information at the candidate level from the Parliamentary Candidates UK database, which covers the general elections between 2001 and 2015.

Table 2 reports summary statistics for our main outcomes.[18] The activity measures are heavily right-skewed: the average constituency records around 90 spoken contributions and 70 questions in a typical year, but with medians well below the means (56 and 31) and long tails reaching into the thousands, which is why we study these outcomes in logs. Participation in divisions averages 72%, while only 39% of constituency-years feature any Early Day Motion, which is why we study EDMs on the extensive margin. The inverse-covariance-weighted performance index has a mean of zero and a standard deviation of 0.56, against which we gauge the magnitude of the estimated effects. Expense claims average roughly £163,000 per constituency-year, but the bulk of this—

[18]Characteristics of the constituencies and their 2009 incumbents are summarized in Table A1.

about £140,000—is operational spending on staff and offices. The accommodation and travel claims at the center of the scandal are a smaller £23,000 component.

4 Empirical Strategy

Our difference-in-differences (DiD) strategy combines the cross-constituency variation in MP misconduct derived from the Legg report with the timing of the expenses scandal. As described in Section 2, the scandal began in May 2009, when the *Daily Telegraph* began publishing a series of stories based on detailed expenses records obtained from an anonymous source. The Legg review proceeded over late 2009 and early 2010, culminating in a final report that quantified required repayments. Because MPs and parties may have begun responding once the scandal became public, we treat 2009 as the first post-treatment year.

For our baseline estimates, we implement the synthetic difference-in-differences (SDID) estimator developed by Arkhangelsky et al. (2021). SDID combines elements from traditional DiD and synthetic control by choosing weights on control units and pre-treatment periods to improve pre-treatment fit between treated and control outcomes. Intuitively, SDID constructs a weighted comparison group whose pre-2009 outcome path closely matches that of affected constituencies, and then estimates the post-2009 divergence between treated and weighted-control outcomes, net of any remaining level differences.

Formally, the parameters estimated in the SDID design are obtained by solving

$$\left(\hat{\tau}^{sdid}, \hat{\mu}, \hat{\alpha}, \hat{\gamma}\right) = \arg\min_{\tau,\mu,\alpha,\gamma} \left\{ \sum_{c=1}^{N} \sum_{t=1}^{T} \left(\tilde{Y}_{ct} - \mu - \alpha_c - \gamma_t - W_{ct}\,\tau\right)^2 \hat{\omega}_c^{sdid}\, \hat{\lambda}_t^{sdid} \right\}, \tag{1}$$

where $\tilde{Y}_{ct}$ is a residualized outcome in constituency c and year t. N is the number of constituencies, and α_c and γ_t are constituency and year fixed effects. The treatment indicator $W_{ct} = \text{Affected}_c \times \mathbb{1}\{t \geq 2009\}$ equals one for affected constituencies over the treatment period (2009–2023), where Affected_c indicates constituencies whose 2009 incumbent falls in the upper quartile of Legg repayments. We obtain the residualized outcome $\tilde{Y}_{ct}$ by partialling out a set of 2009-incumbent-party $\times$ parliamentary-term indicators from the outcome Y_{ct}. This absorbs differences in the incentives and opportunities for parliamentary activity between government and opposition across successive terms.[19] The unit weights $\hat{\omega}_c^{sdid}$ are convex weights chosen so that the weighted average of the control constituencies' outcomes closely approximates that of the affected constituencies in the

[19] We define parliamentary terms by general elections: a new term begins in the year a general election takes place. We use the *projected* method developed by Kranz (2022), which estimates the covariate coefficients from a regression on the untreated constituencies only. Because the 2009 party is constant within constituency and the term is a coarsening of the year, the party and term main effects are absorbed by α_c and γ_t.

pre-treatment period, and the time weights $\hat{\lambda}_t^{sdid}$ are chosen so that the control constituencies' pre-treatment outcomes best approximate their post-treatment outcomes.[20] The parameter of interest, τ, is the Average Treatment Effect on the Treated (ATT), the effect of the scandal on the outcome of interest in affected constituencies.[21]

The main advantage of SDID is that it uses a data-driven approach to determine the optimal weights that enhances compliance with the parallel trends assumption (Roth 2022). A potential downside of SDID is that it requires a balanced panel, but this is not a concern in our setting as we do not have any missing values for our main outcomes. More importantly, the weighting of constituencies is determined by the optimization algorithm rather than by an economic rationale that might better justify why certain unaffected constituencies are more comparable to the affected units. Additionally, the SDID method does not afford much flexibility to the regression specification. For example, including MP fixed effects to disentangle selection from sanctioning is not straightforward. These challenges lead us to complement the SDID analysis with a more standard Two-Way Fixed Effects (TWFE) OLS specification:

$$Y_{ct} = \alpha_c + \gamma_t + \theta_{pt} + \beta\,(\text{Affected}_c \times \mathbb{1}\{t \geq 2009\}) + \varepsilon_{ct}, \tag{2}$$

where α_c are constituency fixed effects, γ_t are year fixed effects, and θ_{pt} are 2009-incumbent-party $\times$ parliamentary-term fixed effects. When using TWFE, we cluster standard errors at the constituency level.

To allow for heterogeneous effects over time, we disaggregate the post-scandal period into (i) the initial impact period in 2009, (ii) the first post-scandal Parliament (2010–2014), and (iii) subsequent Parliaments (2015–2023). For SDID, we overcome the inability to include interaction terms by restricting the post-treatment window to the relevant sub-period. This approach preserves the SDID weighting logic while delivering period-specific estimates aligned with our substantive interest in short-run versus longer-run responses. We use a similar 'sample split' approach to estimate heterogeneous effects by 2009 incumbent party or seat competitiveness. For TWFE, we include interactions of the treatment indicator with separate dummies for each sub-period in the same regression.

Finally, to visualize dynamics and assess pre-trends, we report event-study plots that trace the evolution of outcomes in affected versus control constituencies over time.[22] Under SDID, we

[20] See equations (4)–(6) in Arkhangelsky et al. (2021) for the optimization problem that yields these weights. Without the weights, Equation (1) reduces to the canonical two-way fixed-effects DiD estimator.

[21] We implement SDID using the *sdid* command in Stata and conduct inference using a clustered bootstrap at the constituency level with 50 repetitions.

[22] As every affected constituency enters treatment simultaneously in 2009, our design sidesteps the issues at the center of the recent DiD literature. There are no already-treated units serving as controls, so TWFE is free of the negative weighting and forbidden comparisons of Goodman-Bacon (2021) and de Chaisemartin & D'Haultfœuille

compute event-study coefficients following Ciccia (2024), who shows that the Arkhangelsky et al. (2021) estimator disaggregates into dynamic effects. Because treatment adoption is simultaneous in our setting, let

$$\widehat{\Delta}_t \;=\; \frac{1}{N_{tr}} \sum_{c:\,\text{Affected}_c=1} \tilde{Y}_{ct} \;-\; \sum_{c:\,\text{Affected}_c=0} \hat{\omega}_c^{sdid}\, \tilde{Y}_{ct}$$

denote the differential in year t between the N_{tr} affected constituencies and their synthetic control, where $\tilde{Y}_{ct}$ and the weights $\hat{\omega}_c^{sdid}$, $\hat{\lambda}_t^{sdid}$ are those from Equation (1). The SDID event-study coefficient for year t is

$$\hat{\tau}_t^{sdid} \;=\; \widehat{\Delta}_t \;-\; \sum_{s=2002}^{2008} \hat{\lambda}_s^{sdid}\, \widehat{\Delta}_s, \tag{3}$$

the year-t differential net of the time-weighted average differential over the pre-treatment years. Coefficients for $t < 2009$ serve as placebo tests of parallel trends and are normalized by construction to average to zero, so no omitted category is required. Coefficients for $t \geq 2009$ trace the dynamics of the treatment effect. The baseline ATT in Equation (1) is the average of the post-treatment coefficients, $\hat{\tau}^{sdid} = \frac{1}{15}\sum_{t=2009}^{2023} \hat{\tau}_t^{sdid}$.

Under TWFE, by contrast, we estimate a fully interacted specification of the form

$$Y_{ct} = \alpha_c + \gamma_t + \theta_{pt} + \sum_{k \neq 2008} \beta_k \left(\text{Affected}_c \times \mathbb{1}\{t = k\}\right) + \varepsilon_{ct}, \tag{4}$$

where α_c, γ_t, and θ_{pt} are the same set of fixed effects as above and 2008 is the omitted year.

5 Main Results: MP Performance

This section presents our main results on how transparency about MPs' misconduct affects legislative performance. We begin by documenting changes in parliamentary activity—including speeches, questions to the government, Early Day Motions, and participation in divisions—and we summarize these outcomes using our inverse-covariance performance index. We then turn to heterogeneous effects based on incumbent party and political competition. Finally, we present results from a large battery of robustness checks.

5.1 Main results

Figure 2 reports point estimates and 95% confidence intervals from the SDID event-study (Equation 3) for our four measures of parliamentary activity and for the performance index. Two patterns emerge. First, for three outcomes we observe a sharp improvement shortly after the scandal. These

(2020), and SDID requires no aggregation across adoption cohorts (Arkhangelsky et al. 2021).

are questions to ministers, the indicator for Early Day Motions, and the share of divisions in which the MP participates. We do not detect a clear response in spoken contributions. These component-level patterns are reflected in the summary index in panel (e), which increases markedly in the immediate post-scandal Parliament (2010-14). Second, the improvements in parliamentary activity appear to attenuate over time and become statistically indistinguishable from zero in the later post-scandal period, roughly from 2015 onward. This combination of a pronounced short-run increase and a weaker long-run response motivates the sub-period disaggregation reported in Table 3 below. The event-study plots also illustrate that SDID yields excellent pre-treatment fit. The estimated coefficients for years before 2009 are close to zero and statistically insignificant, consistent with the algorithm's reweighting of control units to enhance comparability between affected and unaffected constituencies prior to the scandal.

Table 3 summarizes our baseline SDID estimates. Panel A reports aggregate effects over the full post-scandal period (2009–2023), corresponding to Equation (1). Panel B reports disaggregate estimates for the year of the scandal (2009), the next Parliament (2010-14), and the later years in our sample (2015-23). Columns (1)–(4) present estimates for the individual performance outcomes, and Column (5) reports the effect on the performance index.

The aggregate estimates in Panel A mirror the event-study evidence. Point estimates are positive for all outcomes except log spoken times (Column 1), though precision varies across outcomes. The estimate for log questions in Column 2 is economically meaningful (roughly indicating a 17% increase) but is imprecisely estimated and not statistically significant. Similarly, the estimate for the extensive margin of Early Day Motions (Column 3) implies an increase of 5.6 percentage points (pp) in the probability of filing at least one motion (equivalent to 14% of the sample mean), but is not statistically significant at conventional levels. In contrast, the effect on division participation is both sizable and precisely estimated. Column (4) implies an increase of 3.4 pp in the share of divisions in which the MP votes, statistically significant at the 1% level, which corresponds to a 4.7% increase relative to the sample mean. Aggregating across outcomes, Column 5 shows that the performance index rises by 0.08 points (0.14 of a Standard Deviation – SD), which is marginally significant at the 10% level.

Panel B shows that these effects are concentrated in the first Parliament after the scandal. The estimates for 2009 are mostly negative but small and statistically insignificant, suggesting a limited response by sitting MPs in the immediate aftermath of the scandal. In contrast, we estimate a positive and statistically significant increase in the performance index of 0.16 points for the 2010-14 period, equivalent to 0.3 SD. The component outcomes point in the same direction. The number of questions to the government increases by 33 log points (significant at the 10% level). The probability of filing an Early Day Motion increases by 9.5 pp (significant at the 5% level), equivalent to a 25% increase relative to the sample mean. Division participation increases by 4.6 pp (significant at

the 1% level), equivalent to 6.4% of the sample mean. In contrast, the estimates for the later period (2015–2023) are smaller and generally statistically indistinguishable from zero, with the exception of division participation, which shows a 3 pp increase and remains statistically significant at the 5% level.

5.2 Heterogeneous effects

The previous results show that transparency about MP misuse of expense accounts leads to an improvement in legislator performance, particularly in the short run. We examine possible heterogeneity in the short-run treatment effect based on two predetermined characteristics of the constituency: the party holding the seat at the time of the scandal and the competitiveness of the seat.[23] We focus on the two main parties, Labour and Conservative, for the party heterogeneity to ensure a large enough sample. The Labour party held 255 of our sample seats in 2009 (53%), while Conservatives had 155 (32%). We define a constituency as competitive ("marginal") if it was not the case that the same party won the three general elections before the scandal (1997, 2001, 2005) or the same party won but its average win margin was below 10 percentage points. Close to 26% of constituencies are considered competitive by this definition. Importantly, Table 1 shows that MP misconduct is balanced between Labour and Conservative seats, as well as between swing and safe seats. We estimate these heterogeneous effects by replicating our SDID analysis for the subsample meeting the relevant condition (e.g., Conservative incumbent in 2009), which helps ensure the absence of pre-trends in each subsample. Figure A4 shows very similar results using TWFE.[24]

Panel (a) in Figure 3 shows the results for the MP performance index. We find a much larger improvement in MP performance in Conservative seats, which see an increase of 0.22 points in the performance index during the 2010 Parliament (0.39 SD), significant at the 1% level. In contrast, Labour-held seats only experience a 0.10-point increase, which is not statistically significant (p=0.22). The magnitude of these estimates suggests a meaningful difference in the response depending on the incumbent party at the time of the scandal, but the large confidence intervals indicate that the difference is not statistically significant.[25] Still, these results are consistent with the Conservative leadership responding to the scandal more aggressively on transparency and internal discipline than Labour's (Winnett & Rayner 2009, Crewe & Walker 2019).[26] However, we

[23] Figure A3 shows similar qualitative patterns for the full post-scandal period.

[24] For SDID, we omit the 2009 incumbent party × parliamentary-term fixed effects when studying heterogeneity by incumbent party, as there is only one incumbent party in these subsamples by construction. For TWFE, each cut is a single pooled regression with constituency fixed effects; the party cut adds party × year effects, while the competition and turnover cuts keep the baseline party × term effects and add cut × year effects.

[25] We cannot formally test the difference between two SDID estimates from different regressions. The TWFE equivalent, estimated through a single regression and including party x term fixed effects, yields a point estimate of 0.09 for Labour and 0.19 for Conservative. The p-value for the difference is 0.36.

[26] While Conservative leader David Cameron advocated for the use of open primaries to select Conservative candi-

cannot separate this from the change in government at the 2010 election, with the Conservatives entering office as Labour left it. Anticipating some of our findings on political turnover below, MP misconduct does not affect the probability that the 2009 incumbent party retains the seat. This means that the plausibly larger effect for Conservative-held seats reflects an improvement among Conservative MPs rather than turnover across parties.

Panel (a) in Figure 3 also shows the heterogeneous performance effects based on the competitiveness of the seat. The point estimate is larger in more competitive constituencies. In safe seats, the performance index increases by 0.11 points, while in marginal seats the index improves by a much larger 0.22 points. This pattern aligns with previous findings in the literature indicating that the effect of transparency on politician performance depends on the level of political competition (Bobonis et al. 2016, Grossman & Michelitch 2018). Substantively, the larger effect in competitive seats suggests the response was driven by electoral strategy rather than a blanket moral reckoning, which would have shown up more evenly everywhere. Instead the response is largest precisely where a tainted incumbent could cost the party the seat, indicating a response shaped strongly by electoral stakes. However, the confidence interval for the swing seats is large due to the small sample size (while the effect for safe seats is statistically significant at 5% level), and we cannot formally reject that the two effects are equal in our TWFE specification (p-value: 0.26).

5.3 Robustness checks

In the Online Appendix, we verify the robustness of the previous findings in multiple ways. We consider changes to our regression specification, the measurement of our main variables, and the composition or construction of the sample. We mainly focus on the performance index for these robustness checks, considering both the average post-scandal effect for the full 2009-2023 period and the short-term impact between 2010 and 2014.

We first show that the results are not driven by our SDID estimator. Figure A5 plots raw averages of the MP performance measures for affected and control constituencies and shows patterns consistent with the baseline results. Figure A6 reports the corresponding event-study plots from the TWFE specification in Equation (4). While the pre-scandal coefficients are noisier than under SDID, the post-2009 dynamics are very similar. Table A3 reports the TWFE estimates from Equation (2), which closely match the SDID magnitudes.

We also assess robustness to alternative measurement choices. Figure A7 shows that the results are robust to variations in the construction of the performance index. The results are similar when we recompute the inverse-covariance-weighted index excluding each of its four components in turn

dates in 2010, less than a handful of constituencies implemented this practice. Notably, two of these cases (Totnes and Gosport) correspond to seats that became vacant due to scandal-related retirements. Data limitations prevent us from further exploring this channel, but the practice had gone out of favor by 2015 (Alexandre-Collier 2016).

or if we use a simple equal-weighted average of the standardized components instead.

Table A4 shows that the results are largely unchanged if we use the gross amount of Legg repayment to construct our MP misconduct measure, alleviating concerns about possible endogeneity of the post-appeal amounts. We verify in Table A5 that the results are also similar if we exclude from the sample the three constituencies whose MPs were criminally prosecuted and convicted. These constituencies are the only exception in which the treatment assignment is not based on the Legg repayment amount.

Figures A8 and A9 examine sensitivity to the repayment cutoff used to define affected constituencies. We consider cut-offs ranging from the 50th percentile, which coincides with the extensive margin (any payment), to the 90th percentile. The estimates tend to grow in magnitude as the cutoff becomes more stringent. Because our binary treatment coarsens the underlying repayment amount, a higher cutoff concentrates the treated group on the most heavily implicated members, so the rising estimate traces a dose-response relationship between the severity of revealed misconduct and the subsequent improvement in performance. It also implies that our baseline upper-quartile estimate is diluted by the many MPs required to repay only small amounts and, if anything, understates the response among the clearly implicated. Relatedly, Table A6 reports estimates using the continuous Legg repayment amount in place of our preferred upper-quartile indicator. The continuous regressor requires the TWFE estimator, but has the advantage of more fully exploiting the variation in MP misconduct and yields similar conclusions.

We consider as well changes to the composition of the sample. Figures A10 and A11 show that results are stable to changes in the threshold value of the geographic overlap used to construct our harmonized panel of constituencies. We use at baseline a threshold value of IOU $\geq 70\%$, but consider IOU values ranging from 60% to 90%. The results remain very similar. We also consider an alternative method for the harmonization of the panel based on overlap in the electorate, using information from Denver et al. (2004) and Rallings & Thrasher (2007). This approach has the downside that we do not have the relevant information for Northern Ireland, so we first verify in Table A7 that our results are unchanged with our baseline harmonization for the 470 constituencies of Great Britain, which is our full sample less the 15 Northern Irish seats. Table A8 then replicates the analysis for the alternative sample based on electoral overlap. This sample uses a similar 70% cut-off for the electorate-based IOU measure and has 468 constituencies. Reassuringly, the results are very similar. We validate the research design by plotting in Figure A12 the SDID event-study estimates for the performance index in this sample.

We also consider possible confounding factors that may be affecting our results. As mentioned above, our baseline regressions include 2009 incumbent-party x Parliamentary term fixed effects, which account for changes in the party in power and its possible impact on MP performance. Table A9 verify that our findings remain unchanged if we omit this set of controls. Relatedly, MP

performance may be affected by the specific role of the MP (e.g., Speaker) or by their seniority. In this regard, Table 1 shows that frontbenchers and MPs with more years in office were more likely to be implicated in the scandal, while party leadership had a lower probability of involvement. Tables A10-A13 verify that our results are robust to excluding from the sample constituencies corresponding to the Speaker, party leaders or deputy leaders, front-bench MPs, and MPs with more than 20 years in office.[27] As mentioned above, London constituencies were excluded from the Additional Cost Allowance for second homes and their MPs were mechanically less likely to be implicated. Table A14 shows that the results are likewise robust to their exclusion. Finally, Figures A13 and A14 report robust findings dropping each nation other than England: Wales, Scotland, and Northern Ireland. This exercise addresses concerns about possible changes in MP performance after 2010 specific to these nations (e.g., growing Scottish nationalism before the 2015 independence referendum).

6 Mechanisms I: Political Turnover

In this section, we explore the role of political turnover and selection as a potential mechanism connecting transparency with the increase in MP performance documented in the previous section. Our results so far already suggest that selection might be more important than an alternative sanctioning effect on sitting incumbents, insofar as our estimate for 2009 (pre-election year) shows no detectable immediate response. We provide three pieces of evidence that lend further support to selection as the main mechanism. First, we show that implicated MPs in affected constituencies were significantly less likely to retain their seats in 2010, mostly because they stood down and did not run. Second, we replicate our main analysis at the monthly level and show that the increase in MP performance sharply coincides with the start of the new parliament in 2010. Third, we show that the improvements in performance largely vanish if we include MP fixed effects in our regression and only leverage within-MP variation. We also find that the gains in performance are concentrated in seats that experienced turnover in 2010. While these patterns do not rule out some behavioral response among surviving incumbents, they collectively suggest that compositional change through replacement and selection is a key part of the mechanism. Finally, we benchmark the scandal-induced replacement of incumbents against ordinary electoral turnover and find it to be much more consequential for performance than a routine change of representative.

[27] For these tests, we drop constituencies whose 2009 incumbent held the respective role at any point between April 2004 and March 2009.

6.1 Exit, not defeat

Our main political outcomes of interest are respective indicators for whether the 2009 incumbent MP runs for re-election and whether they win. The unit of observation remains constituency–year, but the sample is restricted to election years. We study similar outcomes for the sitting incumbent rather than the fixed individual holding the seat in 2009.[28] When studying if an incumbent wins, we do not condition on running to preserve the balanced panel required for SDID and to facilitate comparison across outcomes. We also study the vote share of the 2009 incumbent's party and an indicator for whether that party wins the seat. We do not analyze whether the 2009 incumbent party fields a candidate, as this essentially always happens.

Figure 4 reports SDID event-study estimates from Equation (3) for these outcomes. Panel (a) shows a sharp decline in the probability that the 2009 incumbent MP runs for re-election in affected constituencies in 2010. Panel (b) shows a corresponding decline in the probability that the 2009 incumbent MP wins, with the magnitude of the decline in running being at least as large as the decline in winning. Given that running is a prerequisite for winning and that we measure winning without conditioning on running, this means that the entire decline in incumbent success is accounted for by implicated MPs not standing. Accountability operates here through anticipatory retirement and party deselection rather than electoral defeat. Survey evidence from the 2010 British Election Study is consistent with the local awareness this channel requires.[29] These results for the 2010 election largely echo previous findings by Larcinese & Sircar (2017), but our seven-election panel reveals that this is a durable, one-time replacement rather than a transitory shock, as the point estimates remain negative and stable for the elections in 2015, 2017, and 2019. This persistence indicates that the 2010 replacement of implicated MPs was not merely a shift in the timing of retirement — with comparable incumbents in control seats departing shortly afterward and closing the gap — but a permanent compositional swap that holds across several election cycles.

Panels (c) and (d) replicate the analysis for the sitting incumbent. We see a sharp decline in the likelihood of running or winning in 2010, which aligns with our findings for the 2009 incumbent as these estimates correspond to the same individual MP. But in contrast to our previous findings, in this case the effect attenuates and loses statistical significance over time. This indicates that the accountability triggered by the scandal corresponds to a single swap concentrated in 2010, and the incoming MPs in the affected constituencies were not unusually vulnerable. This pattern coincides

[28] Outcomes for the sitting incumbent are unavailable for the first election in 1997, which leads to a reduction in sample size. Establishing whether the sitting incumbent ran or won in 1997 would require accounting for redistricting between this election and the previous one in 1992.

[29] Table A15 shows that respondents in affected constituencies were more likely to report that their own MP had claimed money improperly, even as general awareness of the scandal was near-universal everywhere. Unfortunately, questions that directly reference the expenses scandal appear only in the 2010 BES wave, which prevents us from tracking scandal-specific attitudes in later years. See Vivyan et al. (2014) for further analysis of voter perceptions.

with the peak of public attention around the one-time information shock provided by the scandal.[30]

Figure 4 also highlights an important distinction between incumbent-level and party-level accountability. While the scandal is associated with substantial penalties for the implicated incumbent MPs, we find little evidence of a persistent party-level penalty. The estimates for the party-level outcomes in panels (e) and (f) are largely flat and statistically insignificant. Hence, affected constituencies kept their partisan representation and only swapped the tainted MP. These null effects at the party level also corroborate our interpretation of the heterogeneous effects by incumbent party presented in the previous section as not reflecting party turnover.

Table 4 reports the corresponding SDID regression estimates. Panel A confirms a large decline in incumbent political survival in affected constituencies. Column (1) implies that the probability the 2009 incumbent runs falls by about 12 percentage points (pp), which corresponds to roughly 19% of the sample mean and is statistically significant at the 1% level. Column (2) shows that the probability the 2009 incumbent wins falls by 10 pp. This drop is also statistically significant at the 5% level and represents a 17% reduction relative to the sample mean. Panel B shows that these effects remain comparable through the last election in our sample. The results for the sitting incumbent (Columns 3-4) confirm the visual evidence from the event study plots. In 2010, the probability of running drops by 17 pp (20% of sample mean) and the probability of winning drops by 15 pp (19% of the mean) for affected MPs.[31] For later elections, the impact attenuates substantially and there is little evidence of a lasting impact. In the case of the 2009 incumbent party, the results in columns 5 and 6 indicate a null impact on the vote share or the probability of winning.

In sum, we find that (i) implicated incumbents are much less likely to remain in office after 2010; (ii) political turnover is driven by anticipatory stand-down and party deselection rather than defeat at the polls; (iii) the penalty operates at the candidate level and does not affect the incumbent party; (iv) the effect on turnover of implicated incumbent MPs is durable, not just a slight shift in the time of retirement; (v) re-election rates for incoming MPs return to their pre-scandal level.[32]

6.2 Is there a link between turnover and performance?

Having shown that the expenses scandal led to the removal of sitting MPs in affected constituencies, we now examine whether scandal-induced political turnover explains its effect on MP perfor-

[30]Figure A15 shows that UK online search intensity for "MP expenses" spiked with the 2009 revelations, stayed elevated through the 2010 election, then receded and did not recur.

[31]The 2010 estimates in columns 1-4 track the same MPs and the raw 2010 declines are nearly identical. They differ because the 2009-incumbent indicators are mechanically near one in 2005 for everyone (bar a few by-election entrants), leaving no pre-gap for the SDID estimator to remove, whereas affected seats re-elect the sitting incumbent at somewhat higher rates pre-scandal and differencing out that gap enlarges the post-2009 decline.

[32]Table A16 and Figure A16 provide results for additional political outcomes, such as voter turnout, the number of candidates (parties), and the winning margin. The estimates are small and insignificant, indicating no evidence of change in other margins like candidate entry or the competitiveness of the race.

mance. To start, we leverage the granularity of our performance measures to replicate the analysis at the finer level of the constituency-month. This allows us to more precisely situate the onset of the gains in our main outcomes. We focus on the 48-month period between January 2008 and December 2011. This includes 16 months before the start of the scandal in May 2009 (which we set as the starting month for the treatment), the entire period leading up to the general election in May 2010, and the first 19 months of the new Parliament. The adjusted regression equations are essentially identical to our baseline specifications, except that we substitute month fixed effects for the year fixed effects and the 2009 incumbent party $\times$ term fixed effects simplify to a single post-June 2010 dummy for each party.

Figure 5 shows the monthly SDID event study for the performance index.[33] The SDID estimator provides excellent fit until April 2009 and there is no evidence of pretrends. There is also little evidence of an immediate change in performance between May 2009 and June 2010, further indicating that implicated incumbents did not respond immediately. In contrast, we see a sharp improvement in performance right after the general election in May 2010 that persists until the end of our sample window in December 2011. Table A17 provides the monthly-level estimates of τ in Equation (1) for the performance index and its subcomponents. We find no evidence of change in any performance outcome before the election. After June 2010, the monthly performance index increases by 0.11 points in affected constituencies, significant at the 5% level. We observe an increase of 4.6 pp in the probability of submitting an EDM and a 3.9 pp increase in participation in divisions, both significant at the 10% level. Table A18 and Figure A18 show similar results using TWFE. Thus, the improvement that our annual analysis attributes to the post-2010 period can be dated more precisely to the parliamentary reset following the 2010 election. While this timing does not fully distinguish between within-incumbent behavioral change and compositional change through turnover, it is consistent with the scandal operating primarily through the latter.

As our next piece of evidence on the role of turnover, we replicate our main analysis of MP performance using an augmented specification that includes MP fixed effects. These fixed effects absorb time-invariant differences across MPs and identify treatment effects solely from within-MP changes over time. MPs who we do not observe both before and after the start of the scandal in 2009 are effectively excluded from the estimation of the treatment effect. Our SDID estimator cannot easily accommodate these additional set of fixed effects, so we rely on TWFE for this part of the analysis. Table A19 reports full results for all performance outcomes, but Figure 6 summarizes our findings for the performance index. These estimates on the left correspond to our full sample period while those on the right zoom in on the immediate post-election period. In line with

[33] We recalculate the inverse-variance-weighted index to account for the right moments at the monthly level. Missing estimates correspond to Parliament's summer recess and the election month, when there is no legislative activity. Figure A17 shows equivalent results for the subcomponents of the index.

our previous robustness tests, we find that the SDID and TWFE estimators yield almost identical results. More importantly, the inclusion of MP fixed effects in the TWFE regression (triangular markers) causes the coefficient to collapse to zero for the full sample and to attenuate substantially (53% reduction) and become statistically insignificant for the 2010-14 period. Importantly, the length of the confidence intervals remains largely unchanged, so the loss in statistical significance is not driven by a drop in precision. Overall, the evidence suggests that the performance improvements documented in Section 5 are driven primarily by variation across MPs rather than detectable within-incumbent adjustment, which plausibly reflects the turnover documented above.

As final evidence on the turnover mechanism, we return to the heterogeneous short-run effects in Figure 3. Panel (b) replicates the heterogeneity analysis based on incumbent party and political competition using as dependent variable the indicator for the 2009 incumbent MP winning the election. The post-treatment period includes only the 2010 election in this case. We find that incumbent re-election in affected constituencies drops by 20 pp in Conservative seats (significant at 5% level) and only by an insignificant 3 pp in those held by Labour (p=0.545). We also find that implicated MPs in seats deemed as competitive experienced a 20 pp reduction in the probability of winning (also significant at 5% level), while those in safe seats see this probability drop by an insignificant 5.7 pp. The TWFE estimates in Figure A4 indicate statistically significant differences across sub-groups for both cuts, with respective p-values of 0.005 for party and 0.023 for competition. More importantly, this pattern mirrors the heterogeneity observed for the performance index in panel (a), where Conservative and competitive seats see larger gains. This suggests that the same margin through which political turnover operates is also driving the effect on performance.

Panel (a) includes results from one additional test examining heterogeneity in performance based on MP turnover in 2010. While these results should be interpreted with caution, as we are conditioning on what we already know to be an endogenous outcome, the results are in line with the hypothesized turnover mechanism: Affected constituencies that experienced turnover see gains during the 2010 Parliament of 0.24 points in the performance index (significant at 1% level), while those without turnover see performance improve by only 0.05 points (not significant). The difference between both subgroups under TWFE is significant at the 5% level (p-value: 0.013).

6.3 Are the scandal-induced replacements different?

The previous results suggest that the 2009 expenses scandal led to an improvement in legislator performance mostly through the replacement of implicated MPs. The natural question is whether the increase in performance thus corresponds to what is regularly observed when a new MP arrives to Parliament. We answer this question by estimating the average correlation between political turnover and MP performance in the next Parliament using OLS. We then use this estimate to

benchmark the one we obtain using our DID scandal regressor (Affected$_c$ $\times$ Year$\geq$ 2009) as an excluded instrumental variable (IV). The interpretation of our IV estimate as a Local Average Treatment Effect (LATE) hinges on four conditions, most notably an exclusion restriction stating that the scandal only affects performance through electoral turnover.[34] While theoretically there are many reasons to think that this condition is not satisfied, particularly a sanctioning effect on retained MPs, the evidence presented immediately above (e.g., null effect with MP fixed effects) suggests that this is a reasonable assumption in our specific setting. Moreover, we think of these results as purely suggestive rather than conclusive.

Columns 1-4 in Table 5 provide several estimates of the correlation between MP turnover and performance for alternative subsamples. The turnover indicator is equal to one for all years in which the new MP is in office until the next election. In Column 1, we consider our full sample period but exclude the period 2010-14 to avoid contamination from the main wave of scandal-induced turnover. In Column 2, we further restrict the sample to years before the 2010 election. We drop the later years in the sample both to avoid downstream spillover effects of the scandal and because these years include particularly short Parliamentary terms. Column 3 additionally excludes the year of the scandal (2009). Column 4 corresponds to the sample we use for the IV analysis, which also drops 2009 but extends the analysis window until 2014 to include the 2010 Parliament. The OLS correlation in this sample indicates that having a new MP is associated with an increase of 0.25 points in performance. This estimate is robust across subsamples, but slightly smaller in the full sample (Column 1), which shows an increase of 0.18 points.

Column 5 presents our IV estimate.[35] We find that scandal-induced turnover leads to a 0.83-point increase in legislator performance. This estimate is several times larger than the OLS correlation and suggests that the gains in performance brought about by scandal-induced turnover substantially exceed those from regular churn. However, the Kleibergen-Paap (KP) F-statistic of 7.88 reported at the bottom of the table falls below commonly-used heuristic thresholds to assess weak instruments. This is not surprising given that our binary instrument only captures the extensive margin of MP misconduct. To improve the information content of the excluded instrument, Column 6 provides an alternative IV estimate using the continuous amount of net Legg repayment to construct the instrument, which leads to a reassuringly larger KP F-statistic of 37.4. While the resulting IV estimate attenuates substantially to 0.46 points, it remains 84% larger than the corresponding OLS estimate and suggests a much stronger impact for scandal-induced turnover.[36]

[34]Our proposed instrument also plausibly satisfies *relevance* per the previous results on the effect of the scandal on MP turnover, as well as *exogeneity* (conditional on the fixed effects in our DiD design), and *monotonicity* (i.e., implicated MPs are always less likely to retain their seat). Under these assumptions, IV captures the LATE for those *complier* constituencies that experience turnover because of the scandal (Imbens & Angrist 1994, Angrist et al. 1996).

[35]The IV coefficient with a binary instrument, as in this case, corresponds to the Wald estimate that rescales the reduced-form effect of the scandal on performance by the first-stage impact of the scandal on MP turnover.

[36]Using a triple-difference specification instead, Table A20 shows that MP performance improves by 0.19 points

Do differences in observable characteristics help explain this larger impact of the new MPs brought to Parliament by the scandal? Table 6 shows SDID estimates of τ in Equation (1) for several different MP characteristics (Figure A19 shows event study plots). We consider demographics (age, gender, race), education (college or postgraduate degree, Oxbridge education), and occupation: business, professional, politics/public affairs, and public sector. All outcomes are binary indicators for a given characteristic except for age, which we measure continuously.[37]

The results in column 1 show that affected constituencies experience a reduction of approximately 3 years in the age of their MP after the scandal. This is equivalent to 0.3 SD of the cross-MP age distribution and is significant at the 5% level. Younger MPs could explain some of the gains in performance if they have stronger career concerns, but ordinary turnover also brings in younger members while yielding much smaller performance gains. Some of the estimates for other characteristics are economically meaningful, but they are imprecise and we cannot distinguish them from zero. For example, column 2 suggests that the share of female MPs increased by 5.9 pp in affected constituencies, equivalent to a 27% increase relative to the sample mean. In contrast, the estimates for educational characteristics are all small and indicate negligible change. In terms of occupational background, the point estimates suggest a shift towards business backgrounds and away from political and public sector backgrounds.[38] In particular, column 10 shows that the share of MPs with a public sector background dropped by 3.4 pp, equivalent to a 24% decrease relative to the sample mean, though not statistically significant. Overall, the evidence suggests a limited role for the selection of new MPs who are observationally different from their predecessors and points to the heightened scrutiny and reputational incentives facing incoming MPs in affected seats.[39]

7 Mechanisms II: Media Coverage

The MP expenses scandal had intense media coverage throughout, starting with the stories published by *The Telegraph* in May 2009. Our baseline analysis, based on the Legg audit and its objective assessment of MP misconduct, does not explicitly consider the role of the media. In

in affected constituencies with turnover in 2010, while both control constituencies with turnover in 2010 and affected constituencies without turnover see negligible change. The triple-interaction coefficient is robust to controlling for the MP's number of years in office, which has a strong negative correlation with performance.

[37]Our data source is the Parliamentary Candidate UK (PCUK) dataset. The data only extends until 2015, so we drop later elections. We manually fill other missing values to ensure a balanced panel, but data is unavailable for some outcomes in 5 constituencies of Northern Ireland. The four occupational categories represent 78% of the total, with the residual largely consisting of trade union leaders, members of the voluntary sector, and journalists.

[38]News reports from the 2010 election emphasize this change for Parliament as a whole. E.g., Robert Booth, "Parliament's 2010 Intake Shows Swing Towards Private Sector," *The Guardian*, 10 May 2010.

[39]Unreported results show a 5.8-year drop in age and a 14pp increase in the share of women in Conservative-held seats in 2009 (both significant at 5% level). Labour-held seats show no such change. This could plausibly reflect the creation of a Conservative 'A-list' of priority candidates in 2006, aimed at diversifying and modernizing the party.

this section, we explore whether the media served as a propagation mechanism that facilitated public access to the newly available information on MP misconduct and contributed to the political turnover and gains in legislator performance documented above. First, we characterize the available sources on scandal-related news coverage and their information content relative to the Legg report. We then simultaneously leverage variation in the Legg repayment amount and news coverage to examine the interaction between objective and reported misconduct.

7.1 Understanding media coverage

We consider two pre-existing measures of scandal-related news coverage by MP. Eggers (2014) reports the *share* of news stories mentioning the word "expenses" relative to the total number of stories mentioning a given MP in the Google news archive between May 2009 and May 2010. Larcinese & Sircar (2017) measure the *number* of news stories mentioning an MP and the word "expenses" between May and August 2009. Tables A21 and A22 provide cross-sectional correlations between these media-coverage variables and constituency and MP characteristics, similarly to Table 1 above. The only difference is that we consider our indicator for constituencies affected by the scandal (Legg repayment in the upper quartile) as an additional regressor.

Three results are noteworthy. First, there is a robust, positive correlation between our indicator of MP misconduct and both measures of news coverage. This indicates that media coverage tracked audited misconduct and validates these media variables as measures of information transmission. Second, female MPs have higher news coverage according to both measures, despite women not having higher objective misconduct in Table 1. This suggests possible media bias and validates our reliance on the Legg report for our main analysis. Third, the Larcinese-Sircar measure is systematically higher for more prominent MPs like party leaders or the Speaker, plausibly as a mechanical result of being a count, despite these members having *lower* objective misconduct in Table 1. This last point leads us to focus on the Eggers measure for our media analysis. This measure is only available for English constituencies, which reduces our sample to 390 constituencies.

We follow Eggers (2014) in defining a constituency as having high media coverage if it ranks in the top quartile of the continuous coverage variable, harmonizing our media-coverage measure with our main indicator for MP misconduct based on top-quartile Legg repayment (i.e., high Legg repayment). As a result, we can break down the sample into four cells: 241 constituencies have low media coverage and low Legg repayment (denoted as "Neither"), 58 constituencies have high media coverage and low Legg repayment ("Media-only"), 56 have high Legg repayment and low media coverage ("Legg-only"), and 35 have high repayment and high coverage ("Both").

To better understand the information content of the different cells, Table A23 shows the average Legg repayment and claimed amount for living expenses in 2008 by cell. As mentioned above, the

scandal centered around misuse of living expenses. MPs in the media-only cell claimed over £30,000 in living expenses, similarly to those in the cells with objective misconduct (Legg-only and Both), but their actual findings of misconduct in the Legg report were an order of magnitude smaller (£329 vs more than £3,900) and much closer to Neither (the 'clean' cell, which averaged £187). While having high expenses claims is not in itself an indication of wrongdoing, this pattern suggests that MPs in the media-only cell had systematically high claims, but fell outside the scope of the Legg review. In particular, the Legg inquiry could not demand repayment for actions that fell within the existing rules governing MP expenses, no matter how unsavory. Some of the behaviors that attracted most media attention amid the scandal, such as the practice of "flipping" the second-home designation to claim expenses across multiple properties, were technically allowed.

We explore this further by manually coding any documented abuse of the expenses system among the 58 MPs in the media-only cell. We find evidence of abuse for 50% of media-only MPs.[40] A notable example is Conservative front-bencher Eleanor Laing, who avoided £180,000 in capital gains tax but was asked for no repayment by Legg. Our qualitative analysis also reveals that some of the coverage was seemingly related to outlandish claims, as was the case with David Tredinnick, who charged £755 for astrological software. As we proceed to incorporate the media coverage measure into our analysis of MP performance, the implication is that this measure bundles transmission of the objective misconduct from the Legg report with transmission of other behaviors plausibly deemed undesirable by the public, as well as some degree of sensationalism.

7.2 Media coverage and legislator performance

Table 7 presents disaggregate SDID estimates of τ in Equation (1) for the Media-only, Legg-only, and Both cells, using the performance index as dependent variable. In each case, we restrict the sample to the relevant cell and Neither, which serves as the comparison group. Column 1 replicates the main analysis for the smaller sample of 390 constituencies with available media coverage data. If anything, the results are stronger. Affected constituencies see an improvement of 0.12 points in the index after 2009 (significant at 5% level), with the effect concentrated in the 2010-14 period, when the index increases by 0.19 points (significant at 1% level).

Columns 2-4 present the cell-level estimates, which display a clear gradient. The estimate of τ in panel A is 0.08 for Legg-only (not significant), 0.14 for Media-only (significant at 5% level), and 0.23 for Both (significant at 1% level). This suggests that media coverage played an important role. In the Legg-only cell, which had objective misconduct but low media coverage,

[40] We construct this variable using an LLM prompted classifier based on MP Wikipedia pages. We define documented abuse equal to one if the MP engaged in flipping, capital-gains-tax avoidance, 'phantom' mortgages, or overclaiming. Figure A20 shows that, within this cell, MPs with higher media coverage according to the continuous measure have higher claims for living expenses and are more likely to have documented abuse.

we find no gains in performance, while in the Both cell, which had high misconduct and high coverage, the effect is more than three times larger. The Media-only cell sits in the middle, but does display a positive and significant effect. As the previous subsection highlights, MPs in this cell systematically engaged in abuse of the expenses system, but benefited from the narrow scope of the Legg enquiry. The positive effect for this cell thus plausibly reflects increased transparency on other forms of undesirable behavior, such as flipping and capital-gains-tax avoidance.[41]

The estimates by subperiod in panel B display a similar gradient to the main effects in panel A. Importantly, we find a positive and significant effect for the Media-only and Both cells that extends until the end of the sample period in 2023. Hence, the weak long-term effects for the full sample appear to be more the result of the dilution of the gains in performance across cells rather than reflecting a substantive attenuation of the effect over time. Panels (a)-(c) in Figure 7 show the corresponding event study plots. We see no evidence of differential pre-trends and a clear gradient of the impact based on the combination of objective misconduct and media coverage, with Media-only and Both displaying a clearly persistent effect.

Panels (d)-(f) in Figure 7 show cell-level event-study plots for the indicator of the 2009 incumbent MP winning the election. The estimates provide the mirror image of our results for MP performance. The scandal had no impact on the removal of the 2009 incumbent in the Legg-only cell, moderate impact in the Media-only cell, and a very large effect under Both. Table A25 provides the corresponding estimates of Equation (1). The probability that the 2009 incumbent wins drops by 6 pp in Legg-only (not significant), 16 pp in Media-only (significant at 5% level), and 30 pp in Both (significant at 1% level). The estimates for whether the 2009 incumbent runs are at least as large within each cell, consistent with the anticipatory stand-down documented in Section 6.[42] This suggests that the turnover mechanism discussed in the previous section remains at play at the informational cell level. In this regard, Table A26 replicates the cell-level analysis on performance using TWFE and considers an augmented specification with MP fixed effects. The results are very similar across estimators. More importantly, the average effects vanish and the short-term impact attenuates substantively when we include the MP fixed effects.

Taken together, our evidence on mechanisms suggests that the transparency shock from the expenses scandal led to an improvement in MP performance through the replacement of implicated MPs with better-performing entrants, and that this process was facilitated by media coverage of

[41] One concern supported by Table A23 is that these cells based on binary indicators for affected constituencies and media coverage also differ in the amount of misconduct. I.e., Both not only has higher media coverage than Legg-only but also higher Legg repayment. To address this concern, Table A24 and Figure A21 replicate the analysis with TWFE using the continuous (normalized) measures of Legg repayment and media coverage, and their interaction. We obtain a similar gradient in the estimated effect to our baseline results, but find no evidence of superadditivity.

[42] Figure A22 shows cell-level event-study plots for the 2009 incumbent running, and whether the sitting incumbent runs or wins. The analysis for the 2009 incumbent winning using the continuous measures in Table A24 recovers an independent effect of Legg repayment on removal that the small, low-dose Legg-only cell understates.

the misconduct by individual MPs. As a final piece of evidence connecting media coverage and political turnover, we study the precise timing of stand-down decisions before the 2010 election. Figure 8 plots the cumulative share of retirement announcements among incumbents who did not run in 2010, disaggregated by informational cell. We find that retirements spike up after the initial Telegraph leak on May 8, 2009, but only for those cells with high media coverage: Media-only and Both. In contrast, retirement announcements among MPs in the Legg-only cell, who also engaged in misconduct but lacked coverage, follow a similar trend to the one for MPs not implicated in the scandal in the Neither cell. Roughly 75% of stand-down announcements in Media-only and Both came after the leak, against about 50% in Legg-only and Neither. This pattern suggests that media revelations activated the standing-down decisions of implicated MPs.

8 Results: MP expenses

We conclude our analysis by studying MPs' expense claims. The performance results in Section 5 suggest that revealing misconduct in one dimension - misuse of expense accounts - is associated with improved performance in distinct, broader, and more visible dimensions of legislative activity. Focusing on expenses allows us to study the behavioral margin most directly implicated by the scandal. It is also informative to examine expenses because they represent a set of inputs that may contribute to the production of legislative output. Comparing the evolution of these inputs to changes in performance helps assess whether post-scandal improvements reflect increased resources or changes in behavior holding resources fixed.

Figure 9 reports SDID event-study plots for total expenses and its two sub-components: living and operational expenses. The SDID reweighting again yields tight fit before the scandal. Beginning in 2009, panel (a) shows a decline in total expenses that persists through most of the post-scandal period, with some attenuation near the end of the sample. Panels (b) and (c) indicate that the drop in total expenses is driven by a sharp decline in living expenses—the category most closely associated with the scandal—while operational expenses, which reflect staffing and office costs and account for most of the total, remain largely unchanged. As with total expenses, the reduction in living expenses attenuates over time and loses statistical significance after 2021.

Columns 1, 4, and 7 in Table 8 report the corresponding SDID estimates from Equation 1. In Panel A, the point estimate for total expenses implies a reduction of roughly £1,800 per year, but is noisy and not statistically significant. In contrast, Column (4) shows a statistically significant reduction in living expenses of approximately £2,100, equivalent to a 9% decline relative to the sample mean. The estimate for operational expenses in column 7 indicates a small and imprecise increase of roughly £700, which is negligible in magnitude and not statistically significant.

The sub-period estimates in Panel B further clarify the timing dynamics. Living expenses fall

by approximately £3,600 in 2009, consistent with MPs curtailing the most controversial claims as the scandal unfolded. The decline remains sizable though smaller in 2010–2014 (about £2,400), indicating that the reduction persisted into the first post-scandal Parliament. After 2015, the average reduction in living expenses in affected constituencies amounts to roughly £1,700 and is no longer statistically significant.[43] These results show that the post-scandal period is characterized by a meaningful decline in the expense category most directly connected to the scandal, especially during the first post-scandal Parliament when the gains in MP performance are strongest. This suggests an improvement in the efficiency with which legislative output is produced, at least to the extent that measured outputs rise while a salient component of measured inputs falls. The estimates for operational expenses in column 7 remain small and insignificant throughout.

In contrast to our previous results on MP performance, the reduction in expenses is largest in 2009 when implicated MPs were still in office.[44] This suggests that the scandal did have a sanctioning effect on sitting MPs, but only in the dimension of behavior covered by the information shock. We turn again to an augmented TWFE specification with MP fixed effects to further disentangle the role of sanctioning and selection. Reassuringly, columns 2, 5, and 8 replicate the main analysis with TWFE and yield similar patterns to our SDID estimates. Columns 3, 6, and 9 then introduce the MP fixed effects. We still observe a substantive reduction in living expenses, which further suggests a sanctioning effect on sitting MPs. However, the results in column 9 – though noisy and statistically insignificant – show a growing trend in operating expenses. For the post-2015 period, living expenses fall by £4,200 on average within MP, but operating expenses increase by £4,400. This pattern in the within-MP analysis, which is absent when we consider all seats, is consistent with sitting incumbents reallocating toward operational spending over time.

We further probe this possibility in Table A27 by estimating heterogeneous effects based on MP turnover in 2010. As before, these results are only suggestive and must be interpreted with caution as we are conditioning on an endogenous outcome. Among the seats with turnover, we find a significant and persistent reduction in total and living expenses, with no change in operations expenses. Hence, the same affected seats that exhibit the gains in legislative performance also exhibit a meaningful response in legislator expenses. In the seats without turnover, we still observe a sharp reduction in living expenses in 2009. However, this response attenuates over time in the SDID split-sample analysis, in contrast with the TWFE estimates with MP fixed effects. More importantly, we still observe a growing trend in operational expenses, with absolute magnitudes at

[43]Figure A23 plots raw averages of the expenses outcomes for affected and control constituencies. Living expenses drop sharply and converge for both groups in the scandal's immediate aftermath. In the long run, living expenses in affected constituencies exceed those in the controls, though the level remains much lower than before the scandal.

[44]The 2009 reduction in expenses is also significant because it predates the reform of the expenses system and the creation of the Independent Parliamentary Standards Authority (IPSA). The IPSA reform should not confound our DID estimates to the extent that it affects all constituencies equally, without regard for previous MP misconduct.

least as high as for living expenses. Overall, the results for affected seats without turnover confirm the presence of a short-term sanctioning effect among sitting incumbents, but further suggest a strategic response in the long term, such that the net effect on total expenses is a clear null.

Data limitations prevent us from using our DID strategy to further probe the nature of any such strategic response by retained MPs in affected constituencies.[45] However, we can use granular information on members' staff for the late post-scandal period (2015-2023) to provide additional descriptive analysis. Figure A24 shows that the total number of staff and the respective shares that are full-time or permanent are almost identical in affected and control constituencies. We do find a small difference in the share of constituencies that employ a connected party, which mostly corresponds to family members and was also a source of controversy amid the scandal. This share equals 0.22 for affected constituencies and 0.20 for controls. When we further disaggregate based on turnover in 2010, we find that the gap is concentrated in constituencies that retained their MP (0.22 vs 0.26) and vanishes in constituencies with turnover (0.16 in both groups). While this analysis remains purely descriptive, and none of the differences are statistically significant, it constitutes further suggestive evidence of a strategic response by retained MPs in the long run.

9 Conclusion

This paper studies whether transparency about legislator misconduct improves subsequent performance, using the 2009 UK parliamentary expenses scandal as a large information shock. We document a meaningful improvement in affected constituencies for multiple measures of parliamentary activity and an aggregate index. Our mechanism evidence suggests that political selection plays an important role. Affected incumbents are less likely to retain their seat in the 2010 election and the gains in performance are concentrated in seats that change hands. These effects also only manifest in the new Parliament. We further show that the improvement in MP performance is concentrated and durable only in places where the media transmitted the misconduct. These findings constitute novel evidence on the fundamental pillars of the political agency framework: information to voters, electoral accountability, and politician performance.

Importantly, none of our performance measures were part of the scandal or were considered by the Legg audit that we use to measure misconduct. Our findings show that transparency on one dimension of politician behavior can lead to a broad improvement in performance along other dimensions not covered by the information shock. At the same time, we also observe a response in the claims for living expenses directly covered by the audit. While there is evidence of a short-term sanctioning effect on sitting incumbents along this margin, the larger and more durable effect is

[45] Data on MP expenses is provided by IPSA after 2010 and cannot be harmonized with data from previous years at a more granular level than what we study here.

concentrated in the same seats that show the broader improvement in performance, namely those that experience turnover. This suggests a positive correlation of MP behavior along the audited and non-audited margins. The newcomers in affected seats also display larger gains in performance than those observed for regular turnover, plausibly because the information shock facilitated the removal of particularly ineffective legislators due to this correlation.

The expenses scandal was a momentous event in British politics. Originating in the Freedom of Information Act and the subsequent public demand for information on MP expenses, the scandal was described as "the biggest parliamentary scandal for two centuries" by then Prime Minister Gordon Brown. A commonly-held view is that things did not change much despite the intense media coverage and widespread public outrage. Our findings challenge this view and show a meaningful and durable response in the selection of MPs and their performance in office. Ultimately, we find that efforts for increased transparency can have a lasting impact on politics and governance.

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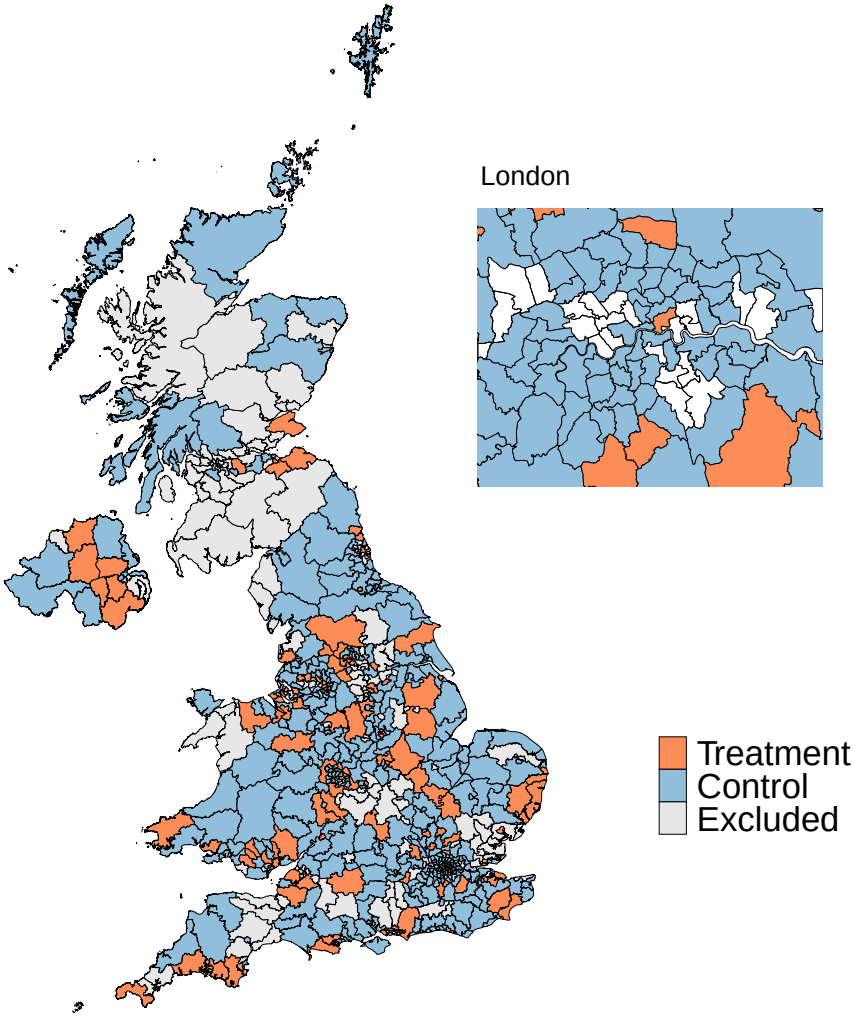
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Figure 1: Geographic Distribution of Affected Constituencies

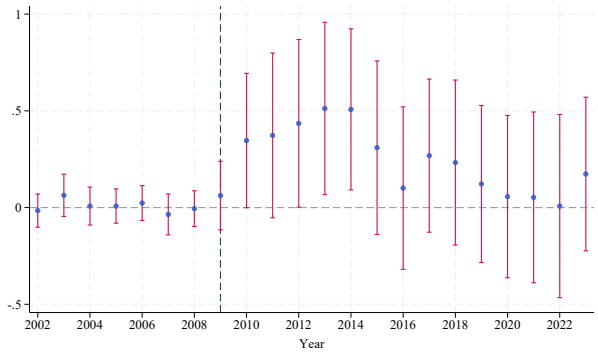


Notes: Map shows the geographic distribution of the constituencies with MP misconduct. We shade in orange those constituencies where the repayment ordered by the Legg report ranked above the 75th percentile. Those in blue correspond to MPs ranking below the 75th percentile in the Legg report. Constituencies in gray are excluded from the sample because the spatial overlap after redistricting falls below 70%.

Figure 2: MP Performance: Event study plots



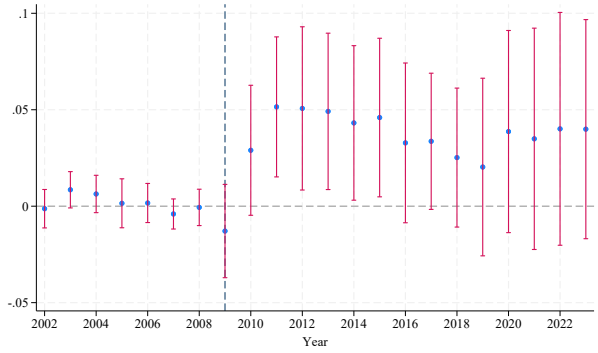
(a) Log Spoken Times



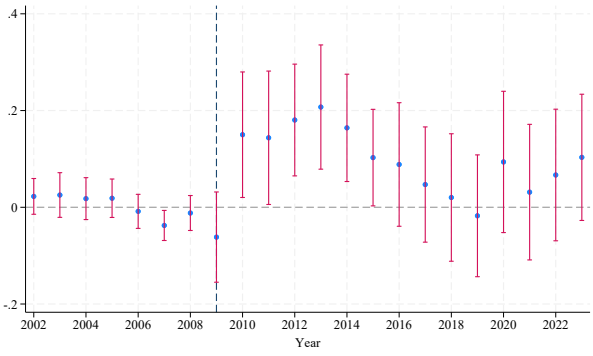
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



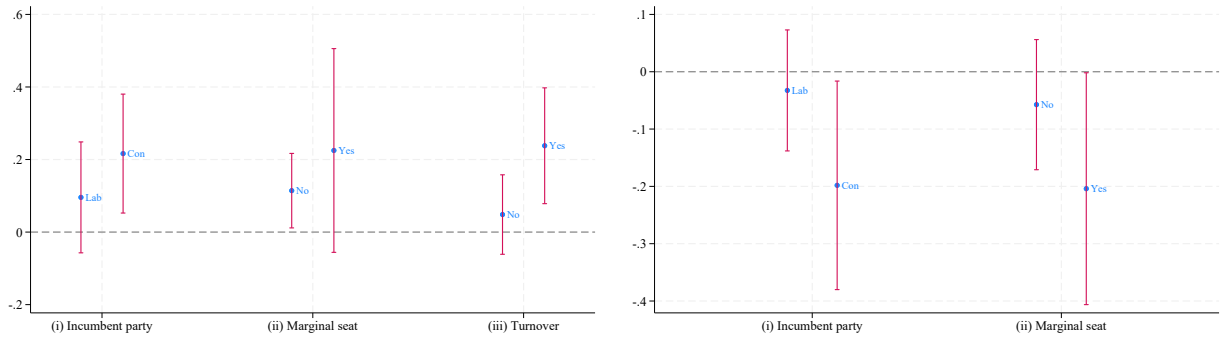
(d) Votes in Divisions (share)



(e) MP Performance index

Notes: Each panel shows point estimates and 95% confidence intervals from an SDID regression of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misconduct interacted with year dummies. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. Regressions include constituency, year and 2009 incumbent party x Parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

Figure 3: MP Performance and Political Turnover: Heterogeneous Effects

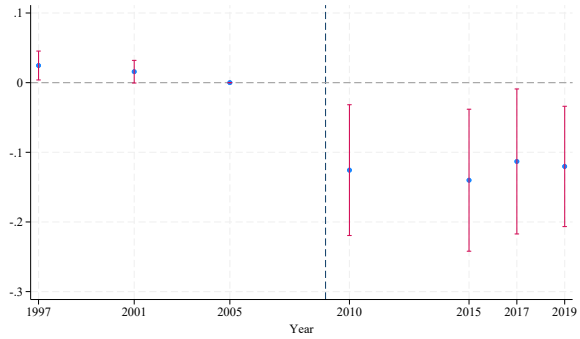


(a) Performance Index

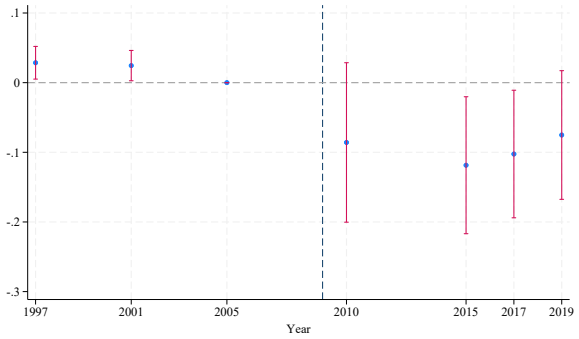
(b) 2009 Incumbent Wins (=1)

Notes: The figure shows heterogeneous SDID estimates of the effect of exposure to the 2009 MPs' expenses scandal. The dependent variable is the MP performance index in panel (a) and an indicator equal to one if the 2009 incumbent MP wins the constituency in panel (b). Panel (a) covers 2002–2014 (excluding 2009), with the effect estimated for 2010–2014; panel (b) covers the 1997, 2001, 2005, and 2010 elections, with the effect estimated for 2010. Each pair of estimates splits the sample by the characteristic on the horizontal axis. "Incumbent party" is the party of the 2009 incumbent. "Marginal seat" equals one if the same party did not win all of the 1997, 2001, and 2005 general elections, or won all three with an average margin below 10 percentage points. "Turnover" equals one if the MP changed at the 2010 general election; this split is defined at the MP level and shown only for performance. A constituency is affected if its 2009 incumbent was asked to repay an amount above the 75th percentile in the Legg report. All estimates include constituency and year effects; the marginal-seat and turnover splits additionally control for 2009 incumbent party $\times$ parliamentary-term effects, which are collinear in the party split and hence omitted. Points are coefficient estimates and vertical bars are 95% confidence intervals. Standard errors are bootstrapped with 50 repetitions.

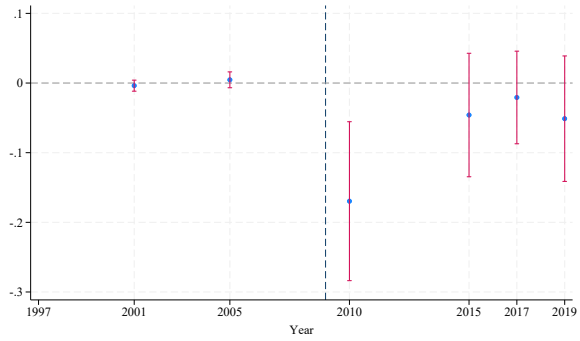
Figure 4: Political Turnover: Event study plots



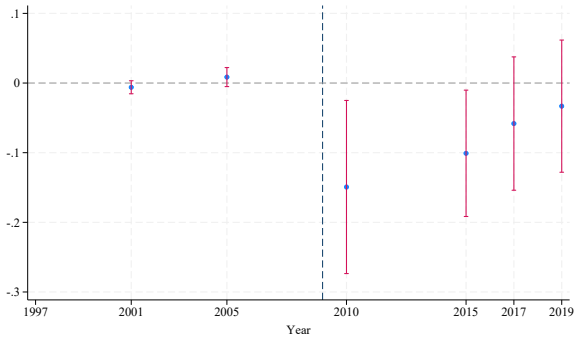
(a) 2009 incumbent MP runs



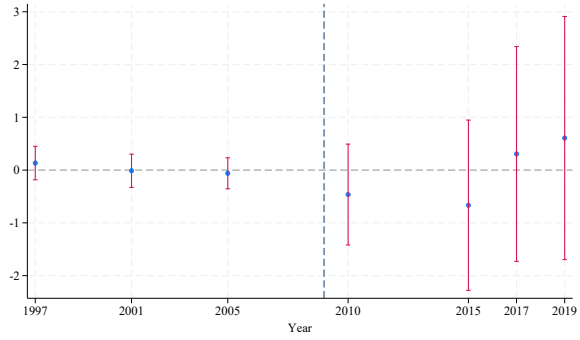
(b) 2009 incumbent MP wins



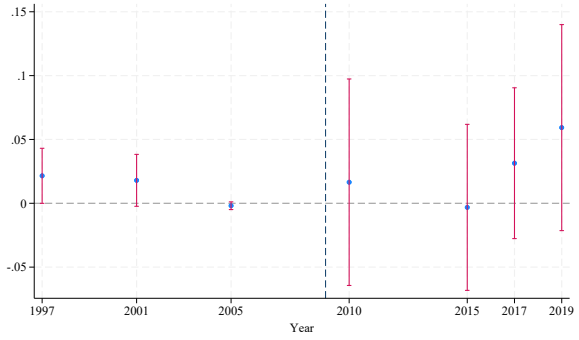
(c) Sitting incumbent MP runs



(d) Sitting incumbent MP wins



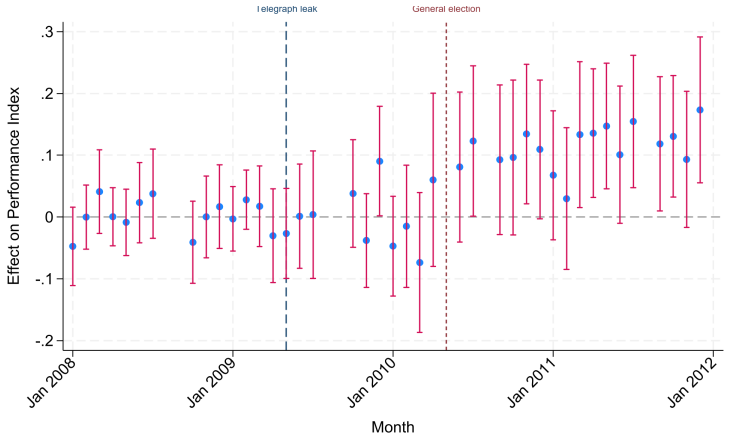
(e) 2009 incumbent party vote share (%)



(f) 2009 incumbent party wins

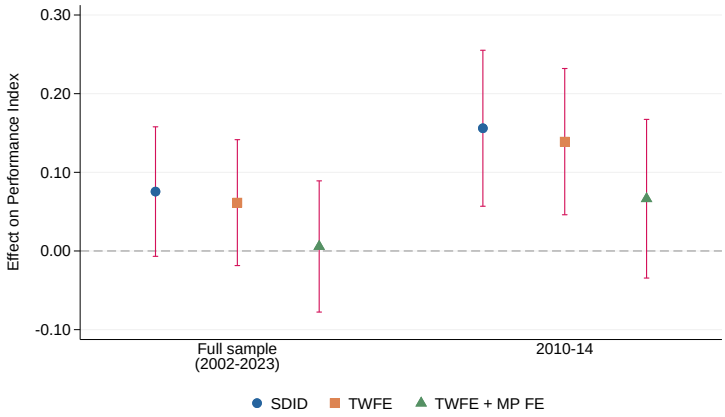
Notes: Each panel shows point estimates and 95% confidence intervals from an SDID regression of the outcome in the caption on our cross-sectional measure of constituencies affected by MP misconduct, interacted with year dummies. A constituency is affected if the 2009 incumbent MP was asked to repay an amount above the 75th percentile in the Legg report. The unit of observation is a constituency in an election year. In panels (a) and (b) the dependent variable is an indicator equal to one if the 2009 incumbent MP runs, and wins the seat, respectively (panel (b) does not condition on running). In panels (c) and (d) the dependent variable is an indicator equal to one if the sitting incumbent at each election runs, and wins, respectively (winning again does not condition on running). In panel (e) the dependent variable is the percentage of votes obtained by the 2009 incumbent party, and in panel (f) it is an indicator equal to one if that party wins the seat. Regressions include constituency, year, and 2009 incumbent party $\times$ parliamentary-term fixed effects. Standard errors are obtained through bootstrapping with 50 repetitions.

Figure 5: MP Performance: Monthly-level Event Study plot (SDID)



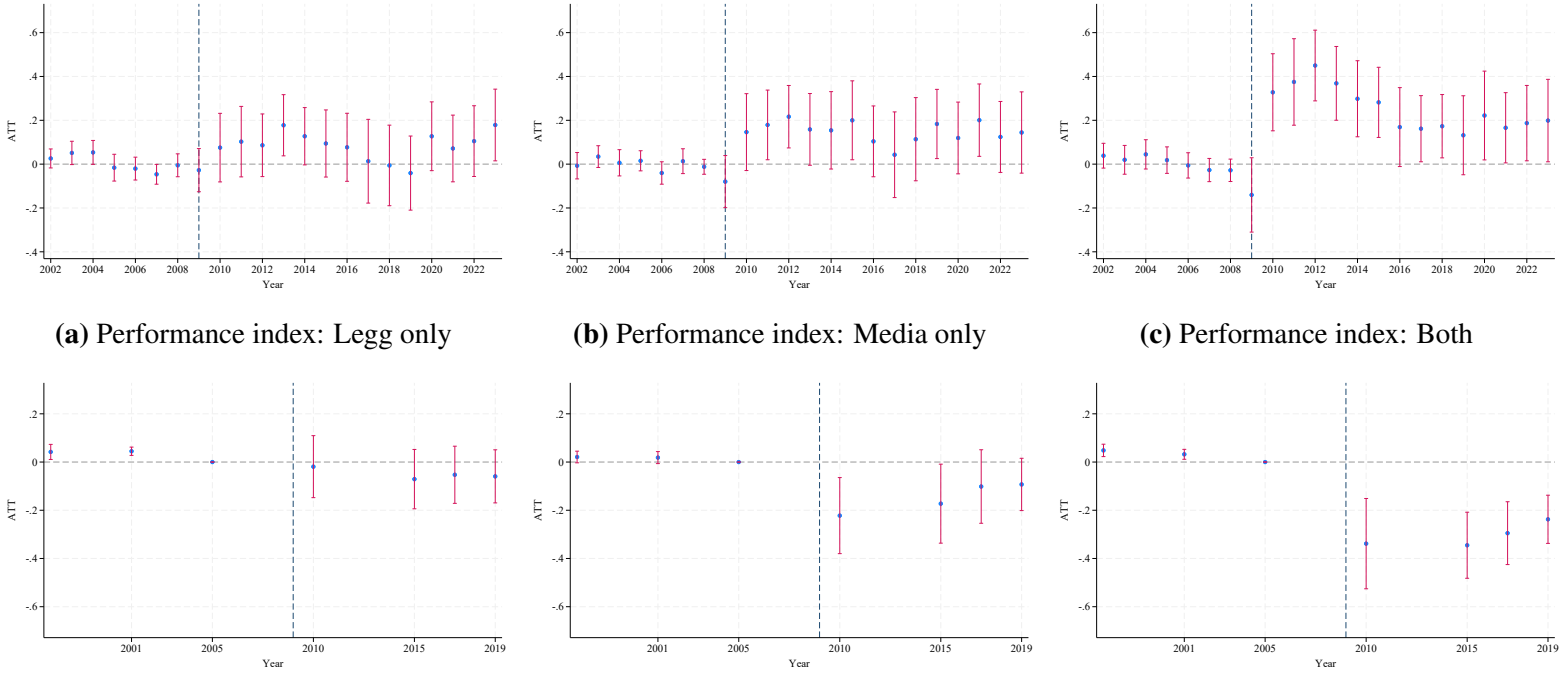
Notes: The figure shows point estimates and 95% confidence intervals from an SDID regression of the MP performance index on our cross-sectional measure of MP misconduct interacted with month dummies. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. The unit of observation is a constituency–month, covering January 2008 through December 2011. Months in which Parliament is not sitting are omitted. The navy dashed line marks the *Telegraph* leak (May 2009) and the maroon dashed line the 2010 general election. Regressions include constituency and month fixed effects, and 2009 incumbent party × post-2010 fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

Figure 6: MP performance with and without MP fixed effects



Notes: Figure plots the estimated effect of exposure to the 2009 expenses scandal on the performance index, for the full sample (2002–2023) and the 2010–2014 sub-period. For each sample we report three estimators: synthetic difference-in-differences (SDID), two-way fixed effects (TWFE), and TWFE augmented with MP fixed effects. Markers denote point estimates and bars denote 95% confidence intervals. Standard errors are obtained by bootstrap with 50 repetitions (SDID) and clustered at the constituency level (TWFE). The underlying estimates correspond to Table 3 (SDID) and Tables A3 and A19 (TWFE, Appendix).

Figure 7: MP Performance and Incumbent Turnover across Information Cells

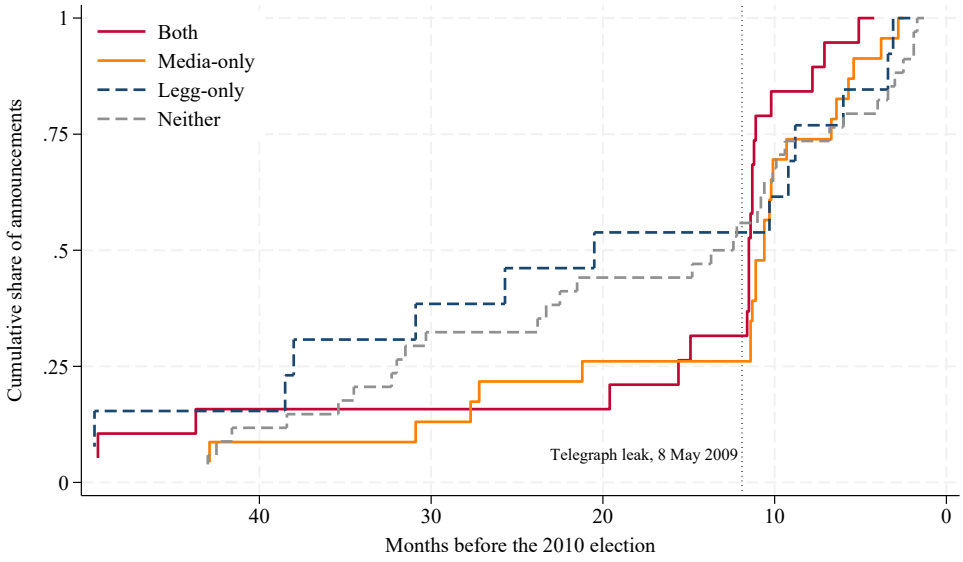


(a) Performance index: Legg only **(b)** Performance index: Media only **(c)** Performance index: Both

(d) Incumbent 2009 Wins: Legg only **(e)** Incumbent 2009 Wins: Media only **(f)** Incumbent 2009 Wins: Both

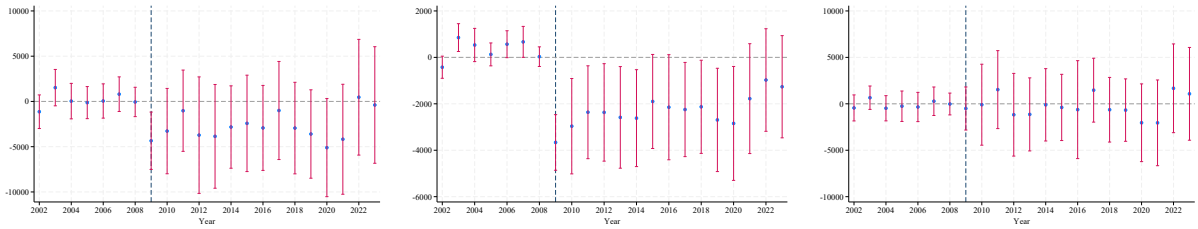
Notes: Each panel reports synthetic difference-in-differences (SDID) event-study estimates for one information cell, relative to the baseline of constituencies that were neither audited above the threshold nor covered in the press. Panels (a)–(c) use the constituency-level MP performance index; panels (d)–(f) use an indicator equal to one if the 2009 incumbent MP wins the constituency. Within each outcome, the panels plot the Legg-only, Media-only, and Both cells in turn. A constituency is *affected* if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report, and *covered* if it falls above the 75th percentile of the Eggers press-implication score. This partition yields four cells—neither (241), Legg only (56), Media only (58), and Both (35). The vertical line marks the 2009 disclosure, when treatment starts. Points show coefficient estimates and vertical bars show 95% confidence intervals, with standard errors obtained through bootstrapping with 50 repetitions.

Figure 8: Timing of Stand-Down Announcements by Information Cell



Notes: The figure plots, for each information cell, the cumulative share of the cell's stand-down announcements—a 2009 incumbent MP's decision not to contest the 2010 general election—against the number of months before the election. A constituency is affected if its 2009 incumbent MP was asked to repay an amount above the 75th percentile in the Legg report, and covered if it ranks above the 75th percentile of the Eggers press-implication score. "Both" is affected and covered, "Media-only" covered and not affected, "Legg-only" affected and not covered, and "Neither" is neither affected nor covered. The vertical dotted line marks the publication of the leaked expenses by *The Daily Telegraph* on 8 May 2009.

Figure 9: Event study plots: MP Expense Claims



(a) Total **(b)** Living **(c)** Operating

Notes: Each panel shows point estimates and 95% confidence intervals from an SDID regression of the outcome indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior interacted with year dummies. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. The unit of observation is a constituency-year and the sample period is 2002–2023. The dependent variable in panel (a) is total expenses. In panels (b) and (c), we provide disaggregate estimates for living expenses and operating expenses (office, staff). Regressions include constituency, year, and 2009 incumbent party x parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

Table 1: Predictors of MP Misconduct

	Dependent variable: Affected (=1)				
	(1)	(2)	(3)	(4)	(5)
Northern Ireland (=1)	0.0766	-0.00978	-0.00857	-0.0341	-0.0983
	[0.152]	[0.399]	[0.365]	[0.366]	[0.370]
Scotland (=1)	-0.0619	-0.0215	0.0158	0.0189	0.00465
	[0.136]	[0.142]	[0.143]	[0.147]	[0.147]
Wales (=1)	0.0690	0.0711	0.0840	0.0772	0.0795
	[0.0866]	[0.0890]	[0.0916]	[0.0924]	[0.0930]
Inner London (=1)	-0.158*	-0.140*	-0.152**	-0.184**	-0.202**
	[0.0813]	[0.0756]	[0.0752]	[0.0803]	[0.0854]
Outer London (=1)	-0.170***	-0.143**	-0.136**	-0.138**	-0.155**
	[0.0632]	[0.0652]	[0.0648]	[0.0657]	[0.0658]
Distance to Westminster (Km/100)	0.0172	0.0277	0.0205	0.0229	0.0242
	[0.0217]	[0.0238]	[0.0237]	[0.0242]	[0.0243]
County constituency (=1)	0.0134	0.0109	0.0218	0.00913	0.00964
	[0.0448]	[0.0500]	[0.0496]	[0.0496]	[0.0491]
DUP (=1)		0.201	0.250	0.394	0.414
		[0.436]	[0.412]	[0.395]	[0.401]
Labour (=1)		-0.0112	0.00529	-0.00763	-0.0522
		[0.0540]	[0.0548]	[0.0558]	[0.0592]
Liberal Democrat (=1)		-0.148**	-0.0957	-0.0900	-0.103
		[0.0684]	[0.0681]	[0.0721]	[0.0700]
Sinn Féin (=1)		-0.174	-0.106	0.0856	0.0992
		[0.432]	[0.401]	[0.405]	[0.405]
SNP (=1)		-0.399***	-0.344***	-0.244*	-0.234*
		[0.117]	[0.123]	[0.133]	[0.131]
Other party (=1)		-0.0252	0.0352	0.0644	0.0367
		[0.279]	[0.271]	[0.275]	[0.281]
Years in office			0.00825***	0.00941***	0.00744**
			[0.00275]	[0.00274]	[0.00354]
Marginal seat (=1)			-0.00771	-0.0108	-0.0101
			[0.0485]	[0.0481]	[0.0479]
Speaker (=1)				-0.0348	-0.0352
				[0.296]	[0.292]
Party leadership (=1)				-0.404***	-0.406***
				[0.125]	[0.131]
Cabinet (=1)				-0.0220	0.0198
				[0.0907]	[0.0936]
Shadow Cabinet (=1)				0.0315	0.0525
				[0.0652]	[0.0669]
Front Bench (=1)				0.136*	0.154**
				[0.0737]	[0.0749]
Age					0.00397
					[0.00282]
Female (=1)					0.0541
					[0.0526]
White (=1)					-0.174
					[0.145]
Oxbridge (=1)					-0.0456
					[0.0465]
Constant	0.219***	0.220***	0.0995	0.0809	0.0950
	[0.0548]	[0.0625]	[0.0729]	[0.0728]	[0.197]
Observations	485	485	485	485	485
R-squared	0.031	0.049	0.073	0.093	0.103

Notes: Table shows results from a cross-sectional regression of our binary indicator for misuse of MP expenses on constituency and MP characteristics. Column 1 shows results for basic geographic characteristics. The omitted nation is England. Column 2 adds dummies for the party affiliation of the incumbent in 2009. The omitted party is Conservative. Column 3 adds additional political characteristics, including the incumbent's number of years in parliament and an indicator for marginal seats, defined as not the same party winning in 1997, 2001, and 2005 or same party winning with average win margin below 10 percentage points. Column 4 adds measures for prominent positions in parliament, aggregated over the period covered by the Legg report (2004-2009). We code cabinet and shadow cabinet as mutually exclusive with front bench. Column 5 adds demographic characteristics of the incumbent MP. Robust standard errors shown in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table 2: Summary statistics

Variable	Mean	S.D.	Min	Median	Max	N
Panel A. Legislative performance						
Spoken contributions	89.9	143.0	0.0	56.0	3909.0	10,670
Questions asked	69.8	121.6	0.0	31.0	2182.0	10,670
Filed any Early Day Motion (=1)	0.386	0.487	0.000	0.000	1.000	10,670
Division participation (share)	0.721	0.181	0.000	0.752	1.432	10,670
Performance index (ICW)	0.003	0.557	-2.545	0.049	1.312	10,670
Panel B. Expense claims (2015 GBP)						
Total expenses	163,185	29,173	0	163,506	281,928	10,670
Living & travel expenses	23,424	14,062	0	24,558	85,044	10,670
Office & staff expenses	139,762	28,474	0	139,551	258,378	10,670
Panel C. Turnover and electoral outcomes						
2009 incumbent runs (=1)	0.636	0.481	0.000	1.000	1.000	3,395
2009 incumbent wins (=1)	0.584	0.493	0.000	1.000	1.000	3,395
Sitting incumbent runs (=1)	0.859	0.348	0.000	1.000	1.000	2,910
Sitting incumbent wins (=1)	0.773	0.419	0.000	1.000	1.000	2,910
2009 incumbent party wins (=1)	0.808	0.394	0.000	1.000	1.000	3,395
2009 incumbent party vote share (%)	47.8	12.3	0.0	48.4	84.5	3,395

Notes: Panels A and B are measured at the constituency–year level for the period 2002–2023. Panel C is measured at the constituency-election level for the period 1997–2019. The sitting-incumbent measures are defined from 2001 onward, as they require the preceding election to identify the incumbent. Spoken contributions and questions are counts (logged in estimation). Expenses are in constant 2015 GBP.

Table 3: MP Performance: SDID Estimates

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0898	0.171	0.0560	0.0335***	0.0755*
	[0.0945]	[0.159]	[0.0389]	[0.0127]	[0.0420]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.0941	0.0681	-0.0327	-0.00998	-0.0529
	[0.0920]	[0.0942]	[0.0365]	[0.0107]	[0.0454]
Affected x {2010 ≤ Year ≤ 2014}	0.0248	0.331*	0.0956**	0.0462***	0.156***
	[0.106]	[0.182]	[0.0381]	[0.0150]	[0.0506]
Affected x {2015 ≤ Year ≤ 2023}	-0.147	0.102	0.0438	0.0311**	0.0475
	[0.121]	[0.181]	[0.0482]	[0.0145]	[0.0514]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,670	10,670	10,670	10,670	10,670
Constituencies	485	485	485	485	485
DV mean	89.94	69.78	0.39	0.72	0.00

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party x Parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table 4: Political Turnover: SDID Estimates

	2009 Incumbent MP		Current Incumbent		2009 Incumbent Party	
	Runs (=1)	Wins (=1)	Runs (=1)	Wins (=1)	Vote %	Wins (=1)
	(1)	(2)	(3)	(4)	(5)	(6)
PANEL A: Main estimates						
Affected x {Year ≥ 2009}	-0.123***	-0.0969**	-0.0714***	-0.0853***	0.00953	0.0243
	[0.0389]	[0.0386]	[0.0264]	[0.0315]	[0.749]	[0.0321]
PANEL B: Heterogeneous effects over time						
Affected x {Year = 2010}	-0.121***	-0.0836**	-0.170***	-0.150***	-0.396	0.0162
	[0.0467]	[0.0412]	[0.0505]	[0.0494]	[0.721]	[0.0354]
Affected x {2015 ≤ Year ≤ 2019}	-0.122***	-0.0989**	-0.0388	-0.0640*	0.144	0.0269
	[0.0417]	[0.0414]	[0.0271]	[0.0335]	[0.829]	[0.0353]
Constituency FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,395	3,395	2,910	2,910	3,395	3,395
Constituencies	485	485	485	485	485	485
DV mean	0.64	0.58	0.86	0.77	47.84	0.81

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is the constituency-election year. The dependent variable is indicated in the column header. Columns 1–2 concern the *2009 incumbent MP*: an indicator equal to one if the 2009 incumbent runs in the constituency that year (column 1) and an indicator equal to one if the 2009 incumbent wins the seat (column 2). Columns 3–4 concern the *current incumbent*: an indicator equal to one if the sitting incumbent runs (column 3) and an indicator equal to one if the sitting incumbent is re-elected (column 4). Columns 5–6 concern the *2009 incumbent's party*: the percentage of votes obtained by the party of the 2009 incumbent (column 5) and an indicator equal to one if that party wins the seat (column 6). Panel A reports the average effect over the full post-scandal period; Panel B decomposes it into the effect at the 2010 general election (estimated on years up to 2010) and over 2015–2019 (estimated excluding 2010). Columns 3 and 4 exclude 1997, when the current-incumbent variables are undefined; reported observations and outcome means correspond to Panel A. Regressions include constituency, year, and 2009 incumbent party × parliamentary-term fixed effects. Standard errors, in brackets, are obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table 5: Effect of MP Turnover on Performance: OLS and IV Estimates

	Dependent variable: Peformance index					
	OLS				IV	
	(1)	(2)	(3)	(4)	(5)	(6)
MP turnover	0.176***	0.275***	0.271***	0.251***	0.826***	0.461***
	[0.0209]	[0.0391]	[0.0400]	[0.0249]	[0.309]	[0.107]
Constituency FE	Yes	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,245	3,880	3,395	5,820	5,820	5,820
Constituencies	485	485	485	485	485	485
Start year	2002	2002	2002	2002	2002	2002
End year	2023	2009	2008	2014	2014	2014
Other years dropped	2010-2014	-	-	2009	2009	2009
Excluded instrument	-	-	-	-	Discrete	Continuous
KP F-stat	-	-	-	-	7.875	37.40

Notes: Table shows OLS and IV estimates of the effect of MP turnover on the performance index. The dependent variable in all columns is the performance index. The regressor of interest, *MP turnover*, is a dummy equal to one in the parliamentary term when a new MP takes office. Columns 1–4 report OLS estimates; columns 5–6 report IV estimates, instrumenting for turnover with, respectively, an indicator for constituencies above the 75th percentile of scandal exposure (column 5) and the net amount repaid by the sitting MP as part of the expenses scandal (column 6). Column 1 uses the full sample excluding the 2010–2014 parliament; column 2 restricts to 2002–2009; column 3 restricts to 2002–2008; column 4 restricts the OLS sample to match the estimation window used in the IV columns (2002–2008 and 2010–2014, excluding 2009). Columns 5 and 6 use this same window. The unit of observation is the constituency-year. Regressions include constituency, year, and 2009 incumbent party × parliamentary-term fixed effects. Standard errors, shown in brackets, are clustered by constituency. For the IV columns, the Kleibergen-Paap F-statistic is reported at the bottom. * p<0.1, ** p<0.05, *** p<0.01.

Table 6: MP Characteristics: SDID Estimates

	Demographics			Education			Occupational background			
	Age	Female	White	University	Oxbridge	Postgrad	Business	Professional	Political	Public sector
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Affected x {Year ≥ 2009}	-2.958**	0.0586	-0.00725	0.0103	0.0348	0.00807	0.0380	0.00698	-0.0386	-0.0342
	[1.357]	[0.0411]	[0.0276]	[0.0373]	[0.0348]	[0.0483]	[0.0496]	[0.0345]	[0.0451]	[0.0349]
Constituency FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,940	1,940	1,940	1,940	1,940	1,880	1,880	1,880	1,880	1,880
Constituencies	485	485	485	485	485	470	470	470	470	470
DV mean	50.75	0.220	0.960	0.830	0.260	0.310	0.250	0.140	0.250	0.140

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is the constituency-election year, restricted to elections 2001, 2005, 2010, and 2015 due to data availability. The dependent variable is indicated in the column header: age in years (column 1); an indicator equal to one if the MP is female (column 2), white (column 3), university-educated (column 4), educated at Oxford or Cambridge (column 5), or holds a postgraduate degree (column 6); and indicators for the MP's pre-parliamentary occupational background — business (column 7), a legal/medical/engineering profession (column 8), politics/public-affairs (column 9), or the public sector (column 10). Regressions include constituency, year, and 2009 incumbent party × parliamentary-term fixed effects. Standard errors, in brackets, are obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table 7: MP Performance by Information Cell: SDID Estimates

	Legg (all England)	By exposure cell (vs. neither)		
		Legg-only	Media-only	Both
	(1)	(2)	(3)	(4)
PANEL A: Average effect				
Affected × {Year ≥ 2009}	0.115**	0.078	0.143**	0.232***
	[0.049]	[0.048]	[0.070]	[0.062]
PANEL B: Effect by period				
Affected × {Year = 2009}	-0.042	-0.024	-0.079	-0.128**
	[0.054]	[0.054]	[0.051]	[0.061]
Affected × {2010 ≤ Year ≤ 2014}	0.186***	0.113*	0.184***	0.376***
	[0.053]	[0.061]	[0.071]	[0.083]
Affected × {2015 ≤ Year ≤ 2023}	0.091	0.067	0.146*	0.195***
	[0.057]	[0.064]	[0.083]	[0.066]
Constituency FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Party 2009 × Term FE	Yes	Yes	Yes	Yes
Observations	8,580	6,534	6,578	6,072
Constituencies	390	297	299	276

Notes: Table shows SDID estimates of τ in Equation (1). The dependent variable in all columns is the MP performance index. The unit of observation is the constituency-year. Column 1 uses all English constituencies; columns 2–4 each restrict the sample to one exposure cell together with the constituencies that were neither audited above the threshold nor covered in the press. A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report, and covered if it ranks above the 75th percentile of the Eggers press-implication score. "Legg-only" denotes affected and not covered, "Media-only" covered and not affected, and "Both" affected and covered. Panel A reports the average effect over the period from 2009 onward; Panel B reports separate effects for 2009, for 2010–2014, and for 2015–2023. All regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors, obtained through bootstrapping with 50 repetitions, are reported in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table 8: MP Expenses

	Total			Living			Operations		
	SDID	TWFE	TWFE + MP FE	SDID	TWFE	TWFE + MP FE	SDID	TWFE	TWFE + MP FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
PANEL A: Main estimates									
Affected x {Year ≥ 2009}	-1,786	-2,726	-976.7	-2,095**	-2,634***	-3,937***	700.5	-92.52	2,960
	[2,659]	[1,956]	[2,260]	[950.8]	[939.1]	[993.7]	[2,030]	[1,490]	[1,827]
PANEL B: Effects by sub-period									
Affected x {Year = 2009}	-4,215***	-4,026**	-3,530*	-3,589***	-4,246***	-4,385***	-385.5	219.7	855.3
	[1,381]	[1,733]	[1,798]	[674.8]	[808.4]	[838.3]	[1,074]	[1,450]	[1,511]
Affected x {2010 ≤ Year ≤ 2014}	-1,985	-2,900	-406.3	-2,412**	-2,916***	-3,552***	698.7	15.70	3,146
	[2,763]	[2,170]	[2,665]	[981.9]	[941.3]	[1,176]	[2,127]	[1,729]	[2,173]
Affected x {2015 ≤ Year ≤ 2023}	-1,260	-2,478	221.9	-1,739	-2,289**	-4,173***	915.9	-189.0	4,395
	[3,115]	[2,367]	[3,494]	[1,141]	[1,123]	[1,392]	[2,466]	[1,859]	[2,902]
Constituency FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MP FE	No	No	Yes	No	No	Yes	No	No	Yes
Observations	10,670	10,670	10,667	10,670	10,670	10,667	10,670	10,670	10,667
Constituencies	485	485	485	485	485	485	485	485	485
DV mean	163,186	163,186	163,186	23,424	23,424	23,424	139,762	139,762	139,762

Notes: The table reports estimates of the effect of exposure to the 2009 MPs' expenses scandal on subsequent MP expense claims, in constant 2015 GBP. Columns 1–3 use total expenses, columns 4–6 living expenses, and columns 7–9 operational expenses; within each outcome the three columns report synthetic difference-in-differences (SDID), two-way fixed effects (TWFE), and TWFE augmented with MP fixed effects. Panel A reports the average effect over the full post-scandal period. Panel B disaggregates it by sub-period. The SDID sub-period estimates are obtained on restricted windows — 2002–2009 for the 2009 effect, 2002–2014 excluding 2009 for 2010–2014, and 2002–2008 together with 2015–2023 for 2015–2023 — each with the corresponding 2009 incumbent party × term covariates; the TWFE sub-period estimates are the individual period coefficients from a single regression that interacts the treatment with the three sub-periods on the full 2002–2023 sample. All specifications include constituency, year, and 2009 incumbent party × term fixed effects; the MP fixed effects columns additionally absorb MP identity and identify the effect from within-MP variation, dropping three singleton observations (10,667 versus 10,670). A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report. Standard errors, in brackets, are obtained through bootstrapping with 50 repetitions for SDID and clustered at the constituency level for TWFE. * p<0.1, ** p<0.05, *** p<0.01.

Appendix (for online publication)

Does Transparency Improve Politician Performance?
Evidence from the UK Parliamentary Expenses Scandal

Authors: Philipp Denter, Luis R. Martínez, Nicolas Motz, Carlos Sanz

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Appendix B Additional Tables and Figures **Online Appendix p.6**

A Data Appendix

This appendix describes where our data come from, how we combine them into the constituency panel used throughout the paper, and how we define the main variables. Table 2 reports summary statistics for our main outcomes and Table A1 reports summary statistics for constituency and incumbent characteristics.

Data sources

Our panel combines several administrative sources at the constituency level. Records of parliamentary activity, including debate transcripts, questions to ministers, participation in divisions, and Early Day Motions, come from *TheyWorkForYou*, which digitizes and structures the official Hansard record of the House of Commons, supplemented with material from the Library of the House of Commons for Early Day Motions. MP expense claims come from three sources that together span our sample period. *TheyWorkForYou* provides itemized claims for 2001 through 2008. The House of Commons published claims directly for the transition period from 2009 until mid 2010, when the newly created Independent Parliamentary Standards Authority (IPSA) took over administration of expenses. IPSA has published the data since.

Our measure of audited misconduct comes from the report of the review led by Sir Thomas Legg, which lists the repayment recommended for each MP following the audit of second home and accommodation claims for the five financial years preceding the scandal. We complement this with the amounts three MPs facing criminal prosecution, David Chaytor, Jim Devine, and Elliot Morley, were separately ordered to repay, since their cases were excluded from the Legg review while they proceeded through the courts.

Election results, candidate names, and vote shares come from Fouirnaies (2021), which also provides the size of the electorate, turnout, the number of candidates standing, and constituency area and county classification. We add candidate level demographic information, including age, gender, ethnicity, and education, from the Parliamentary Candidates UK database, which covers the general elections between 2001 and 2015. Our measure of press attention comes from Eggers (2014), who scored how prominently each 2009 incumbent was reported as implicated in the expenses scandal. Constituency boundaries and shapefiles come from the UK Data Service. We deflate all monetary values to constant 2015 pounds using the Office for National Statistics consumer price index.

Constituency harmonization

We harmonize constituencies across episodes of redistricting through a four step process. First, because each further wave of redistricting complicates the analysis, we restrict our sample to the years 1997 to 2023, so that we take the 1997 constituencies as given and need only adjust for redistricting in 2005 in Scotland and 2010 elsewhere. Second, for each pre-2005 constituency we calculate its geographic overlap with every constituency after the 2005/2010 boundary review, using the shapefiles described above. Overlap is measured as the intersection over union (IOU) of the two areas. Third, we match each pre-existing constituency to the post-redistricting constituency with which it overlaps most. Fourth, we treat the pair as a single harmonized constituency only if the shared area makes up at least 70% of the total area of either constituency. There were

659 seats in the House of Commons in 1997. This fell to 646 in 2005 and rose again to 650 in 2010, so at most 646 constituencies could have remained largely unchanged over our sample period. Applying the 70% overlap threshold leaves 485 constituencies, which is the panel we use throughout the paper. Constituencies that do not meet this criterion are excluded, and we verify in our robustness checks that our results hold under alternative thresholds ranging from 60% to 90%. Figure A1 plots the distribution of IOU values across the full universe of constituencies together with these three thresholds. As a robustness check we also construct an electorate based version of this measure, replacing shared area with shared voters. For each pre-redistricting constituency we use the published dispersal of its electorate into post redistricting constituencies, from Rallings & Thrasher (2007) for the 2010 review in England and Wales and Denver et al. (2004) for the 2005 review in Scotland, and compute the same intersection over union quantity in electors rather than area. The two measures agree on which successor constituency to match in 98% of cases and correlate at 0.79, with 12% of constituencies changing inclusion status at the 70% threshold. No equivalent source exists for Northern Ireland, so this measure covers Great Britain only.

Building the panel

We start from candidate-level election records and order them chronologically within each constituency by the identity of the winning candidate. This lets us follow a constituency's representation through both general elections and by-elections and construct two distinct notions of incumbency that we use throughout the paper. The first is fixed to the specific person who held the seat at the start of 2009, before the scandal broke, and does not change regardless of what happens afterward. The second tracks whoever currently holds the seat and updates whenever the seat changes hands, whether at a general election or a by-election. We use the fixed measure to ask what became of the individuals implicated by the scandal, and the updating measure to ask whether a constituency continues to see normal rates of incumbent re-election in later cycles.

We merge the Legg repayment data onto this record by matching MPs on name and constituency. Our preferred treatment measure is a binary indicator equal to one for constituencies whose 2009 incumbent, the person in office when the scandal broke and to whom the Legg review's findings therefore attached, falls in the upper quartile of required repayments net of successful appeals, which we complement with the three manually coded criminal cases described above. We also keep the continuous repayment amount and the pre-appeal variants used in the robustness checks reported in the paper.

We build the performance and expenses panel at the constituency financial year level, where a financial year runs from April 1 to March 31 of the following calendar year. When more than one MP represents a constituency within a given financial year, whether because of a general election or a by-election, we sum activity and expense measures across them, so that each constituency year reflects the combined record of whoever sat for that seat over the year. Coverage of divisions begins in 2001 but is thin that year, and written questions are not available before 2002, so we restrict the performance and expenses sample to financial years 2002 through 2023. Applying the constituency harmonization described above to this window yields a balanced panel of 485 constituencies observed over 22 years, or 10,670 constituency-year observations, as reported in Table 2.

Our election outcomes are built separately, at the constituency election level, from the same underlying candidate records. This sample covers the seven general elections held between 1997

and 2019. Measures tied to the fixed 2009 incumbent are defined at all seven elections, giving 3,395 observations, while measures tied to whoever currently holds the seat require a preceding election as a reference point and so are defined starting in 2001, giving 2,910 observations. We merge in candidate demographics from the Parliamentary Candidates UK database and the press implication score from Eggers (2014) by matching on candidate name, party, and constituency.

Variable definitions

Misconduct and treatment. Our main treatment variable, which we refer to as Affected in the paper, is an indicator equal to one if the constituency's 2009 incumbent falls in the upper quartile of Legg repayments net of successful appeals, again complemented by the three manually coded criminal cases. Table A1 also reports two related variables: an indicator for whether the 2009 incumbent was asked to repay any amount at all, a considerably larger group than the upper quartile measure, and the underlying continuous repayment amount, which we use in place of the binary indicator in some robustness checks.

Legislative performance. We measure four margins of parliamentary activity. Spoken contributions count an MP's interventions in debate. Questions asked sum written and oral questions to ministers. Both are highly skewed, so we study them in logs in our regressions while Table 2 reports the raw counts. Division participation is the share of recorded votes in which the MP took part. Filing any Early Day Motion is an indicator equal to one if the MP submitted at least one such motion during the year, since most MPs never do. We combine these four measures into a single performance index using the inverse covariance weighting procedure of Anderson (2008), which downweights component measures according to how much they overlap with the others and guards against multiple hypothesis testing across our four margins.

Expense claims. We express all claims in constant 2015 pounds. Total expenses is the sum of every category an MP could claim. We split this into living expenses, which covers accommodation and travel costs such as second homes, hotels, and trains and is the category most directly implicated by the scandal, and office and staff expenses, which covers office rent and staffing costs and was not the object of the Legg review.

Political turnover and electoral outcomes. At the level of the individual member, we track whether the MP who held the seat in 2009 stands again at each subsequent general election and whether they are returned to Parliament, unconditional on standing. We construct the analogous running and winning indicators for whoever is the sitting incumbent going into each election, which capture whether a constituency continues to see normal incumbent re-election in later cycles rather than the fate of the specific 2009 member. At the party level we measure the vote share of the party that held the seat in 2009 and an indicator for whether that party retains the seat, regardless of which individual represents it.

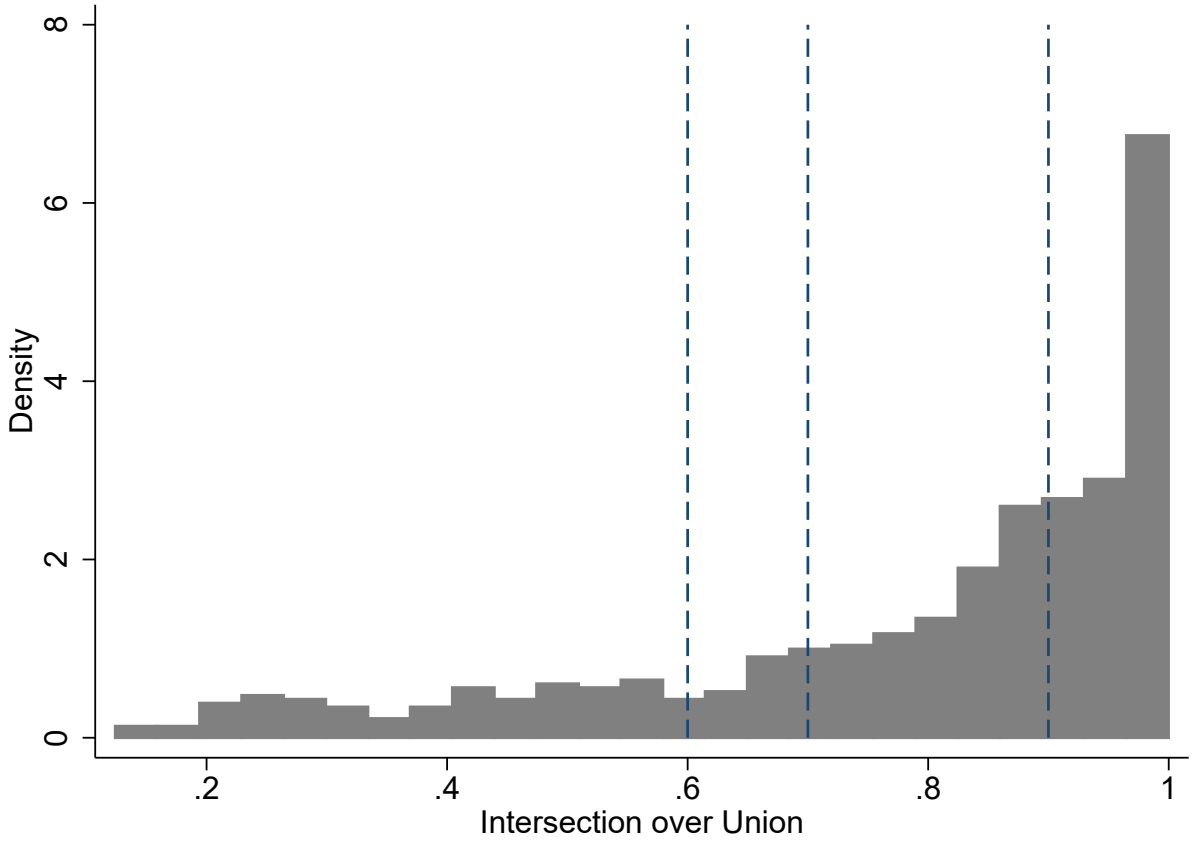
Media implication. Our index of press attention follows Eggers (2014) and captures how prominently each 2009 incumbent was reported as implicated in the expenses scandal, independent of the formal Legg findings. The score for an MP is the share of Google News stories mentioning

the MP and their constituency between the start of the scandal and the 2010 election that also mention the word expenses, with a small stabilizing constant in the denominator so that an MP with very few stories is not marked as heavily implicated on the strength of one or two mentions. We adopt Eggers's own cutoff of 0.25 to convert this continuous score into a binary indicator of media implication, which happens to fall close to the top quartile within our own sample as well. Crossing this indicator with our Legg based Affected indicator gives four groups of constituencies: those implicated by neither source, those flagged only by Legg, those flagged only by the press, and those flagged by both. We use this decomposition in Section 7 to separate constituencies where misconduct was documented but not widely reported from those where it was, and so to ask whether performance tracked the underlying conduct itself or its transmission through the media. Because Eggers's measure and this decomposition are only available for English constituencies, the mechanism analysis in Section 7 that relies on them is run on that subsample.

Constituency and incumbent characteristics. Table A1 summarizes the predetermined characteristics we use as balance checks and in our heterogeneity analysis. Constituency characteristics include nation, whether the seat lies in inner or outer London, distance to Westminster, and whether the constituency is classified as a county (rural) seat. Incumbent characteristics as of 2009 include party, tenure in Parliament, whether the seat is competitive, and whether the MP held a frontbench, cabinet, shadow cabinet, party leadership, or Speaker role, along with age, gender, ethnicity, and whether the MP attended Oxford or Cambridge. We classify a seat as competitive (marginal) if the same party did nto win all of the 1997, 2001, and 2005 elections, or if it did but had an average winning vote margin below 10 percentage points.

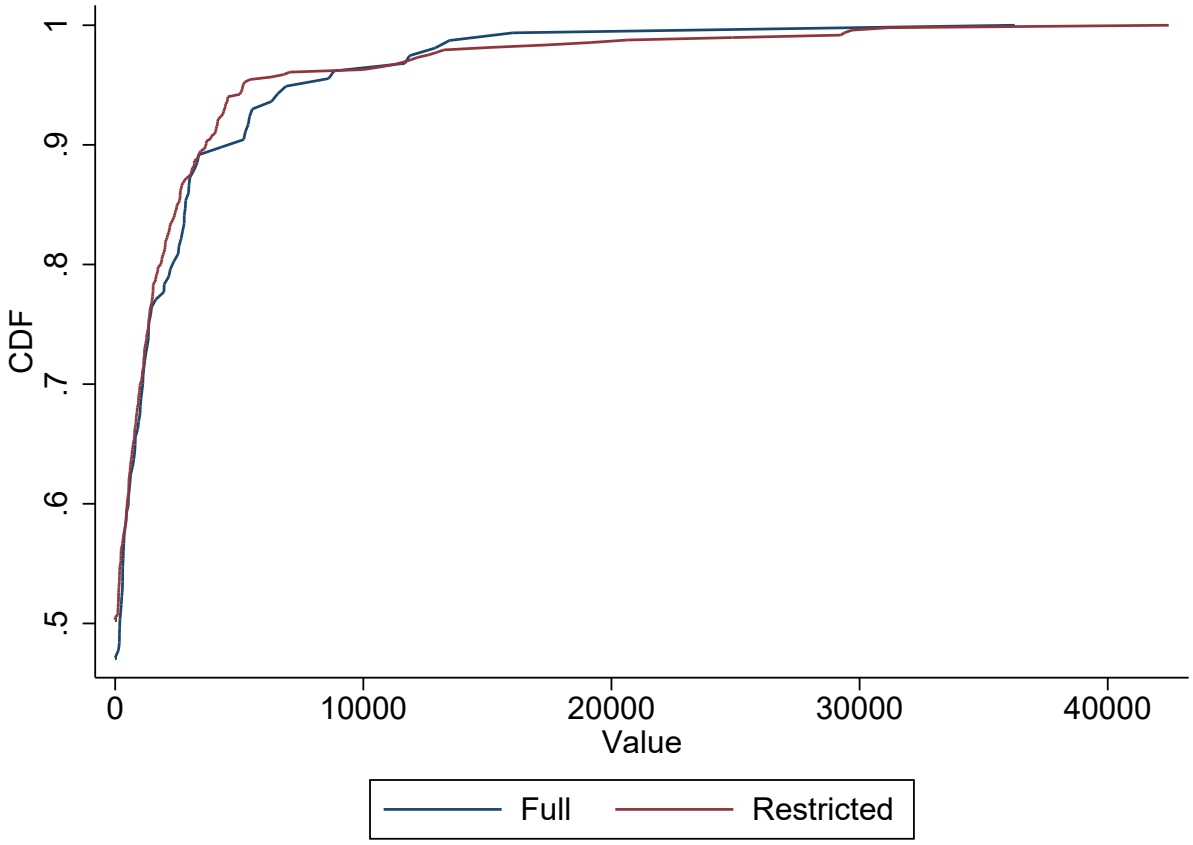
B Additional Tables and Figures

Figure A1: Histogram of Intersection-over-Union Values



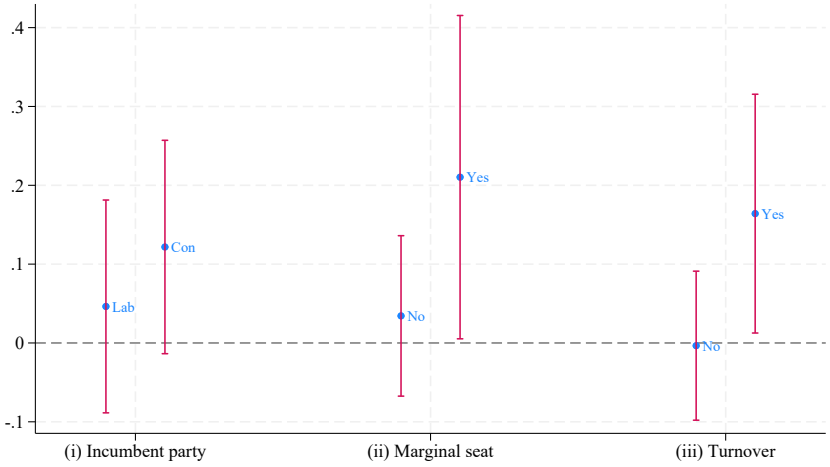
Notes: The plot shows a histogram of the highest degree of overlap with any constituency after boundary changes across all constituencies prior to boundary changes, where overlap is defined as intersection-over-union of a pair of constituencies. Vertical lines indicate thresholds used for including constituencies: 70% in the main analysis, and 60% and 90% as the lowest and highest values used for robustness checks.

Figure A2: CDFs of Repay Amounts Across All Constituencies and for the Restricted Sample

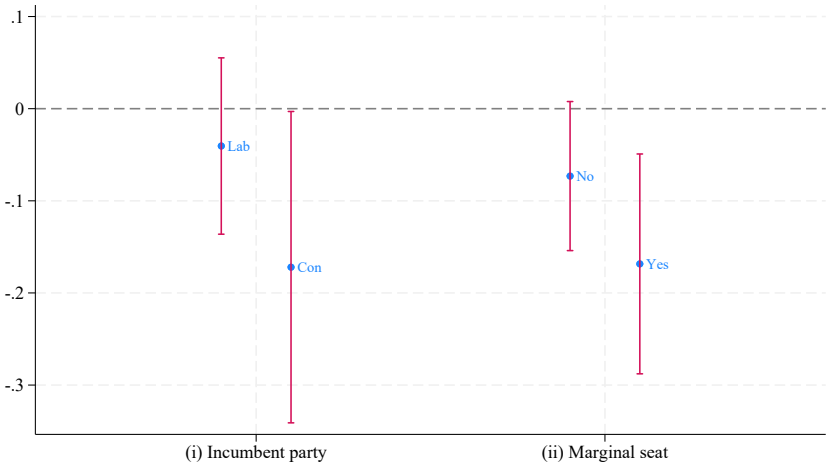


Notes: The plot shows CDFs of the amount MPs were asked to repay across all constituencies and for the sample restricted due to boundary changes.

Figure A3: MP Performance and Political Turnover: Heterogeneous Effects (SDID, full sample)



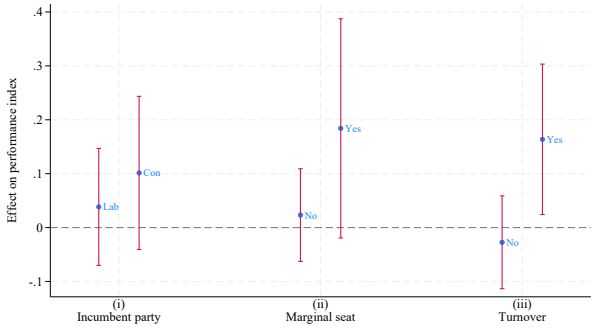
(a) Performance Index



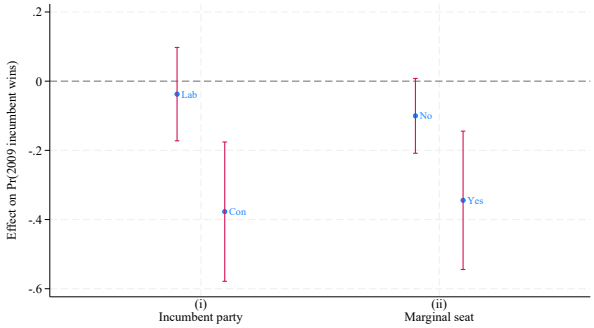
(b) 2009 Incumbent Wins (=1)

Notes: The figure shows heterogeneous SDID estimates of the effect of exposure to the 2009 MPs' expenses scandal. The dependent variable is the MP performance index in panel (a) and an indicator equal to one if the 2009 incumbent MP wins the constituency in panel (b). Panel (a) covers 2002–2023, with the effect estimated for 2009 onward; panel (b) covers all seven elections, with the effect estimated post-2009. Each pair of estimates splits the sample by the characteristic on the horizontal axis. "Incumbent party" is the party of the 2009 incumbent. "Marginal seat" equals one if the same party did not win all of the 1997, 2001, and 2005 general elections, or won all three with an average margin below 10 percentage points. "Turnover" equals one if the MP changed at the 2010 general election; this split is defined at the MP level and shown only for performance. A constituency is affected if its 2009 incumbent was asked to repay an amount above the 75th percentile in the Legg report. All estimates include constituency and year effects; the marginal-seat and turnover splits additionally control for 2009 incumbent party × parliamentary-term effects, which are collinear in the party split and hence omitted. Points are coefficient estimates and vertical bars are 95% confidence intervals. Standard errors are bootstrapped with 50 repetitions.

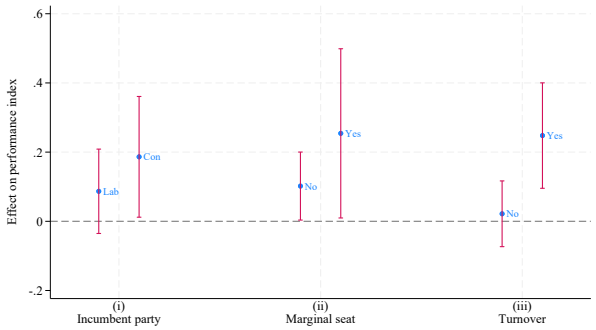
Figure A4: MP Performance and Political Turnover: Heterogeneous Effects (TWFE)



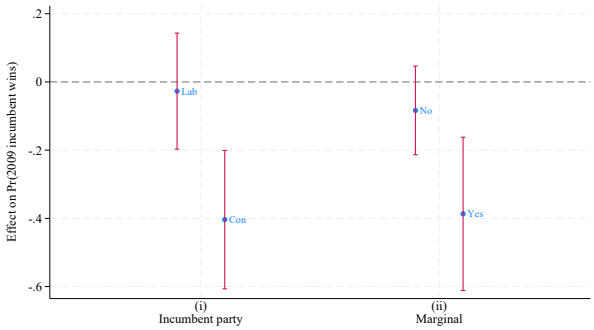
(a) Performance Index (full sample)



(b) 2009 Incumbent Wins (full sample)



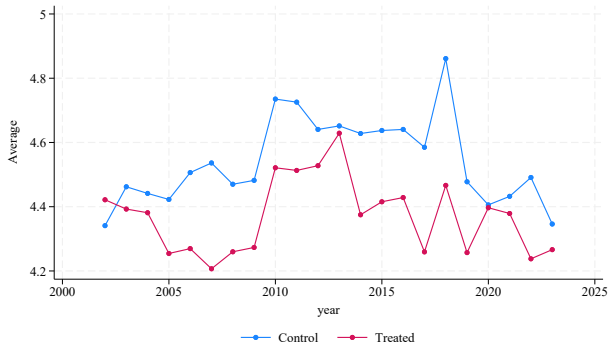
(c) Performance Index (2010–2014)



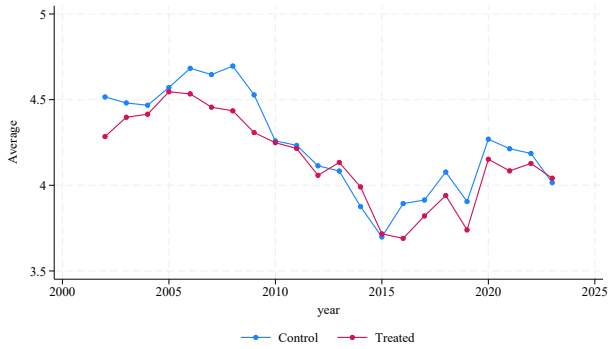
(d) 2009 Incumbent Wins (2010)

Notes: The figure shows heterogeneous two-way fixed effects (TWFE) estimates of the effect of exposure to the 2009 MPs' expenses scandal. Panels (a) and (c) use the MP performance index; panels (b) and (d) use an indicator equal to one if the 2009 incumbent MP wins the constituency in the corresponding election. The top row covers the full sample; the bottom row covers the immediate post-scandal window (2010–2014, excluding 2009, for performance in panel (c) and the 2010 general election for incumbent success in panel (d)). Each panel comes from a single regression in which the treatment is interacted with the split on the horizontal axis. All specifications include constituency fixed effects; to absorb the corresponding lower-order interactions, the party split adds party × year effects, while the marginal-seat and turnover splits retain the baseline party × term effects and add respective swing × year or turnover × year fixed effects. "Incumbent party" is the party of the 2009 incumbent. "Marginal seat" equals one if the same party did not win all of the 1997, 2001, and 2005 general elections, or won all three with an average margin below 10 percentage points. "Turnover" equals one if the MP changed at the 2010 general election; this split is defined at the MP level and shown only for performance. A constituency is affected if its 2009 incumbent was asked to repay an amount above the 75th percentile in the Legg report. Points are coefficient estimates and vertical bars are 95% confidence intervals. Standard errors are clustered at the constituency level.

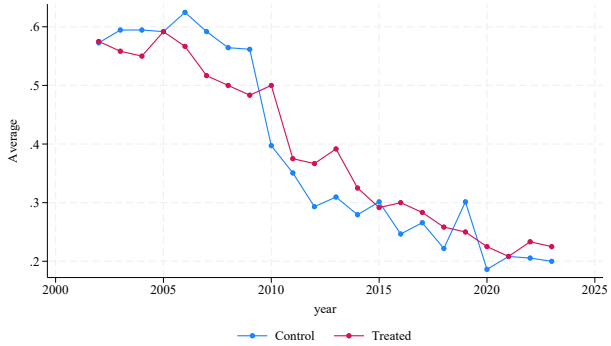
Figure A5: MP Performance: Averages



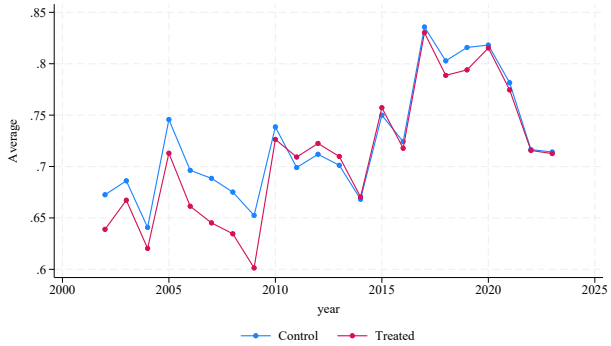
(a) Log Spoken Times



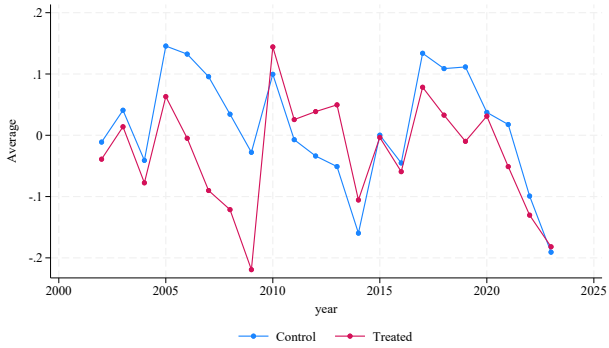
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



(d) Votes in Divisions (share)



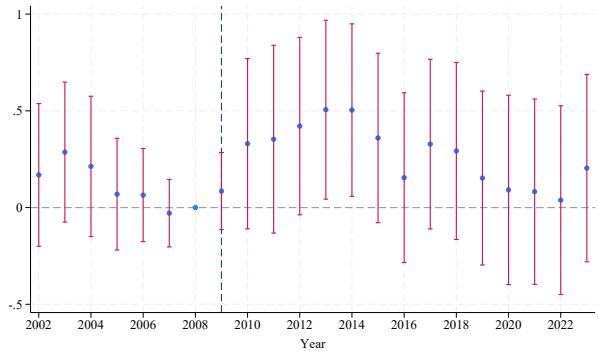
(e) Performance index

Notes: Each panel shows raw averages for the variable in the caption, disaggregated by MP misconduct. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report.

Figure A6: MP Performance: TWFE Event Studies



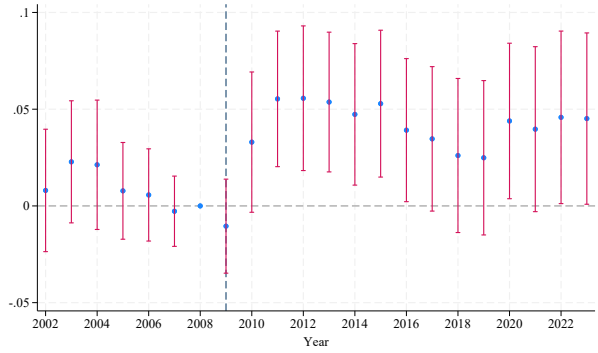
(a) Log Spoken Times



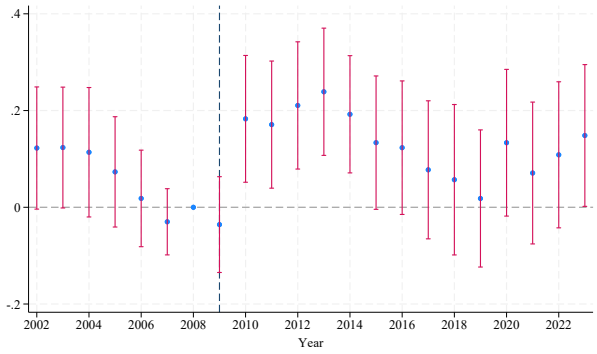
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



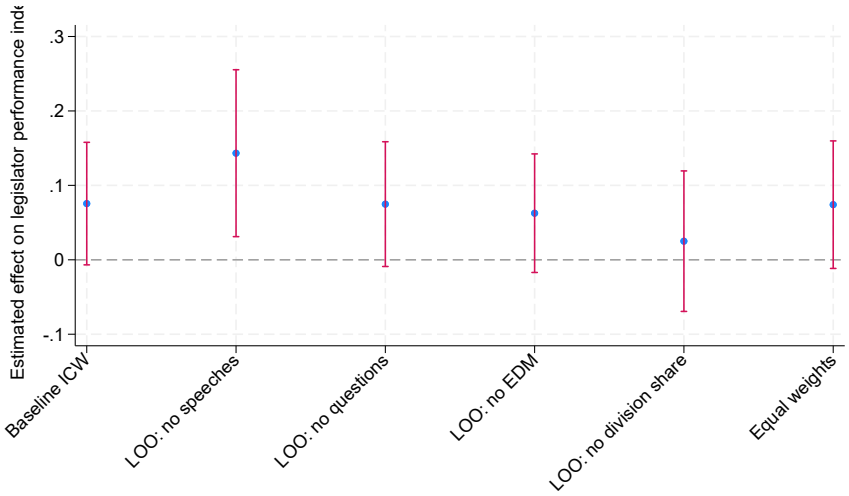
(d) Votes in Divisions (share)



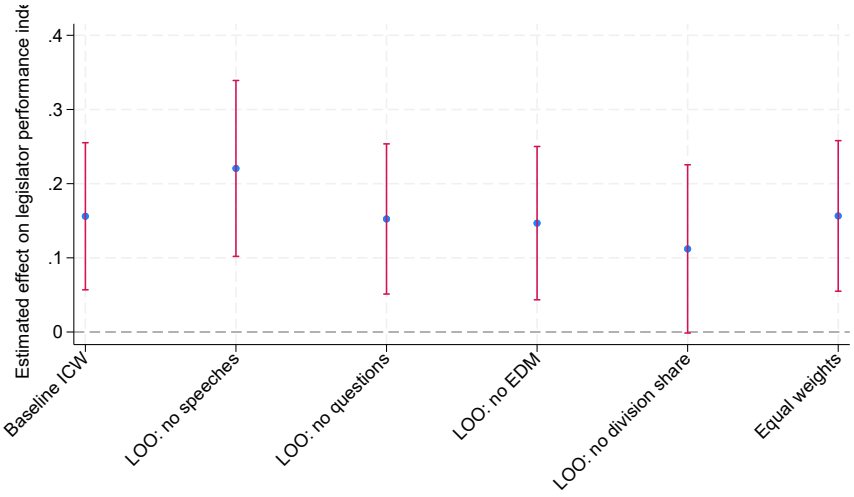
(e) Performance index

Notes: Each panel shows point estimates and 95% confidence intervals from a TWFE regression of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior interacted with year dummies. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors are clustered at the constituency level.

Figure A7: MP Misbehavior and Performance: Robustness to Alternative Index Constructions



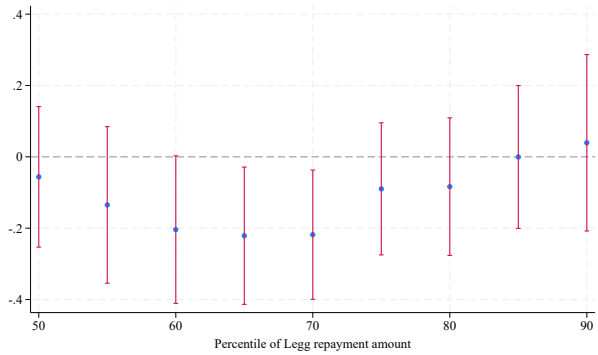
(a) Affected × post-2010



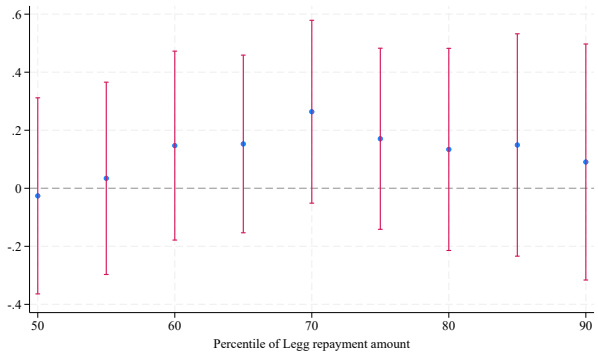
(b) Affected × {2010 ≤ year ≤ 2014}

Notes: Each panel reports point estimates and 95% confidence intervals from six separate SDID regressions, each using a different construction of the MP performance index as the dependent variable. The first specification uses the baseline inverse-covariance-weighted index, constructed from standardized measures of spoken contributions, parliamentary questions, Early Day Motions, and division attendance. The next four specifications report leave-one-out inverse-covariance-weighted indices that sequentially exclude spoken contributions, questions, Early Day Motions, and division attendance. The final specification uses an equal-weighted index of the same four standardized components. The treatment variable is an indicator for constituencies affected by MP misbehavior interacted with the relevant post-scandal period. A constituency is classified as affected if the incumbent MP in 2009 was asked to repay an amount above the 75th percentile in the Legg report. Panel (a) uses the 2002–2023 sample. Panel (b) restricts the sample to 2002–2014 and excludes 2009, so the post-scandal coefficient captures the 2010–2014 Parliament. All specifications restrict the sample to constituency matches with IOU ≥ 0.7, use the SDID estimator, and include projected covariates for 2009 incumbent party × term fixed effects. Standard errors are obtained by bootstrapping with 50 repetitions.

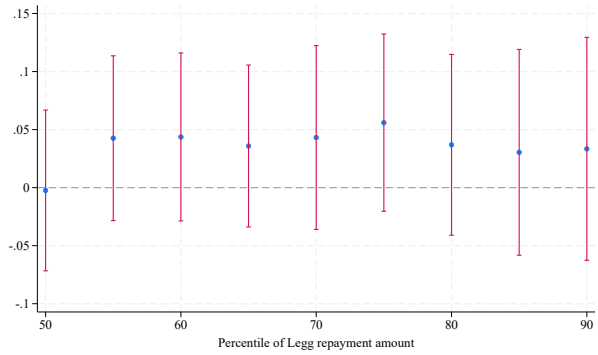
Figure A8: MP Performance: Robustness to Alternative Thresholds



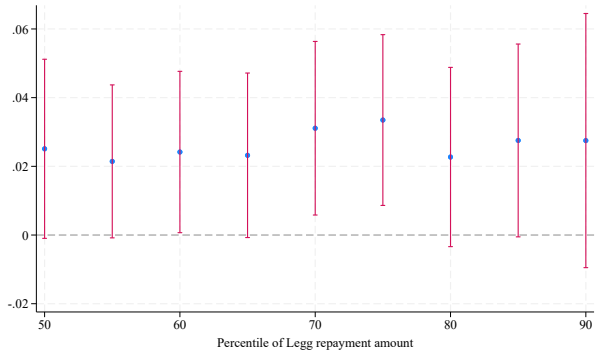
(a) Log Spoken Times



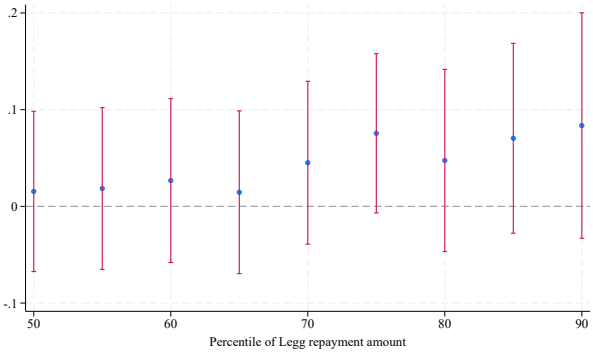
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



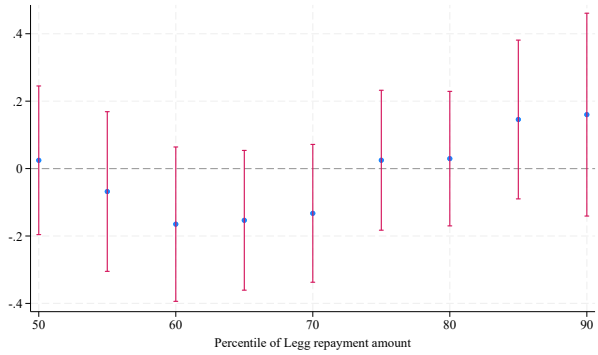
(d) Votes in Divisions (share)



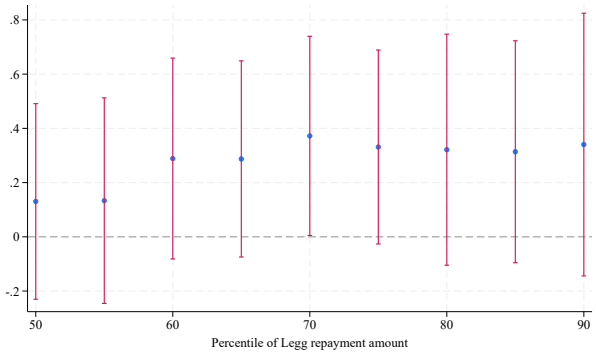
(e) Performance index

Notes: Each panel shows point estimates and 95% confidence intervals from a set of SDID regressions of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior interacted with year dummies. Each estimate corresponds to an alternative definition of misbehavior corresponding to the amount that the incumbent MP in 2009 was asked to repay in the Legg report ranking above the indicated percentile. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

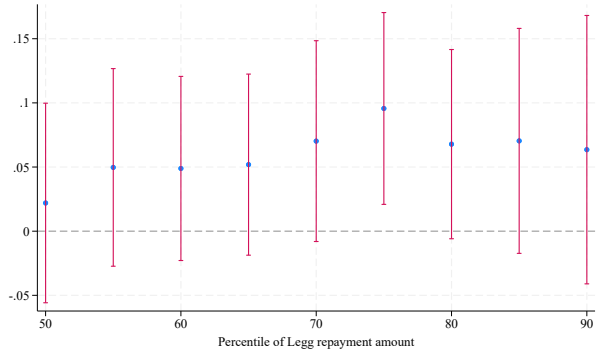
Figure A9: MP Performance: Robustness to Alternative Thresholds (2010-14)



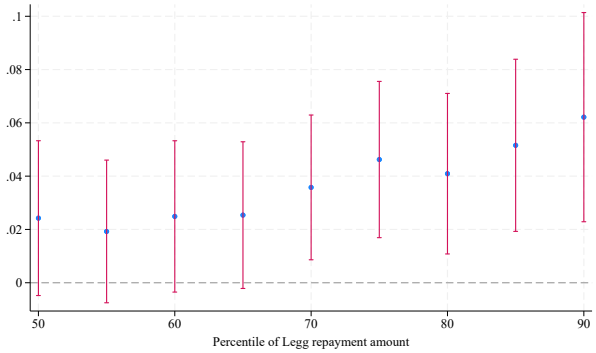
(a) Log Spoken Times



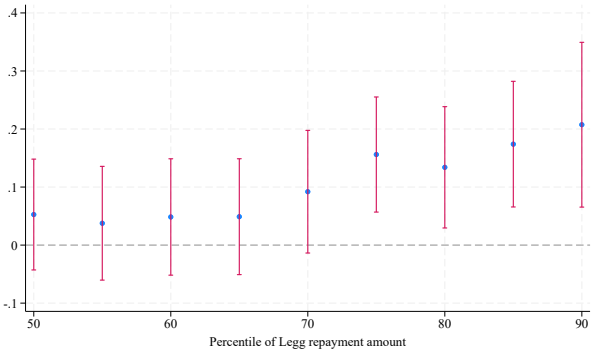
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



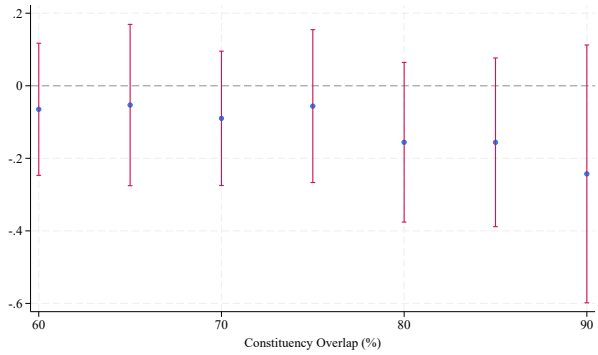
(d) Votes in Divisions (share)



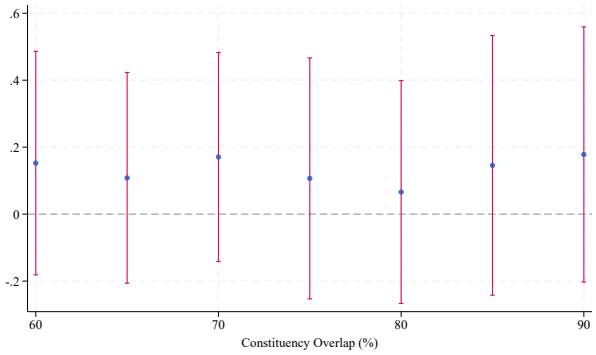
(e) Performance index

Notes: Each panel shows point estimates and 95% confidence intervals from a set of SDID regressions of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior interacted with year dummies. Each estimate corresponds to an alternative definition of misbehavior corresponding to the amount that the incumbent MP in 2009 was asked to repay in the Legg report ranking above the indicated percentile. The sample includes the years 2002-2008 (pre-exposure) and 2010-2014 (short-term). Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

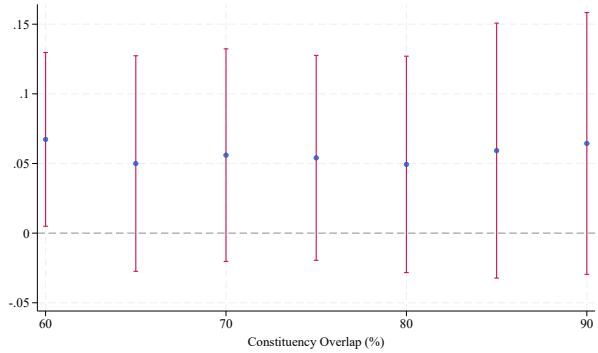
Figure A10: MP Performance: Robustness to Alternative Redistricting Overlap



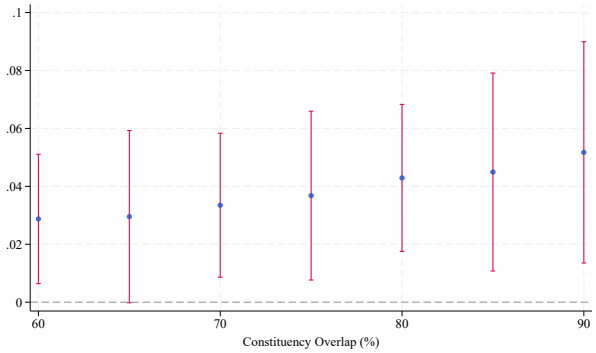
(a) Log Spoken Times



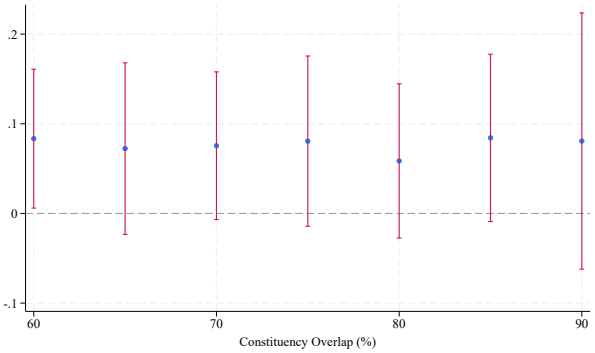
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



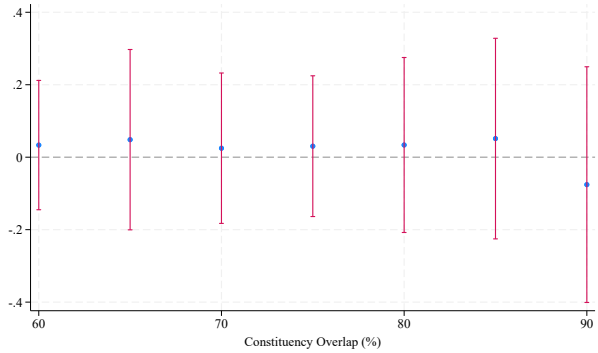
(d) Votes in Divisions (share)



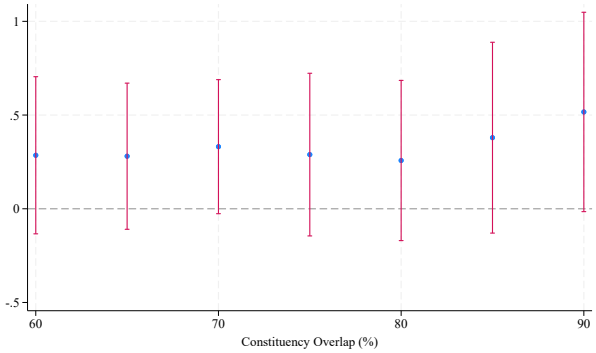
(e) Performance index

Notes: Each panel shows point estimates and 95% confidence intervals from a set of SDID regressions of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior interacted with year dummies. Our involvement measure is a dummy equal to one if the repayment amount in the Legg report ranks above the 75th percentile. Each estimate corresponds to an alternative sample including constituencies that have a spatial overlap after redistricting prior to the 2010 election that exceeds the percentage indicated in the x-axis. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

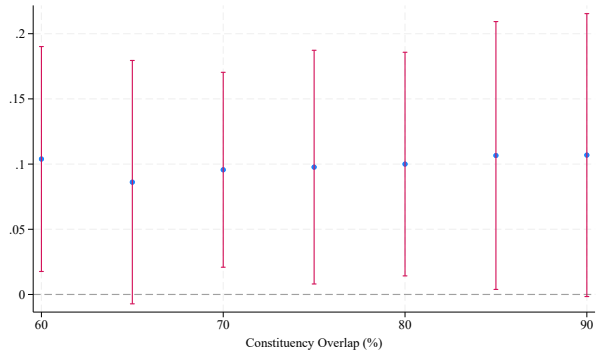
Figure A11: MP Performance: Robustness to Alternative Redistricting Overlap (2010-14)



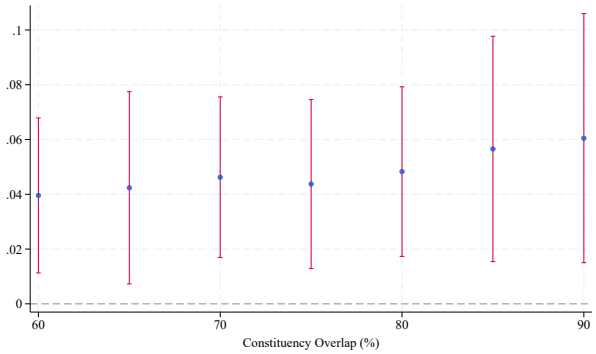
(a) Log Spoken Times



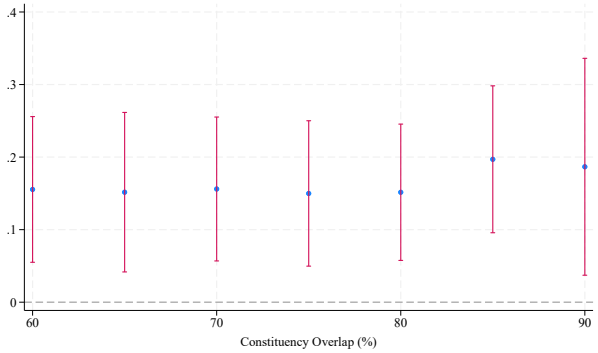
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



(d) Votes in Divisions (share)



(e) Performance index

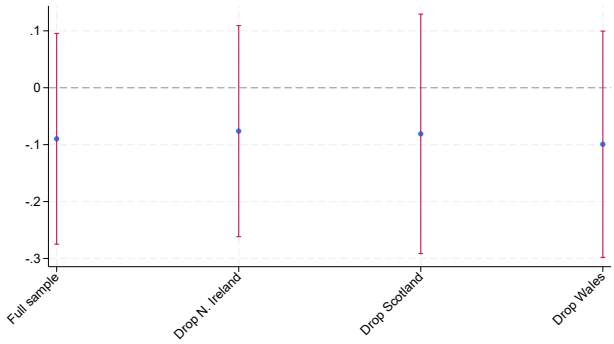
Notes: Each panel shows point estimates and 95% confidence intervals from a set of SDID regressions of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior interacted with year dummies. Our involvement measure is a dummy equal to one if the repayment amount in the Legg report ranks above the 75th percentile. Each estimate corresponds to an alternative sample including constituencies that have a spatial overlap after redistricting prior to the 2010 election that exceeds the percentage indicated in the x-axis. The sample includes the years 2002-2008 (pre-exposure) and 2010-2014 (short-term). Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

Figure A12: Event Study: Performance Index, Great Britain, Electorate-Based IOU

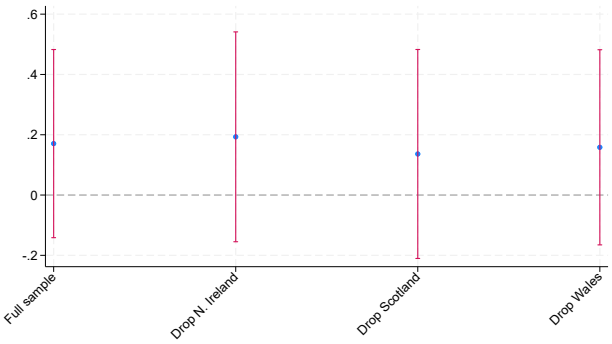


Notes: SDID event-study coefficients for the performance index on the Great Britain subsample, constituencies matched using the electorate-based overlap measure at a 70% threshold (compare Table A8). Point estimates and 95% confidence intervals; dashed line marks 2009, the start of the scandal.

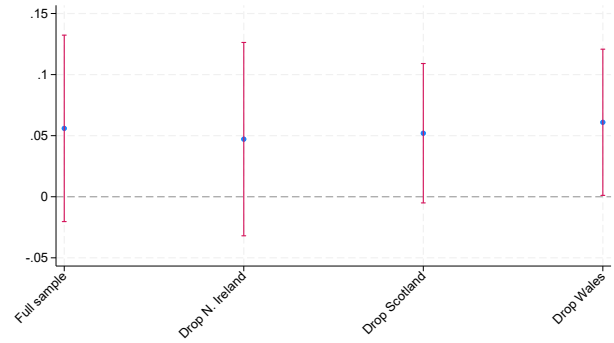
Figure A13: MP Performance: Robustness to Nation Leave One Out



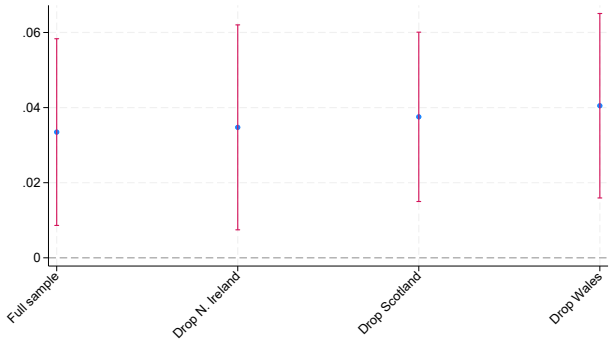
(a) Log Spoken Times



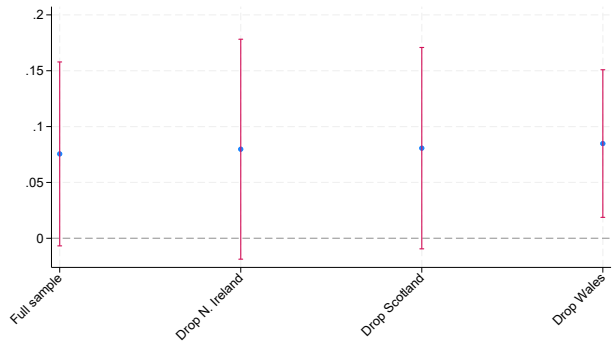
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



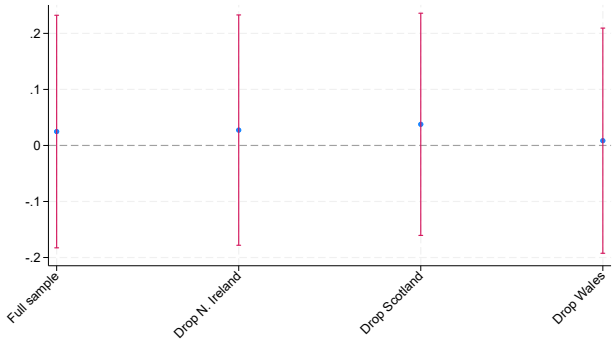
(d) Votes in Divisions (share)



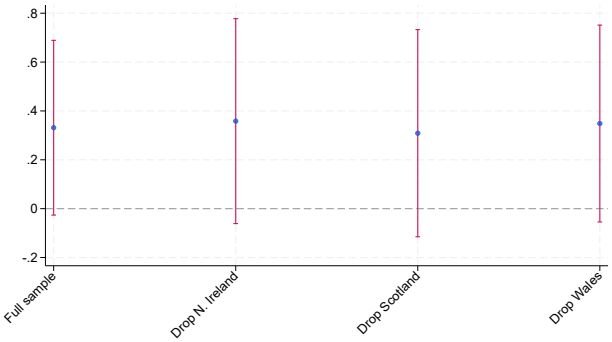
(e) Performance index

Notes: Each panel shows point estimates and 95% confidence intervals from a set of SDID regressions of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior interacted with year dummies. Our involvement measure is a dummy equal to one if the repayment amount in the Legg report ranks above the 75th percentile. Each estimate corresponds to an alternative sample leaving out the nation indicated in the x-axis. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

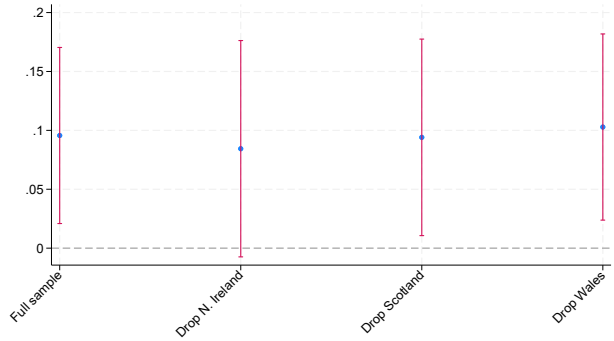
Figure A14: MP Performance: Robustness to Nation Leave One Out (2010-14)



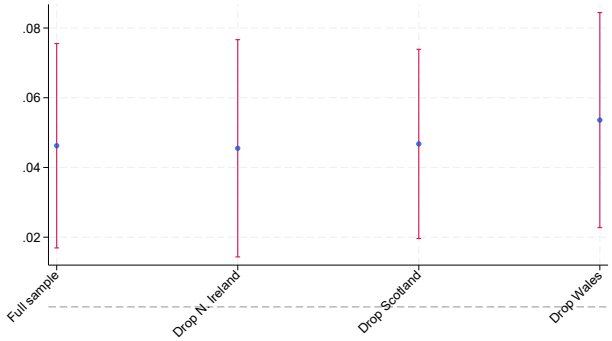
(a) Log Spoken Times



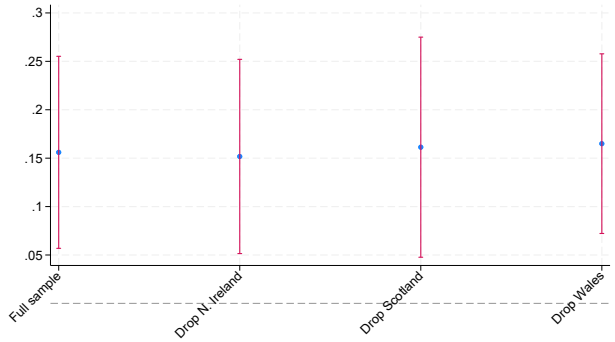
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



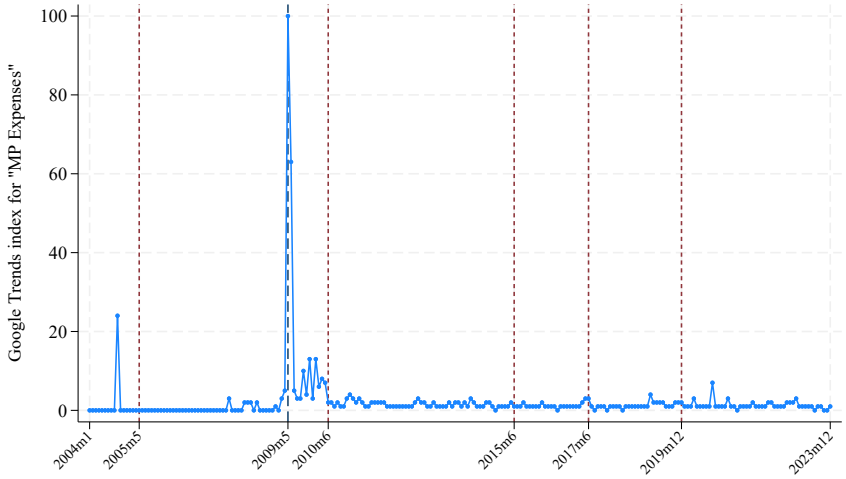
(d) Votes in Divisions (share)



(e) Performance index

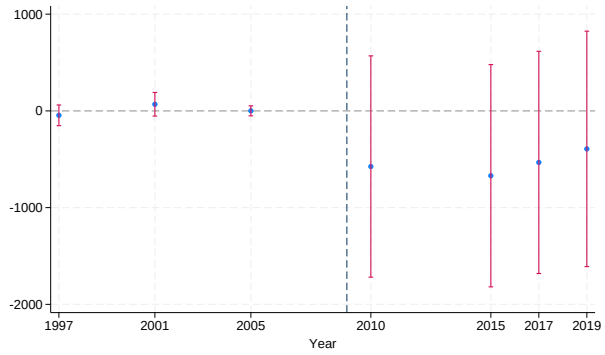
Notes: Each panel shows point estimates and 95% confidence intervals from a set of SDID regressions of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior interacted with year dummies. Our involvement measure is a dummy equal to one if the repayment amount in the Legg report ranks above the 75th percentile. Each estimate corresponds to an alternative sample leaving out the nation indicated in the x-axis. The sample includes the years 2002-2008 (pre-exposure) and 2010-2014 (short-term). Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

Figure A15: Google trends index: "MP expenses"

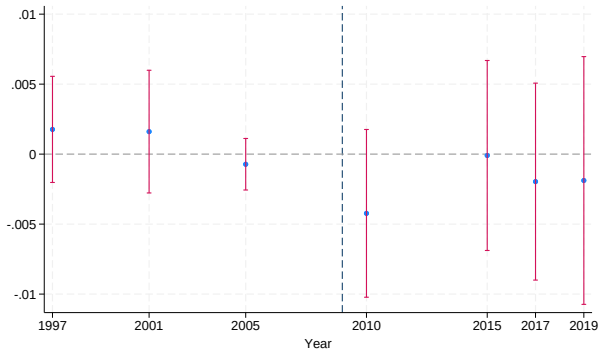


Notes: Plot shows the time series for the Google trends index for the keyword "MP expenses." Query restricted to the United Kingdom between January 2004 (earliest date available) and December 2023. The Google trends index is normalized with the maximum equal to 100.

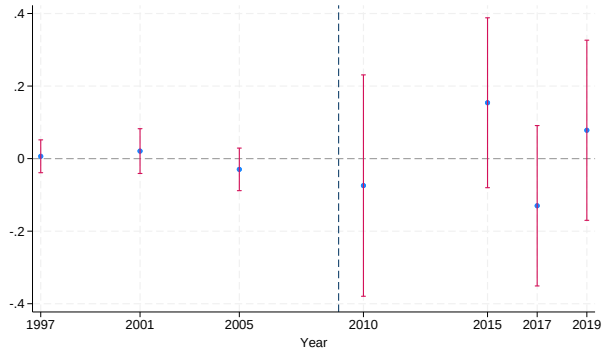
Figure A16: Event study plots: Political Competition



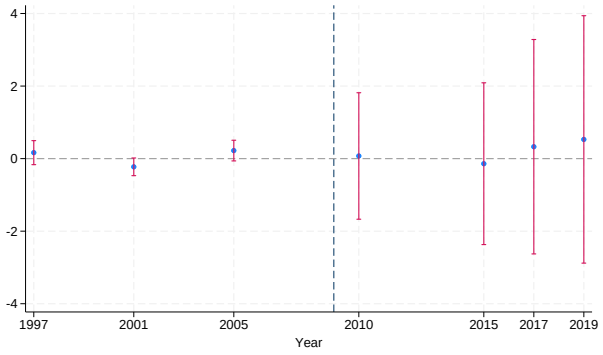
(a) Electorate



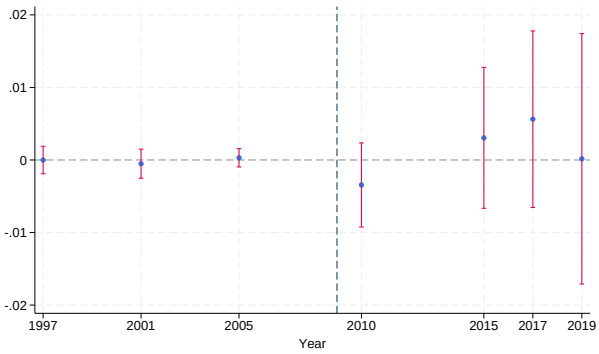
(b) Turnout



(c) Candidates



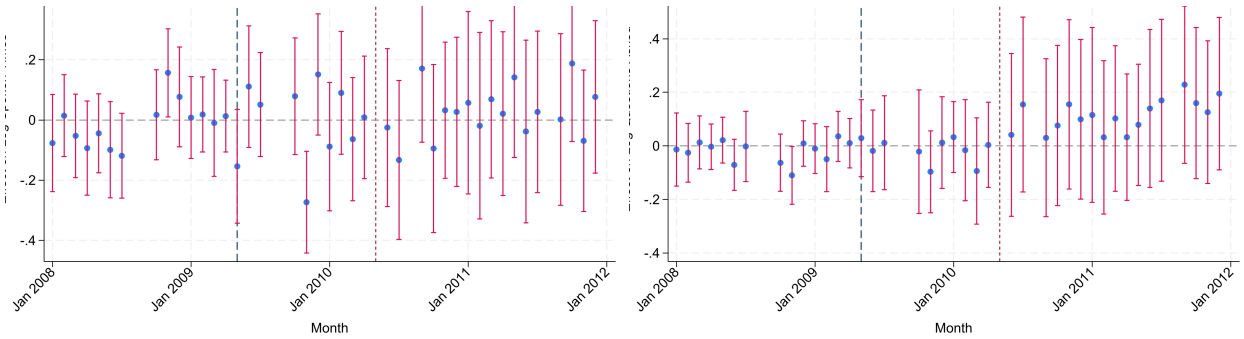
(d) Win Margin (%)



(e) Vote-share HHI

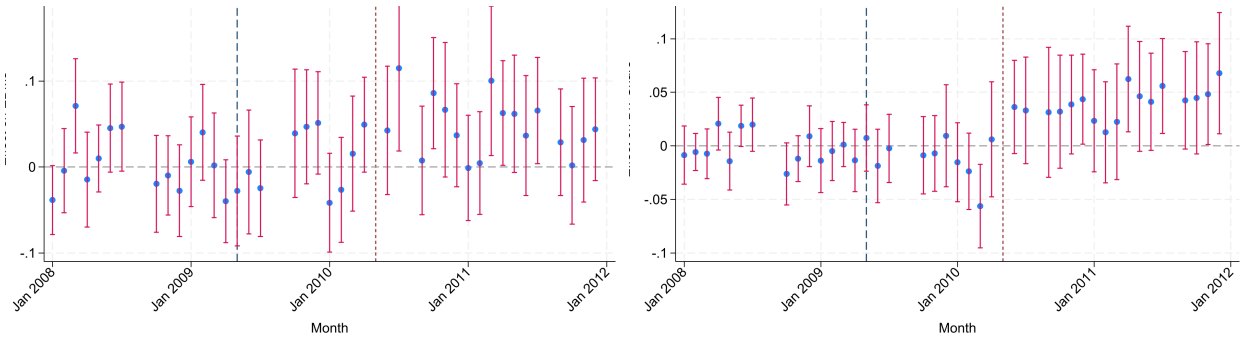
Notes: Each panel shows point estimates and 95% confidence intervals from an SDID regression of the outcome indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior, interacted with year dummies. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. The unit of observation is a constituency in an election year. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors are obtained through bootstrapping with 50 repetitions.

Figure A17: MP Performance Components: Monthly-level Event Study plots (SDID)



(a) Log Spoken Times

(b) Log Questions Asked

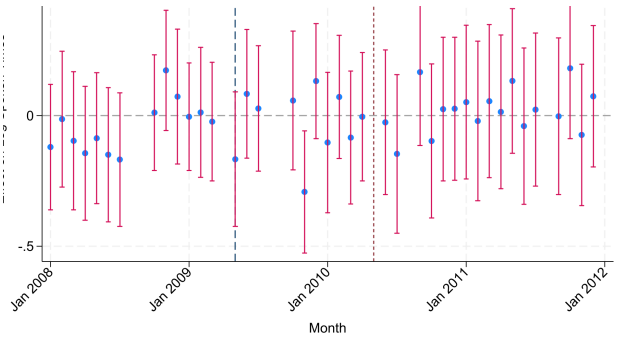


(c) Early Day Motions Filed (=1)

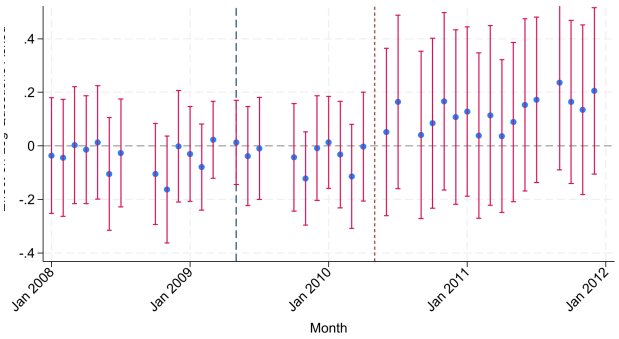
(d) Votes in Divisions (share)

Notes: Each panel shows point estimates and 95% confidence intervals from an SDID regression of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior, interacted with month dummies. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. The unit of observation is a constituency–month, covering January 2008 through December 2011. Months in which Parliament is not sitting are omitted. The navy dashed line marks the *Telegraph* leak (May 2009) and the maroon dashed line the 2010 general election. Regressions include constituency and month fixed effects, and 2009 incumbent party × post-2010 fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

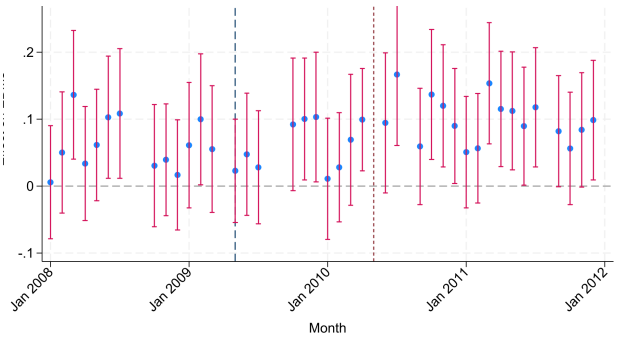
Figure A18: MP Performance: Monthly-level Event Studies (TWFE)



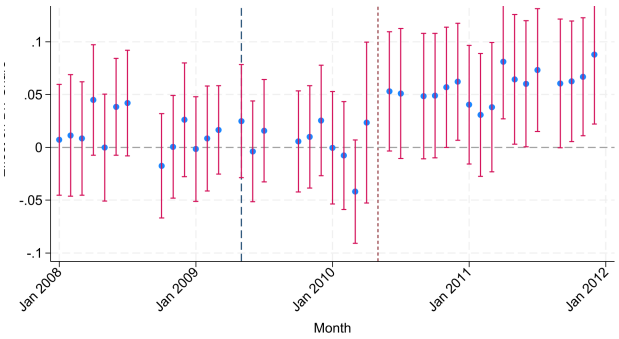
(a) Log Spoken Times



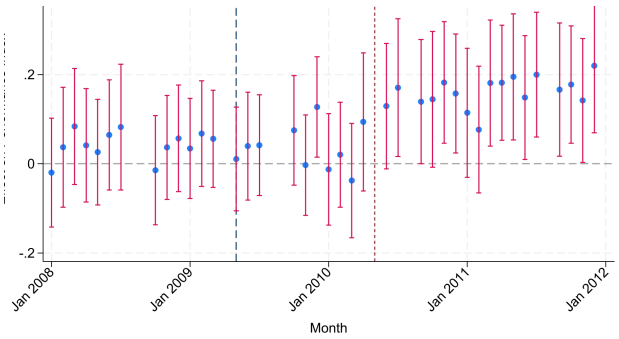
(b) Log Questions Asked



(c) Early Day Motions Filed (=1)



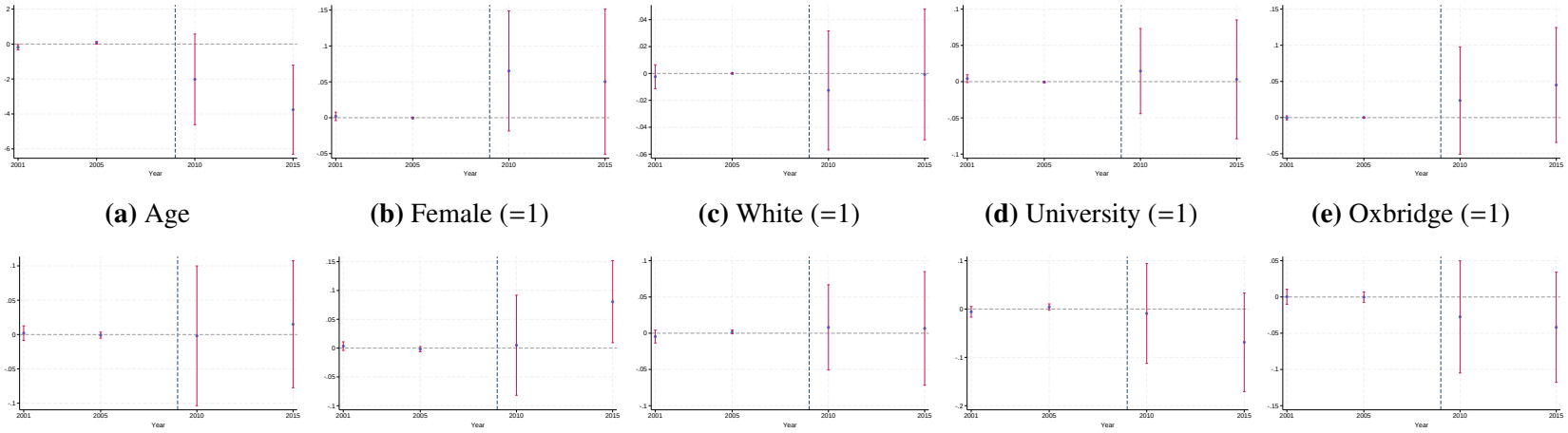
(d) Votes in Divisions (share)



(e) Performance index

Notes: Each panel shows point estimates and 95% confidence intervals from a two-way fixed effects regression of the MP performance measure indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior, interacted with month dummies, omitting the month before the *Telegraph* leak as the baseline. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. The unit of observation is a constituency–month, covering January 2008 through December 2011. Months in which Parliament is not sitting are omitted. The navy dashed line marks the *Telegraph* leak (May 2009) and the maroon dashed line the 2010 general election. Regressions include constituency and month fixed effects, and 2009 incumbent party × post-2010 fixed effects. Standard errors clustered at the constituency level.

Figure A19: Event study plots: MP Characteristics

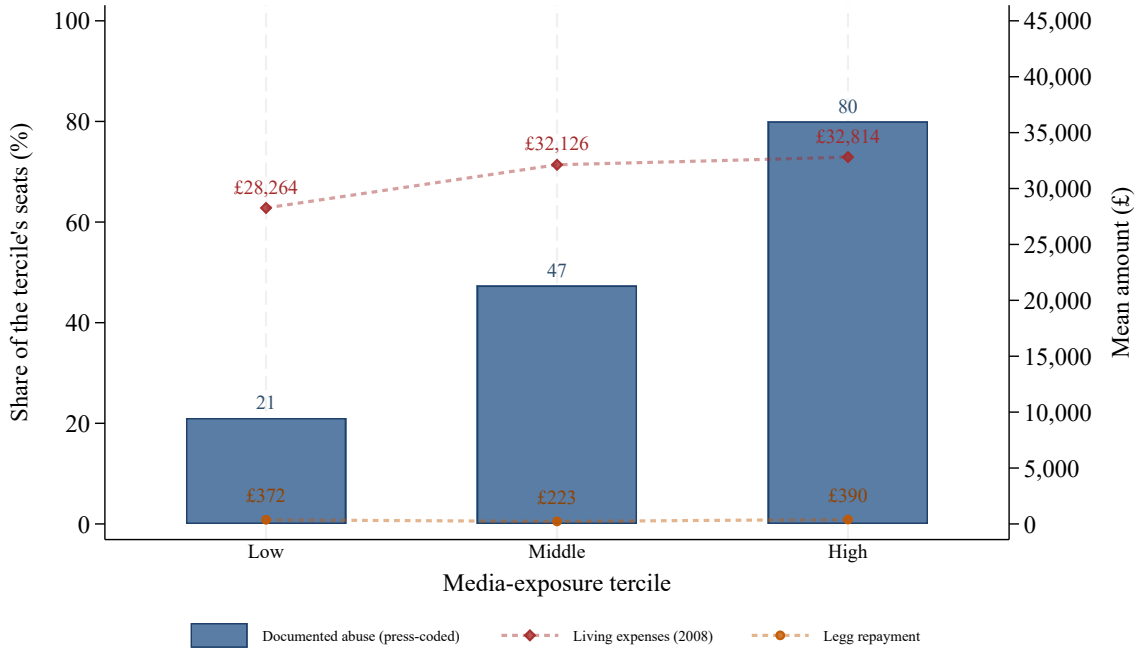


(a) Age **(b)** Female (=1) **(c)** White (=1) **(d)** University (=1) **(e)** Oxbridge (=1)

(f) Postgraduate (=1) **(g)** Business (=1) **(h)** Professional (=1) **(i)** Politics (=1) **(j)** Public Sector (=1)

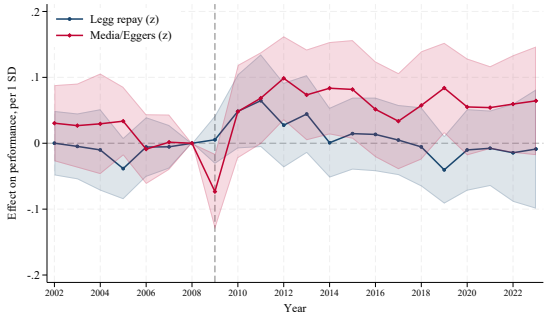
Notes: Each panel shows point estimates and 95% confidence intervals from an SDID regression of the MP characteristic indicated in the caption on our cross-sectional measure of constituencies affected by MP misbehavior, interacted with election-period dummies. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. The unit of observation is a constituency in an election year, restricted to the 2001, 2005, 2010, and 2015 elections (PCUK candidate-biography coverage ends in 2015). Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions.

Figure A20: Media Exposure and Documented Abuse in Media-Only Constituencies

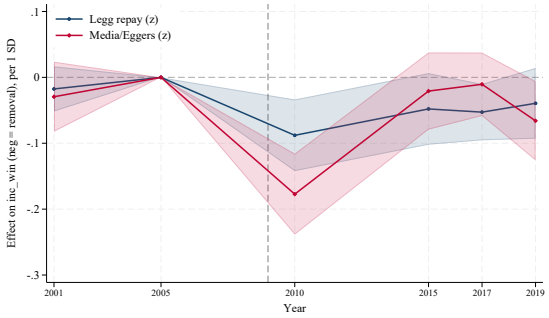


Notes: The figure covers the 58 constituencies coded as media-only—covered in the press but not among those whose 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report—divided into terciles of the Eggers press-implication score (Low, Middle, High; 19, 19, and 20 seats). Bars (left axis) show the share of each tercile's seats hand-coded as showing documented abuse in press reporting. The two overlaid series (right axis, in pounds) show the tercile means of living expenses claimed in 2008 and of the Legg repayment.

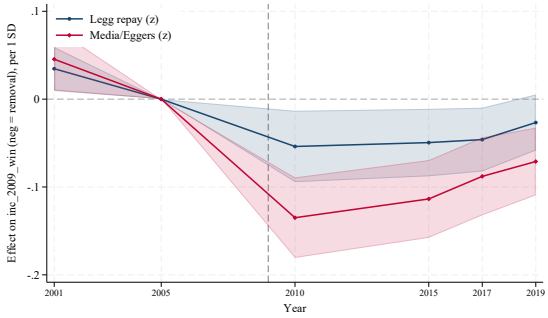
Figure A21: Continuous Treatment: Event Studies of Performance and Incumbent Re-election



(a) Performance Index



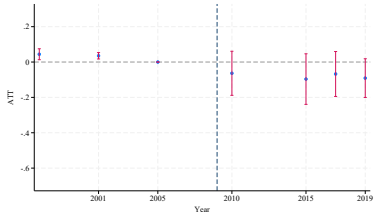
(b) Incumbent Re-elected (=1)



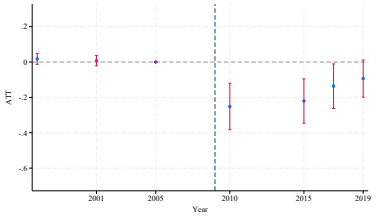
(c) 2009 Incumbent Re-elected (=1)

Notes: Each panel plots year-specific coefficients from a single two-way fixed-effects regression that includes the standardized net Legg repayment of the 2009 incumbent ("Legg repay (z)") and the standardized Eggers press-implication score ("Media/Eggers (z)"), each interacted with year indicators. The dependent variable is the constituency-level MP performance index in panel (a), estimated on constituency-year observations over 2002–2023 with 2008 as the omitted year; an indicator equal to one if the sitting incumbent is re-elected in panel (b); and an indicator equal to one if the 2009 incumbent MP is re-elected in panel (c), both estimated at election years with 2005 as the omitted year. Coefficients are expressed per one standard deviation of the exposure. Shaded bands and vertical extents show 95% confidence intervals; the dashed vertical line marks 2009. All regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects, with standard errors clustered by constituency.

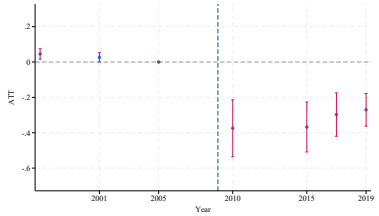
Figure A22: Incumbent Running and Winning across Information Cells



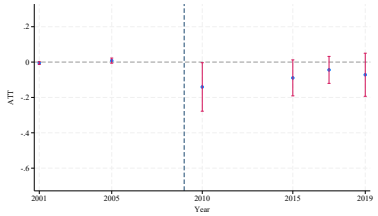
(a) 2009 incumbent runs (L)



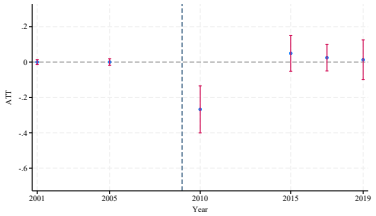
(b) 2009 incumbent runs (M)



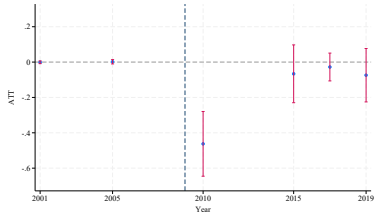
(c) 2009 incumbent runs (B)



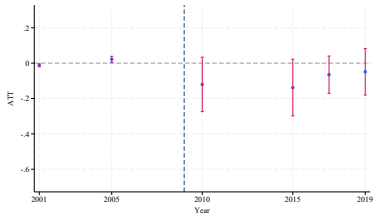
(d) Incumbent runs (L)



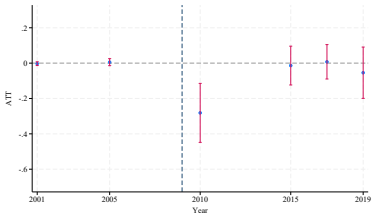
(e) Incumbent runs (M)



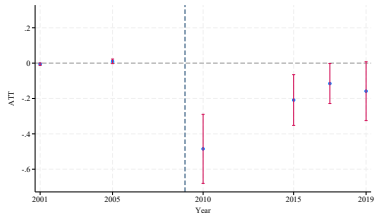
(f) Incumbent runs (B)



(g) Incumbent wins (L)



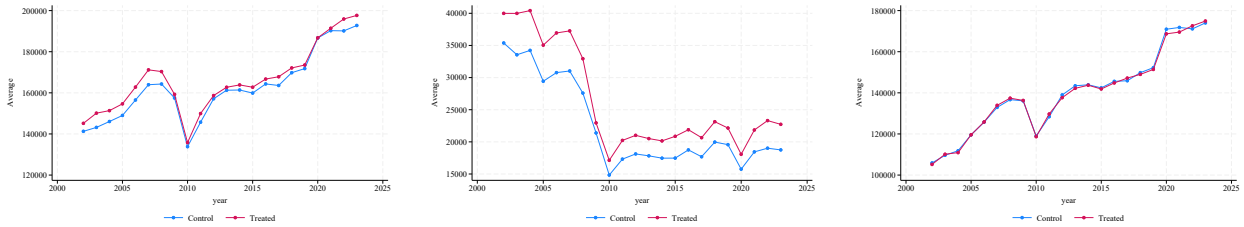
(h) Incumbent wins (M)



(i) Incumbent wins (B)

Notes: Each panel reports synthetic difference-in-differences (SDID) event-study estimates for one information cell, relative to the baseline of constituencies that were neither audited above the threshold nor covered in the press. Panels (a)–(c) use an indicator for whether the 2009 incumbent MP runs for re-election; panels (d)–(f) use an indicator for whether the sitting incumbent runs; and panels (g)–(i) use an indicator for whether the sitting incumbent wins. Within each outcome, the panels plot the Legg-only (L), Media-only (M), and Both (B) cells in turn. A constituency is *affected* if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report, and *covered* if it falls above the 75th percentile of the Eggers press-implication score. This partition yields four cells—neither (241), Legg-only (56), Media only (58), and Both (35). The vertical line marks the 2009 disclosure; treatment is dated to the subsequent (2010) general election. Points show coefficient estimates and vertical bars show 95% confidence intervals, with standard errors obtained through bootstrapping with 50 repetitions. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects.

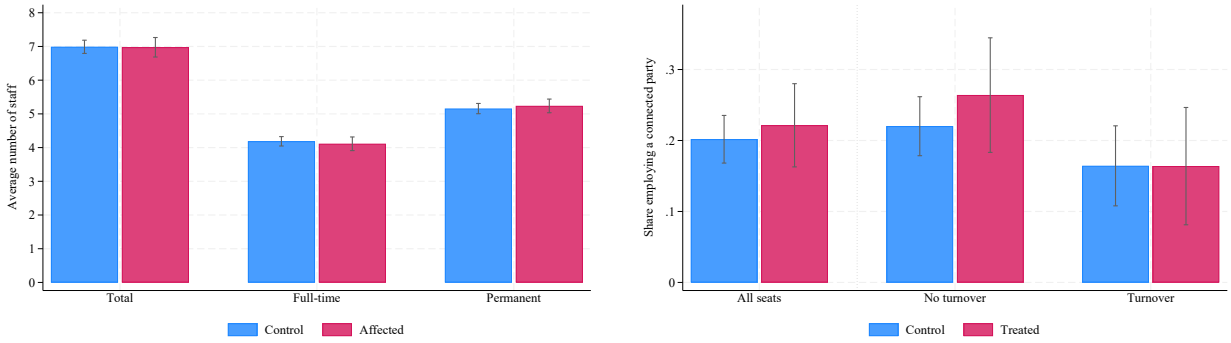
Figure A23: Average Expense Claims by Category: Affected versus Control Constituencies



(a) Total expenses **(b)** Living **(c)** Operations

Notes: Each panel plots the raw, unadjusted average of the indicated expense category, in constant 2015 GBP, separately for affected ("Treated") and unaffected ("Control") constituencies by year. A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report. Panel (a) shows total expenses, panel (b) living and travel expenses, and panel (c) operational expenses.

Figure A24: MP Staffing and Connected-Party Employment



(a) Number of staff **(b)** Connected-party employment

Notes: The figure compares MP office staffing in affected ("Treated") and unaffected ("Control") constituencies in the years these measures are available. Because the measures begin only after the scandal, the comparison is cross-sectional and descriptive, not difference-in-differences. Panel (a) reports the average number of staff employed — total, full-time, and permanent — over 2015–2023, the window in which all three series exist. Panel (b) reports the share of constituencies employing a connected party (an MP employing a family member) over 2010–2023, for all seats and separately for seats that did and did not experience MP turnover at the 2010 general election. A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report. Turnover equals one if the MP representing the constituency changed at the 2010 general election. Bars show constituency-level means and whiskers show 95% confidence intervals.

Table A1: Summary statistics: constituency and 2009-incumbent characteristics

Variable	Mean	S.D.	Min	Median	Max	N
Panel A. Constituency characteristics						
Affected (=1)	0.247	0.432	0.000	0.000	1.000	485
Required to repay (=1)	0.505	0.500	0.000	1.000	1.000	485
Legg repayment (£)	1,650	4,495	0	110	42,458	485
if repayment > 0 (£)	3,266	5,898	0	1,363	42,458	245
England (=1)	0.843	0.364	0.000	1.000	1.000	485
Scotland (=1)	0.054	0.225	0.000	0.000	1.000	485
Wales (=1)	0.072	0.259	0.000	0.000	1.000	485
Northern Ireland (=1)	0.031	0.173	0.000	0.000	1.000	485
Inner London (=1)	0.033	0.179	0.000	0.000	1.000	485
Outer London (=1)	0.078	0.269	0.000	0.000	1.000	485
Distance to Westminster (100 km)	2.03	1.57	0.02	1.81	9.35	485
County constituency (=1)	0.565	0.496	0.000	1.000	1.000	485
Panel B. 2009 incumbent: political						
Conservative (=1)	0.328	0.470	0.000	0.000	1.000	485
Labour (=1)	0.528	0.500	0.000	1.000	1.000	485
Liberal Democrat (=1)	0.097	0.296	0.000	0.000	1.000	485
Other party (=1)	0.047	0.213	0.000	0.000	1.000	485
Tenure (years)	13.5	8.1	1.0	12.0	47.0	485
Marginal seat (=1)	0.276	0.448	0.000	0.000	1.000	485
Frontbench (=1)	0.099	0.299	0.000	0.000	1.000	485
Cabinet (=1)	0.031	0.173	0.000	0.000	1.000	485
Shadow cabinet (=1)	0.062	0.241	0.000	0.000	1.000	485
Party leader (=1)	0.016	0.128	0.000	0.000	1.000	485
Speaker (=1)	0.006	0.078	0.000	0.000	1.000	485
Panel C. 2009 incumbent: personal						
Age	55.3	9.1	34.0	56.0	79.0	485
Female (=1)	0.188	0.391	0.000	0.000	1.000	485
White (=1)	0.979	0.142	0.000	1.000	1.000	485
Oxbridge (=1)	0.302	0.460	0.000	0.000	1.000	470

Notes: The table reports summary statistics for the 485 harmonized constituencies in the estimation sample (IOU $\geq$ 70%). Characteristics are measured for the sitting (2009) incumbent, in the 2009 cross-section. "Affected" equals one if the 2009 incumbent's net Legg repayment falls in the upper quartile. Distance to Westminster is in hundreds of kilometres. Party categories with fewer than five seats are grouped into "Other." Marginal seat equals one if the seat changed hands at any point between 1997 and 2005, or the same party won but had an average win margin below 10%. Oxbridge is available for 470 of the 485 incumbents.

Table A2: Predictors of MP Misconduct: Repayment amount

	Dependent variable: Repayment amount (£)				
	(1)	(2)	(3)	(4)	(5)
Northern Ireland (=1)	169.0	679.5	715.7	329.0	-148.3
	[805.5]	[1,712]	[1,396]	[1,406]	[1,418]
Scotland (=1)	291.5	338.2	830.4	949.5	864.2
	[899.3]	[972.1]	[982.3]	[1,047]	[1,011]
Wales (=1)	-22.95	106.0	275.1	131.3	151.2
	[761.2]	[788.9]	[793.7]	[743.0]	[742.9]
Inner London (=1)	-1,740***	-1,514**	-1,660***	-2,210***	-2,342***
	[521.5]	[614.7]	[639.8]	[847.6]	[871.9]
Outer London (=1)	-1,663***	-1,449***	-1,371***	-1,517***	-1,604***
	[489.8]	[519.2]	[508.8]	[562.9]	[600.7]
Distance to Westminster (Km/100)	-247.4	-146.4	-239.4	-200.1	-202.2
	[214.2]	[273.4]	[275.3]	[271.5]	[267.3]
County constituency (=1)	648.9	548.9	688.8	553.7	556.0
	[434.6]	[523.6]	[526.3]	[492.2]	[489.1]
DUP (=1)		-648.4	-77.67	837.5	1,154
		[1,693]	[1,473]	[1,458]	[1,577]
Labour (=1)		-297.5	-71.47	-378.1	-686.3
		[713.4]	[683.1]	[573.6]	[503.9]
Liberal Democrat (=1)		-1,385**	-716.5	-689.2	-756.0
		[583.3]	[542.8]	[594.5]	[548.5]
Other party (=1)		-1,118	-381.6	-29.04	-71.40
		[1,238]	[1,135]	[1,222]	[1,198]
Sinn Féin		-1,800	-956.4	210.3	377.0
		[1,687]	[1,378]	[1,432]	[1,523]
SNP		-1,501	-797.4	-466.8	-392.6
		[955.1]	[1,090]	[883.8]	[937.4]
Years in office			107.2***	119.8***	118.0***
			[34.19]	[34.97]	[41.92]
Marginal seat (=1)			-31.02	-10.81	-24.71
			[477.1]	[460.9]	[473.0]
Speaker (=1)				-1,097	-1,074
				[1,266]	[1,266]
Party leadership (=1)				-2,015***	-1,968***
				[663.9]	[739.2]
Cabinet (=1)				-313.9	-77.79
				[528.7]	[577.1]
Shadow Cabinet (=1)				180.1	306.0
				[782.0]	[795.8]
Front Bench (=1)				2,609**	2,718**
				[1,175]	[1,229]
Age					15.34
					[27.23]
Female (=1)					699.0
					[616.1]
White (=1)					-415.2
					[612.9]
Oxbridge (=1)					-401.0
					[526.1]
Constant	1,956***	2,103***	516.2	284.1	63.09
	[496.3]	[556.3]	[671.1]	[619.0]	[1,285]
Observations	485	485	485	485	485
R-squared	0.021	0.028	0.064	0.095	0.101

Notes: Table shows results from a cross-sectional regression of the repayment amount in the Legg report on constituency and MP characteristics. Column 1 shows results for basic geographic characteristics. The omitted nation is England. Column 2 adds dummies for the party affiliation of the incumbent in 2009. The omitted party is Conservative. Column 3 adds additional political characteristics, including the incumbent's number of years in parliament and an indicator for marginal seats, defined as not the same party winning in 1997, 2001, and 2005 or same party winning with average win margin below 10 percentage points. Column 4 adds measures for prominent positions in parliament, aggregated over the period covered by the Legg report (2004-2009). We code cabinet and shadow cabinet as mutually exclusive with front bench. Column 5 adds demographic characteristics of the incumbent MP. Robust standard errors shown in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A3: MP Performance: Robustness with TWFE

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.131	0.149	0.0486	0.0300**	0.0615
	[0.0979]	[0.161]	[0.0360]	[0.0132]	[0.0408]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.192*	-0.0236	-0.0347	-0.0193	-0.0952**
	[0.111]	[0.115]	[0.0420]	[0.0139]	[0.0454]
Affected x {2010 ≤ Year ≤ 2014}	-0.0333	0.313*	0.0916**	0.0400**	0.139***
	[0.109]	[0.189]	[0.0407]	[0.0156]	[0.0474]
Affected x {2015 ≤ Year ≤ 2023}	-0.179	0.0790	0.0344	0.0302*	0.0367
	[0.118]	[0.184]	[0.0427]	[0.0154]	[0.0498]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,670	10,670	10,670	10,670	10,670
Constituencies	485	485	485	485	485
DV mean	89.94	69.78	0.39	0.72	0.00

Notes: Table shows TWFE estimates. The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party x term fixed effects. Standard errors clustered by constituency. * p<0.1, ** p<0.05, *** p<0.01.

Table A4: MP Performance: Gross Legg Repayment

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Average effect					
Affected × {Year ≥ 2009}	-0.041	0.198	0.024	0.034***	0.069
	[0.090]	[0.158]	[0.038]	[0.013]	[0.044]
PANEL B: Effect by period					
Affected × {Year = 2009}	-0.123	-0.007	-0.041	-0.009	-0.068
	[0.095]	[0.079]	[0.044]	[0.011]	[0.048]
Affected × {2010 ≤ Year ≤ 2014}	0.080	0.406**	0.068*	0.051***	0.165***
	[0.102]	[0.178]	[0.037]	[0.016]	[0.049]
Affected × {2015 ≤ Year ≤ 2023}	-0.096	0.112	0.008	0.030**	0.033
	[0.111]	[0.182]	[0.048]	[0.014]	[0.052]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 × Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,670	10,670	10,670	10,670	10,670
Constituencies	485	485	485	485	485

Notes: Table shows SDID estimates of the effect of exposure to the 2009 MPs' expenses scandal on the five performance outcomes indicated in the column headers. The unit of observation is the constituency-year. A constituency is affected if its 2009 incumbent MP's gross recommended repayment in the Legg report ranks above the 75th percentile. Panel A reports the average effect over the period from 2009 onward; Panel B reports separate estimates for 2009, for 2010–2014, and for 2015–2023. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors, obtained through bootstrapping with 50 repetitions, are reported in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A5: MP Performance: Robustness excluding criminal MPs

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0815	0.166	0.0556	0.0335***	0.0774**
	[0.122]	[0.167]	[0.0345]	[0.0126]	[0.0365]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.0808	0.0713	-0.0391	-0.000702	-0.0358
	[0.0818]	[0.0943]	[0.0367]	[0.0107]	[0.0438]
Affected x {2010 ≤ Year ≤ 2014}	0.0294	0.320	0.0996**	0.0439***	0.156***
	[0.110]	[0.198]	[0.0394]	[0.0129]	[0.0442]
Affected x {2015 ≤ Year ≤ 2023}	-0.137	0.0956	0.0415	0.0315**	0.0488
	[0.155]	[0.194]	[0.0395]	[0.0159]	[0.0459]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,604	10,604	10,604	10,604	10,604
Constituencies	482	482	482	482	482
DV mean	89.78	69.86	0.38	0.72	0.00

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Sample excludes constituencies represented by an MP with a criminal process due to the mishandling of expenses. Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A6: MP Performance: Robustness with continuous measure (TWFE)

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Repayment x {Year ≥ 2009}	-0.0460	0.150	0.0333	0.0198*	0.0551*
	[0.0718]	[0.130]	[0.0300]	[0.0116]	[0.0312]
PANEL B: Heterogeneous effects over time					
Repayment x {Year = 2009}	-0.0512	-0.0950	-0.00895	-0.0160	-0.0515
	[0.107]	[0.114]	[0.0379]	[0.0118]	[0.0418]
Repayment x {2010 ≤ Year ≤ 2014}	-0.0417	0.435***	0.0508	0.0422***	0.130***
	[0.0816]	[0.163]	[0.0360]	[0.0120]	[0.0384]
Repayment x {2015 ≤ Year ≤ 2023}	-0.0478	0.0191	0.0284	0.0116	0.0260
	[0.0922]	[0.147]	[0.0321]	[0.0144]	[0.0356]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,670	10,670	10,670	10,670	10,670
Constituencies	485	485	485	485	485
DV mean	89.94	69.78	0.39	0.72	0.00

Notes: Table shows TWFE estimates using the repayment amount indicated in the Legg report as cross-sectional measure of MP misbehavior. The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A7: MP Performance: Great Britain (Geographic IOU)

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0782	0.191	0.0474	0.0339**	0.0781
	[0.0949]	[0.177]	[0.0403]	[0.0137]	[0.0504]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.110	0.0621	-0.0254	-0.0129	-0.0593
	[0.101]	[0.0986]	[0.0427]	[0.0121]	[0.0414]
Affected x {2010 ≤ Year ≤ 2014}	0.0274	0.358*	0.0844*	0.0455***	0.152***
	[0.105]	[0.214]	[0.0468]	[0.0159]	[0.0512]
Affected x {2015 ≤ Year ≤ 2023}	-0.133	0.118	0.0358	0.0321*	0.0525
	[0.116]	[0.197]	[0.0458]	[0.0166]	[0.0608]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,340	10,340	10,340	10,340	10,340
Constituencies	470	470	470	470	470
DV mean	91.57	70.03	0.39	0.73	0.04

Notes: SDID estimates on the Great Britain subsample (geographic IOU ≥ 70%), the benchmark for comparison against the electorate-based harmonization measure in Table A8. Sample and specification otherwise identical to Table 3. Standard errors from a clustered bootstrap with 50 repetitions in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A8: MP Performance: Great Britain (Electorate-Based IOU)

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0796	0.232	0.0554	0.0301**	0.0882*
	[0.0923]	[0.167]	[0.0349]	[0.0140]	[0.0459]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.130	0.0794	-0.00794	-0.0240*	-0.0733
	[0.107]	[0.104]	[0.0440]	[0.0135]	[0.0531]
Affected x {2010 ≤ Year ≤ 2014}	0.0351	0.376*	0.0833**	0.0409***	0.163***
	[0.106]	[0.197]	[0.0373]	[0.0132]	[0.0501]
Affected x {2015 ≤ Year ≤ 2023}	-0.137	0.173	0.0479	0.0294*	0.0655
	[0.106]	[0.195]	[0.0402]	[0.0175]	[0.0533]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,296	10,296	10,296	10,296	10,296
Constituencies	468	468	468	468	468
DV mean	90.71	70.35	0.39	0.73	0.03

Notes: SDID estimates on the same Great Britain subsample as Table A7, but with constituencies matched using an electorate-based overlap measure – dispersal of voters between pre- and post-redistricting constituencies, from Rallings & Thrasher (2007) for England and Wales and Denver et al. (2004) for Scotland – in place of the geographic IOU, again thresholded at 70%. Standard errors from a clustered bootstrap with 50 repetitions in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A9: MP Performance: Robustness excluding 2009 incumbent party x term FEs

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0718	0.230	0.0663*	0.0269*	0.0888**
	[0.0945]	[0.172]	[0.0370]	[0.0147]	[0.0409]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.0935	0.0479	-0.0353	-0.00997	-0.0537
	[0.0924]	[0.0946]	[0.0362]	[0.0106]	[0.0455]
Affected x {2010 ≤ Year ≤ 2014}	0.0435	0.428**	0.106***	0.0397**	0.174***
	[0.103]	[0.191]	[0.0351]	[0.0160]	[0.0494]
Affected x {2015 ≤ Year ≤ 2023}	-0.139	0.137	0.0553	0.0240	0.0565
	[0.118]	[0.195]	[0.0460]	[0.0171]	[0.0470]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	No	No	No	No	No
Observations	10,670	10,670	10,670	10,670	10,670
Constituencies	485	485	485	485	485
DV mean	89.94	69.78	0.39	0.72	0.00

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency and year fixed effects. Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A10: MP Performance: Robustness excluding Speaker

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0650	0.124	0.0541	0.0273**	0.0654
	[0.0917]	[0.153]	[0.0340]	[0.0113]	[0.0420]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.110	0.0554	-0.0385	-0.0137	-0.0656
	[0.0932]	[0.0934]	[0.0342]	[0.0128]	[0.0454]
Affected x {2010 ≤ Year ≤ 2014}	0.0659	0.268	0.0906**	0.0348***	0.138***
	[0.0913]	[0.175]	[0.0378]	[0.0126]	[0.0438]
Affected x {2015 ≤ Year ≤ 2023}	-0.127	0.0604	0.0441	0.0275*	0.0422
	[0.123]	[0.178]	[0.0449]	[0.0143]	[0.0573]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,472	10,472	10,472	10,472	10,472
Constituencies	476	476	476	476	476
DV mean	85.09	69.40	0.39	0.73	0.01

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Sample excludes constituencies represented by the speaker or deputy speakers during the sample period (2001-2018). Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A11: MP Performance: Robustness excluding party leadership

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0884	0.217	0.0669*	0.0353**	0.0908*
	[0.110]	[0.173]	[0.0392]	[0.0150]	[0.0467]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.0899	0.0621	-0.0292	-0.0106	-0.0506
	[0.0783]	[0.0860]	[0.0425]	[0.0116]	[0.0392]
Affected x {2010 ≤ Year ≤ 2014}	0.0573	0.384**	0.107***	0.0515***	0.187***
	[0.125]	[0.176]	[0.0380]	[0.0186]	[0.0476]
Affected x {2015 ≤ Year ≤ 2023}	-0.166	0.145	0.0557	0.0313*	0.0557
	[0.132]	[0.211]	[0.0489]	[0.0167]	[0.0599]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	10,494	10,494	10,494	10,494	10,494
Constituencies	477	477	477	477	477
DV mean	89.19	69.99	0.39	0.73	0.02

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Sample excludes constituencies represented by a party leader or deputy leader during the sample period (2001-2018). Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A12: MP Performance: Robustness excluding front-bench MPs

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0875	0.214	0.0684	0.0424***	0.0959*
	[0.112]	[0.181]	[0.0507]	[0.0137]	[0.0537]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.160	0.0854	-0.0334	-0.00909	-0.0518
	[0.105]	[0.0933]	[0.0526]	[0.0134]	[0.0551]
Affected x {2010 ≤ Year ≤ 2014}	0.0413	0.389*	0.112**	0.0504***	0.176***
	[0.104]	[0.222]	[0.0519]	[0.0162]	[0.0610]
Affected x {2015 ≤ Year ≤ 2023}	-0.145	0.140	0.0555	0.0436***	0.0705
	[0.140]	[0.201]	[0.0573]	[0.0156]	[0.0636]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	9,614	9,614	9,614	9,614	9,614
Constituencies	437	437	437	437	437
DV mean	90.22	71.81	0.40	0.72	0.01

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Sample excludes constituencies whose 2009 incumbent held a front-bench position. Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A13: MP Performance: Robustness excluding MPs with 20+ years in office

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	0.0221	0.119	0.0430	0.0254	0.0787
	[0.107]	[0.173]	[0.0425]	[0.0161]	[0.0583]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.100	0.0236	-0.0704	-0.0159	-0.0965
	[0.117]	[0.109]	[0.0517]	[0.0160]	[0.0597]
Affected x {2010 ≤ Year ≤ 2014}	0.139	0.169	0.0681	0.0318*	0.130**
	[0.119]	[0.166]	[0.0444]	[0.0168]	[0.0577]
Affected x {2015 ≤ Year ≤ 2023}	-0.0243	0.111	0.0400	0.0261	0.0706
	[0.149]	[0.219]	[0.0517]	[0.0203]	[0.0750]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	8,514	8,514	8,514	8,514	8,514
Constituencies	387	387	387	387	387
DV mean	89.49	73.26	0.39	0.73	0.01

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Sample excludes constituencies whose 2009 incumbent had served 20 or more years in office. Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A14: MP Performance: Robustness excluding London constituencies

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.115	0.224	0.0501	0.0309**	0.0660*
	[0.115]	[0.165]	[0.0384]	[0.0139]	[0.0382]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.0966	0.0928	-0.0486	-0.0109	-0.0592
	[0.107]	[0.105]	[0.0388]	[0.0114]	[0.0492]
Affected x {2010 ≤ Year ≤ 2014}	0.00775	0.330	0.0919**	0.0452**	0.147***
	[0.120]	[0.215]	[0.0469]	[0.0179]	[0.0501]
Affected x {2015 ≤ Year ≤ 2023}	-0.178	0.189	0.0380	0.0278*	0.0386
	[0.137]	[0.177]	[0.0459]	[0.0156]	[0.0460]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	9,482	9,482	9,482	9,482	9,482
Constituencies	431	431	431	431	431
DV mean	90.92	67.51	0.38	0.72	-0.01

Notes: Table shows SDID estimates of τ in Equation (1). The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Sample excludes constituencies in inner or outer London. Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A15: Voter Attitudes

	Heard about scandal (=1)	Scandal proves most MPs corrupt (=1)	Scandal makes me angry (=1)	Scandal is not all that important (=1)	MPs acted within the law (=1)	Involved MPs should resign (=1)	Local MP claimed money not entitled (=1)	How much money did local MP take (0-10)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Affected	0.000558	-0.0113	-0.00173	-0.0129	-0.0159	0.0169	0.0912**	0.963**
	[0.0127]	[0.0299]	[0.0141]	[0.0143]	[0.0267]	[0.0272]	[0.0358]	[0.459]
Constant	0.958***	0.460***	0.911***	0.105***	0.292***	0.706***	0.141***	4.189***
	[0.00534]	[0.0168]	[0.00724]	[0.00741]	[0.0147]	[0.0165]	[0.0138]	[0.259]
Observations	2,510	2,404	2,404	2,404	2,404	1,379	2,447	345
R-squared	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.026
Constituencies	150	150	150	150	150	150	150	108
DV mean	0.960	0.460	0.910	0.100	0.290	0.710	0.160	4.520

Notes: Table shows results from cross-sectional regressions of voter attitudes on our binary measure of scandal involvement, based on survey responses in the 2010 wave of the British Election Survey (BES). The unit of observation is an individual respondent. Our involvement measure is a dummy equal to one if the repayment amount in the Legg report ranks above the 75th percentile. The dependent variable in columns 1 is a dummy equal to one if the respondent answers "yes" to the question "Recently, there have been reports that Members of Parliament have claimed expense money to which they are not entitled. Have you heard or read anything about this?" The dependent variable in columns 2-6 are dummies equal to one if the respondent answers "agree" or "strongly agree" to the following questions."The reports on MPs expense claims prove that most MPs are corrupt" (column 2). "The way some MPS have claimed expenses makes me very angry" (column 3). "Despite all the press coverage, what MPs claim for expenses really isn't all that important" (column 4). "Most MPs did nothing wrong - they were just claiming expenses that the rules allow" (column 5). "Involved MPs should resign" (column 6). The dependent variable in columns 7 is a dummy equal to one if the respondent answers "yes" to the question "Now thinking about your own MP in this constituency, has he or she claimed expense money to which they are not entitled?" The dependent variable in column 8 is the response to the following question (only asked to those responding "yes" to the previous question). "On a scale that runs from 0 to 10, where 0 means a very small amount, and 10 means a very large amount, how much expense money do you think that your MP in this constituency has claimed that he or she was not entitled to?" Standard errors clustered by constituency shown in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A16: Political Competition

	Electorate	Turnout	Candidates	Win Margin (%)	Vote-share HHI
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-528.0	-0.00176	0.000201	0.183	0.00138
	[613.7]	[0.00369]	[0.108]	[1.170]	[0.00529]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2010}	-556.1	-0.00373	-0.0796	-0.0474	-0.00318
	[585.8]	[0.00336]	[0.177]	[0.885]	[0.00387]
Affected x {2015 ≤ Year ≤ 2019}	-524.0	-0.00110	0.0276	0.258	0.00293
	[634.1]	[0.00406]	[0.112]	[1.391]	[0.00618]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
Observations	3,395	3,395	3,395	3,395	3,395
Constituencies	485	485	485	485	485
DV mean	70191	0.660	5.520	22.01	0.380

Notes: Table shows synthetic difference-in-differences (SDID) estimates of the effect of exposure to the 2009 MPs' expenses scandal on electoral competition in affected constituencies. The unit of observation is the constituency-election year. The dependent variable is indicated in the column header: the size of the electorate (column 1); turnout, as a share of the electorate (column 2); the number of candidates standing (column 3); the winner's margin of victory, in percentage points (column 4); and the Herfindahl-Hirschman index of vote shares across all candidates (column 5). Panel A reports the average effect over the full post-scandal period; Panel B decomposes it into the effect at the 2010 general election (estimated on years up to 2010) and over 2015–2019 (estimated excluding 2010). Regressions include constituency, year, and 2009 incumbent party × parliamentary-term fixed effects. Standard errors, in brackets, are obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A17: MP Performance: Monthly-level Estimates (SDID)

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Full post-scandal period (May 2009 – Dec 2011)					
Affected x {Month ≥ May 2009}	0.0127	0.0658	0.0320*	0.0212	0.0709**
	[0.0484]	[0.108]	[0.0187]	[0.0146]	[0.0322]
PANEL B: Post-scandal period by electoral cycle					
Affected x {Pre-election: May 2009 – Apr 2010}	-0.00951	-0.00649	0.00193	-0.00985	0.000470
	[0.0502]	[0.0600]	[0.0161]	[0.0102]	[0.0263]
Affected x {Post-election: Jun 2010 – Dec 2011}	0.0281	0.112	0.0460*	0.0390*	0.109**
	[0.0666]	[0.147]	[0.0250]	[0.0212]	[0.0439]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Post-2010 FE	Yes	Yes	Yes	Yes	Yes
Observations	19,516	19,516	19,516	19,516	19,516
Constituencies	476	476	476	476	476
DV mean	1.560	1.290	0.160	0.680	0.0500

Notes: Table shows SDID estimates of the effect of MP misbehavior on legislative performance. The unit of observation is a constituency–month, covering January 2008 through December 2011; months in which Parliament is not sitting are omitted. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. Panel A reports a single treatment effect for the full post-scandal period, beginning with the *Telegraph* leak in May 2009. Panel B disaggregates this into the pre-election period (May 2009–April 2010) and the post-election period (June 2010–December 2011), each estimated against the common January 2008–April 2009 baseline. The dependent variable is indicated in the column header. Regressions include constituency and month fixed effects, and 2009 incumbent party × post-2010 fixed effects. Standard errors obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.

Table A18: MP Performance: Monthly-level Estimates (TWFE)

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Full post-scandal period (May 2009 – Dec 2011)					
Affected x {Month ≥ May 2009}	0.0404	0.104	0.0271	0.0249*	0.0737**
	[0.0663]	[0.0941]	[0.0172]	[0.0130]	[0.0348]
PANEL B: Post-scandal period by electoral cycle					
Affected x {Pre-election: May 2009 – Apr 2010}	0.0105	0.00607	0.00294	-0.00808	-0.00390
	[0.0578]	[0.0633]	[0.0154]	[0.0127]	[0.0313]
Affected x {Post-election: Jun 2010 – Dec 2011}	0.0589	0.168	0.0399*	0.0432**	0.118**
	[0.0923]	[0.135]	[0.0227]	[0.0183]	[0.0476]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Post-2010 FE	Yes	Yes	Yes	Yes	Yes
Observations	19,516	19,516	19,516	19,516	19,516
Constituencies	476	476	476	476	476
DV mean	1.560	1.290	0.160	0.680	0.0500

Notes: Table shows two-way fixed effects estimates of the effect of MP misbehavior on legislative performance. The unit of observation is a constituency–month, covering January 2008 through December 2011; months in which Parliament is not sitting are omitted. A constituency is affected if the incumbent MP in 2009 was asked to repay an amount ranking above the 75th percentile in the Legg report. Panel A reports a single treatment effect for the full post-scandal period, beginning with the *Telegraph* leak in May 2009. Panel B disaggregates this into the pre-election period (May 2009–April 2010) and the post-election period (June 2010–December 2011), each estimated against the common January 2008–April 2009 baseline. The dependent variable is indicated in the column header. Regressions include constituency and month fixed effects, and 2009 incumbent party × post-2010 fixed effects. Standard errors clustered at the constituency level. * p<0.1, ** p<0.05, *** p<0.01.

Table A19: MP Performance: TWFE Estimates with MP Fixed Effects

	Log Spoken Times	Log Questions Asked	Early Day Motions filed (=1)	Votes in Divisions (share)	Performance index
	(1)	(2)	(3)	(4)	(5)
PANEL A: Main estimates					
Affected x {Year ≥ 2009}	-0.0721	0.0865	0.0113	0.00428	0.00573
	[0.0893]	[0.191]	[0.0410]	[0.0128]	[0.0426]
PANEL B: Heterogeneous effects over time					
Affected x {Year = 2009}	-0.137	0.0615	-0.0416	-0.00830	-0.0608
	[0.117]	[0.122]	[0.0448]	[0.0146]	[0.0494]
Affected x {2010 ≤ Year ≤ 2014}	0.0212	0.109	0.0490	0.0147	0.0664
	[0.115]	[0.248]	[0.0482]	[0.0140]	[0.0515]
Affected x {2015 ≤ Year ≤ 2023}	-0.166	0.0717	-0.00450	-0.00179	-0.0349
	[0.128]	[0.277]	[0.0578]	[0.0204]	[0.0601]
Constituency FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes
MP FE	Yes	Yes	Yes	Yes	Yes
Observations	10,667	10,667	10,667	10,667	10,667
Constituencies	485	485	485	485	485
DV mean	89.94	69.78	0.39	0.72	0.00

Notes: Table shows TWFE estimates. The unit of observation is constituency-year and the sample period is 2002–2023. The dependent variable is indicated in the column header: the natural logarithm of one plus the number of spoken contributions in parliamentary debates in column 1; the natural logarithm of one plus the number of questions submitted to ministers (written and oral) in column 2; an indicator equal to one if the MP filed any Early Day Motion during the year in column 3; the share of divisions in which the MP participated in column 4; and an inverse-covariance-weighted index of the four outcomes in column 5. Regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Specifications additionally absorb MP identity, so the effect is identified from within-MP variation only; three singleton observations are dropped (10,667 versus 10,670). Standard errors are clustered at the constituency level. * p<0.1, ** p<0.05, *** p<0.01.

Table A20: MP Misconduct, Replacement, and Performance

	Dependent variable: Performance index			
	(1)	(2)	(3)	(4)
Affected x {Year ≥ 2009}	0.061	0.056	0.003	-0.020
	[0.041]	[0.040]	[0.043]	[0.041]
New MP in 2010 x {Year ≥ 2009}		0.072*	0.018	-0.066
		[0.038]	[0.042]	[0.041]
Affected x New MP in 2010 x {Year ≥ 2009}			0.185**	0.174**
			[0.081]	[0.079]
Tenure (years)				-0.014***
				[0.001]
Constituency FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes
Observations	10,670	10,670	10,670	10,670
Constituencies	485	485	485	485

Notes: Table reports two-way fixed-effects estimates of the effect of exposure to the 2009 MPs' expenses scandal on the constituency-level MP performance index. The unit of observation is the constituency-year, over the estimation sample of constituencies with boundary overlap of at least 0.7 after the 2010 redistricting. "Post" indicates years from 2010 onward. A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report. "New MP (2010 entrant)" indicates that the constituency is represented in the post-2010 years by an MP first elected in 2010, and "Affected × New MP" is the interaction of the two. "Tenure" is the number of years the sitting MP has served. Columns add these terms sequentially. All regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects. Standard errors, clustered by constituency, are reported in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A21: Predictors of Media Coverage from Eggers (2014)

	Dependent variable: MP implicated					
	(1)	(2)	(3)	(4)	(5)	(6)
Affected (=1)	0.0981***	0.101***	0.0977***	0.0840***	0.0835***	0.0798***
	[0.0198]	[0.0195]	[0.0194]	[0.0190]	[0.0194]	[0.0191]
Inner London (=1)		-0.0859***	-0.0790***	-0.0865***	-0.0879***	-0.100***
		[0.0237]	[0.0236]	[0.0247]	[0.0250]	[0.0259]
Outer London (=1)		0.00838	0.0172	0.0188	0.0205	0.0188
		[0.0350]	[0.0343]	[0.0328]	[0.0331]	[0.0332]
Distance to Westminster (Km/100)		-0.0185**	-0.0137*	-0.0160**	-0.0161**	-0.0153*
		[0.00729]	[0.00800]	[0.00774]	[0.00790]	[0.00777]
county constituency (=1)		0.0360**	0.0269*	0.0312**	0.0315**	0.0300*
		[0.0152]	[0.0163]	[0.0157]	[0.0158]	[0.0158]
Labour (=1)			-0.0201	-0.0156	-0.0174	-0.0286
			[0.0182]	[0.0170]	[0.0181]	[0.0188]
Liberal Democrat (=1)			-0.0823***	-0.0551***	-0.0532***	-0.0542***
			[0.0186]	[0.0183]	[0.0185]	[0.0190]
Years in office				0.00325***	0.00334***	0.00366***
				[0.000953]	[0.000967]	[0.00134]
Marginal seat (=1)				-0.0183	-0.0180	-0.0185
				[0.0147]	[0.0153]	[0.0153]
Speaker (=1)					-0.0484*	-0.0486*
					[0.0266]	[0.0279]
Party Leadership (=1)					-0.0836*	-0.0801
					[0.0486]	[0.0513]
Cabinet (=1)					0.0188	0.0217
					[0.0248]	[0.0242]
Shadow Cabinet (=1)					0.00213	0.000231
					[0.0207]	[0.0204]
Front Bench (=1)					0.00464	0.00728
					[0.0228]	[0.0230]
Age						0.000189
						[0.00102]
Female (=1)						0.0485**
						[0.0189]
White (=1)						-0.00348
						[0.0289]
Oxbridge (=1)						0.00108
						[0.0141]
Constant	0.162***	0.175***	0.189***	0.149***	0.147***	0.134***
	[0.00681]	[0.0189]	[0.0210]	[0.0257]	[0.0267]	[0.0475]
Observations	390	390	390	390	390	390
R-squared	0.088	0.134	0.156	0.196	0.200	0.217

Notes: Table shows results from a cross-sectional regression of the measure of MP media coverage developed by Eggers (2014) on our binary measure of scandal involvement, as well as constituency and MP characteristics. The dependent variable is defined as the number of expenses related media stories involving the MP divided by the total number of stories involving the MP plus 10 (a normalization parameter). Our involvement measure is a dummy equal to one if the repayment amount in the Legg report ranks above the 75th percentile. Column 1 shows results for a simple bivariate regression. Column 2 adds basic geographic characteristics. Column 3 adds dummies for the party affiliation of the incumbent in 2009. The omitted party is Conservative. Column 4 adds additional political characteristics, including the incumbent's number of years in parliament and an indicator for marginal seats, defined as not the same party winning in 1997, 2001, and 2005 or same party winning with average win margin below 10 percentage points. Column 5 adds measures for prominent positions in parliament, aggregated over the period covered by the Legg report (2004-2009). We code cabinet and shadow cabinet as mutually exclusive with front bench. Column 6 adds demographic characteristics of the incumbent MP. Robust standard errors shown in brackets. Sample only includes constituencies in England and those in which the incumbent MP was affiliated with the Conservative, Labour, or Liberal Democratic party. * p<0.1, ** p<0.05, *** p<0.01.

Table A22: Predictors of Media Coverage from Larcinese & Sircar (2017)

	Dependent variable: Log Total Mentions					
	(1)	(2)	(3)	(4)	(5)	(6)
Affected (=1)	0.531***	0.567***	0.574***	0.445***	0.458***	0.457***
	[0.150]	[0.150]	[0.152]	[0.147]	[0.138]	[0.136]
Northern Ireland (=1)		-0.432	-1.183**	-1.308**	-1.464**	-1.468***
		[0.345]	[0.521]	[0.646]	[0.597]	[0.566]
Scotland (=1)		1.036**	0.952**	1.062**	0.659**	0.710**
		[0.440]	[0.462]	[0.426]	[0.331]	[0.340]
Wales (=1)		-0.603***	-0.587***	-0.524**	-0.566***	-0.535***
		[0.215]	[0.224]	[0.219]	[0.199]	[0.204]
Inner London (=1)		-0.158	-0.156	-0.259	-0.237	-0.348
		[0.347]	[0.360]	[0.354]	[0.332]	[0.330]
Outer London (=1)		-0.274	-0.246	-0.187	-0.0844	-0.0661
		[0.248]	[0.253]	[0.240]	[0.247]	[0.245]
Distance to Westminster (Km/100)		-0.0931	-0.0779	-0.113*	-0.0544	-0.0619
		[0.0662]	[0.0722]	[0.0678]	[0.0654]	[0.0647]
County constituency (=1)		0.0106	-0.0311	0.0323	0.0124	0.0169
		[0.141]	[0.151]	[0.144]	[0.124]	[0.124]
DUP (=1)			0.203	0.823	0.658	0.836
			[0.557]	[0.649]	[0.623]	[0.596]
Labour (=1)			-0.0941	-0.0988	-0.149	-0.135
			[0.164]	[0.160]	[0.150]	[0.160]
Liberal Democrat (=1)			-0.325	-0.00987	-0.167	-0.127
			[0.244]	[0.234]	[0.215]	[0.218]
Other party (=1)			0.269	0.828***	0.992***	1.186***
			[0.293]	[0.302]	[0.288]	[0.362]
Sinn Féin (=1)			1.441***	1.988***	1.724***	1.812***
			[0.534]	[0.628]	[0.658]	[0.636]
SNP (=1)			0.527	0.764	0.863**	0.850**
			[0.680]	[0.527]	[0.395]	[0.361]
Years in office				0.0358***	0.0305***	0.0452***
				[0.00847]	[0.00787]	[0.00992]
Marginal seat (=1)				-0.470***	-0.329**	-0.326**
				[0.140]	[0.129]	[0.130]
Speaker (=1)					2.575***	2.598***
					[0.674]	[0.648]
Party Leadership (=1)					1.015**	1.085**
					[0.516]	[0.534]
Cabinet (=1)					2.187***	2.130***
					[0.247]	[0.253]
Shadow Cabinet (=1)					0.916***	0.875***
					[0.214]	[0.217]
Front Bench (=1)					0.627***	0.594***
					[0.194]	[0.190]
Age						-0.0151**
						[0.00700]
Female (=1)						0.308**
						[0.137]
White (=1)						-0.183
						[0.331]
Oxbridge (=1)						0.00376
						[0.133]
Constant	2.112***	2.315***	2.386***	2.040***	1.708***	2.414***
	[0.0702]	[0.166]	[0.187]	[0.235]	[0.209]	[0.473]
Observations	484	484	484	484	484	484
R-squared	0.027	0.068	0.080	0.155	0.337	0.349

Notes: Table shows results from a cross-sectional regression of the measure of MP media coverage developed by Larcinese & Sircar (2017) on our binary measure of scandal involvement, as well as constituency and MP characteristics. The dependent variable is defined as the natural logarithm of one plus the total number of expenses related media stories involving the MP. Our involvement measure is a dummy equal to one if the repayment amount in the Legg report ranks above the 75th percentile. Column 1 shows results for a simple bivariate regression. Column 2 adds basic geographic characteristics. England is the omitted nation. Column 3 adds dummies for the party affiliation of the incumbent in 2009. The omitted party is Conservative. Column 4 adds additional political characteristics, including the incumbent's number of years in parliament and an indicator for marginal seats, defined as not the same party winning in 1997, 2001, and 2005 or same party winning with average win margin below 10 percentage points. Column 5 adds measures for prominent positions in parliament, aggregated over the period covered by the Legg report (2004-2009). We code cabinet and shadow cabinet as mutually exclusive with front bench. Column 6 adds demographic characteristics of the incumbent MP. Robust standard errors shown in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A23: Legg Repayments and Claimed Allowances by Information Cell

	N	Legg repayment (£)	Expense Claims (£)	
			Living	Living (w/o travel)
Neither	241	187	25,268	16,803
Media-only	58	329**	31,098***	21,684***
Legg-only	56	3,931***	33,807***	21,705***
Both	35	10,424***	30,510***	21,511***

Notes: Table reports, for each information cell, the number of constituencies and the mean amount (in pounds) that the 2009 incumbent MP was asked to repay in the Legg report and claimed in living-plus-travel allowances and in living allowances. Claims correspond to 2008. A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report, and covered if it ranks above the 75th percentile of the Eggers press-implication score. "Neither" is not affected and not covered, "Media-only" covered and not affected, "Legg-only" affected and not covered, and "Both" affected and covered. Asterisks denote statistically significant differences from the "Neither" group. * p<0.1, ** p<0.05, *** p<0.01.

Table A24: Continuous Exposure: Legg Repayment and Media Coverage

	Performance index				2009 incumbent wins			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Legg repay (z) × {Year ≥ 2009} [a]	0.035**		0.018	0.053	-0.116***		-0.061***	-0.126***
	[0.016]		[0.020]	[0.035]	[0.020]		[0.021]	[0.031]
Media (z) × {Year ≥ 2009} [b]		0.047**	0.039*	0.043*		-0.153***	-0.125***	-0.133***
		[0.018]	[0.022]	[0.022]		[0.019]	[0.023]	[0.023]
Legg × Media × {Year ≥ 2009} [c]				-0.017				0.033***
				[0.012]				[0.011]
Both ([a] + [b] + [c])			0.057***	0.079***			-0.186***	-0.227***
			[0.019]	[0.028]			[0.021]	[0.028]
Constituency FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Party 2009 × Term FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8,580	8,580	8,580	8,580	2,340	2,340	2,340	2,340
Constituencies	390	390	390	390	390	390	390	390

Notes: Table reports two-way fixed-effects estimates. The dependent variable is the constituency-level MP performance index in columns 1–4 and an indicator equal to one if the 2009 incumbent MP is re-elected in columns 5–8; the performance columns use constituency-year observations and the turnover columns use constituency-election-year observations. "Legg repay (z)" is the standardized net Legg repayment of the 2009 incumbent; "Media (z)" is the standardized Eggers press-implication score; "Legg × Media" is their product. Within each outcome, the columns enter the Legg term alone, the Eggers term alone, both together, and both together with the interaction. The "Both" row reports the linear combination of the two exposure terms, plus the interaction in columns 4 and 8, with its own standard error and significance stars. Coefficients are expressed per one standard deviation of the exposure. All regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects and are estimated on constituencies with boundary overlap of at least 0.7 and available media data from Eggers (2014). Standard errors, clustered by constituency, are reported in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A25: Incumbent Turnover by Information Cell

	Legg (all England)	By exposure cell (vs. neither)		
		Legg-only	Media-only	Both
	(1)	(2)	(3)	(4)
PANEL A: Pooled ATT (all elections)				
2009 incumbent runs	-0.139***	-0.085	-0.185***	-0.328***
	[0.035]	[0.061]	[0.063]	[0.065]
2009 incumbent wins	-0.118***	-0.058	-0.156**	-0.303***
	[0.033]	[0.063]	[0.062]	[0.065]
Incumbent runs	-0.104***	-0.086**	-0.049	-0.158***
	[0.030]	[0.039]	[0.046]	[0.052]
Incumbent wins	-0.135***	-0.092**	-0.095*	-0.248***
	[0.036]	[0.044]	[0.049]	[0.053]
PANEL B: 2009 Incumbent wins by election				
First election (2010)	-0.090*	-0.021	-0.230***	-0.336***
	[0.050]	[0.083]	[0.059]	[0.081]
Later elections (2015–2019)	-0.124***	-0.066	-0.129*	-0.287***
	[0.035]	[0.065]	[0.067]	[0.069]
Constituency FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Party 2009 × Term FE	Yes	Yes	Yes	Yes

Notes: Table shows SDID estimates of the effect of exposure to the 2009 MPs' expenses scandal on incumbent-turnover outcomes. The unit of observation is the constituency-election year. Column 1 uses all English constituencies; columns 2–4 each restrict the sample to one exposure cell together with the constituencies that were neither audited above the threshold nor covered in the press. A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report, and covered if it ranks above the 75th percentile of the Eggers press-implication score; "Legg-only" denotes affected and not covered, "Media-only" covered and not affected, and "Both" affected and covered. In Panel A the dependent variable is, by row, an indicator equal to one if the 2009 incumbent MP stands in the given election, if the 2009 incumbent MP is re-elected, if the sitting incumbent stands, and if the sitting incumbent is re-elected. Panel B reports the "2009 incumbent re-elected" outcome separately for the first post-scandal election (2010) and for later elections (2015–2019). All regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects and are estimated over election years. Standard errors, obtained through bootstrapping with 50 repetitions, are reported in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A26: MP Performance by Information Cell: TWFE estimates + MP Fixed Effects

	Legg-only		Media-only		Both	
	(1)	(2)	(3)	(4)	(5)	(6)
PANEL A: Average effect						
Affected × {Year ≥ 2009}	0.055	0.008	0.136**	-0.009	0.201***	0.013
	[0.055]	[0.062]	[0.064]	[0.070]	[0.062]	[0.069]
PANEL B: Effect by period						
Affected × {Year = 2009}	-0.069	-0.019	-0.093	-0.060	-0.195**	-0.135
	[0.055]	[0.058]	[0.064]	[0.065]	[0.084]	[0.093]
Affected × {2010 ≤ Year ≤ 2014}	0.086	0.047	0.169**	0.039	0.339***	0.152*
	[0.064]	[0.073]	[0.073]	[0.094]	[0.082]	[0.086]
Affected × {2015 ≤ Year ≤ 2023}	0.053	-0.036	0.145**	-0.024	0.171**	-0.012
	[0.069]	[0.092]	[0.073]	[0.096]	[0.068]	[0.101]
Constituency FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Party 2009 × Term FE	Yes	Yes	Yes	Yes	Yes	Yes
MP FE	No	Yes	No	Yes	No	Yes
Observations	6,534	6,534	6,578	6,578	6,072	6,072
Constituencies	297	297	299	299	276	276

Notes: Table shows two-way fixed-effects estimates of the effect of exposure to the 2009 MPs' expenses scandal on the constituency-level MP performance index. The unit of observation is the constituency-year. Columns are grouped by exposure cell—Legg-only (columns 1–2), Media-only (columns 3–4), and Both (columns 5–6)—and within each pair the first column excludes and the second column includes MP fixed effects. Each pair restricts the sample to the indicated cell together with the constituencies that were neither audited above the threshold nor covered in the press. A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report, and covered if it ranks above the 75th percentile of the Eggers press-implication score; "Legg-only" denotes affected and not covered, "Media-only" covered and not affected, and "Both" affected and covered. Panel A reports the average effect over the period from 2009 onward; Panel B reports separate effects for 2009, for 2010–2014, and for 2015–2023. All regressions include constituency, year, and 2009 incumbent party × parliamentary term fixed effects; MP fixed effects are included as indicated. Standard errors, clustered by constituency, are reported in brackets. * p<0.1, ** p<0.05, *** p<0.01.

Table A27: MP Expense Claims by 2010 Incumbent Turnover

	Total		Living & travel		Operations	
	No turnover	Turnover	No turnover	Turnover	No turnover	Turnover
	(1)	(2)	(3)	(4)	(5)	(6)
PANEL A: Main estimates						
Affected x {Year ≥ 2009}	22.55	-5,991*	-1,920*	-3,050**	1,899	-905.5
	[3,364]	[3,388]	[1,089]	[1,490]	[2,929]	[2,514]
PANEL B: Effects by sub-period						
Affected x {Year = 2009}	-3,952**	-4,853*	-2,869***	-4,749***	-889.1	476.0
	[1,800]	[2,561]	[795.5]	[1,393]	[1,638]	[1,674]
Affected x {2010 ≤ Year ≤ 2014}	59.34	-6,910*	-2,707**	-2,526	2,718	-2,371
	[3,867]	[3,766]	[1,205]	[1,545]	[3,369]	[2,970]
Affected x {2015 ≤ Year ≤ 2023}	650.3	-5,449	-1,308	-3,167*	1,880	-261.1
	[3,880]	[3,879]	[1,332]	[1,733]	[3,382]	[2,970]
Constituency FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Party 2009 x Term FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,908	3,762	6,908	3,762	6,908	3,762
Constituencies	314	171	314	171	314	171

Notes: The table reports synthetic difference-in-differences (SDID) estimates of the effect of exposure to the 2009 MPs' expenses scandal on MP expense claims, in constant 2015 GBP, separately for constituencies that did not (columns 1, 3, 5) and did (columns 2, 4, 6) experience MP turnover at the 2010 general election. Columns 1–2 use total expenses, columns 3–4 living and travel expenses, and columns 5–6 operational expenses. Panel A reports the average effect over the full post-scandal period; Panel B disaggregates it by sub-period, with the SDID estimates obtained on the corresponding restricted windows (2002–2009; 2002–2014 excluding 2009; and 2002–2008 together with 2015–2023) and the matching 2009 incumbent party × term covariates. All specifications include constituency, year, and 2009 incumbent party × term effects. A constituency is affected if its 2009 incumbent MP was asked to repay an amount ranking above the 75th percentile in the Legg report; turnover equals one if the MP representing the constituency changed at the 2010 general election. Reported observations and constituencies refer to the full post-scandal period; the sub-period estimates use the windows above. Standard errors, in brackets, are obtained through bootstrapping with 50 repetitions. * p<0.1, ** p<0.05, *** p<0.01.