Appendix of Supplementary Information

Electoral Rules, Legislative Institutions, and Responsible Party Government

August 25, 2019

This appendix of supplementary information provides (1) details on how we categorize speakers based on suffixes recorded in the text records of the Diet committee meetings; (2) supplementary results for the main analyses using alternative cutoffs for institutional time periods; (3) supplementary results that weight speeches by each group based on the number of characters (i.e., taking into account that the volume of words in speeches can vary across utterances); (4) details on how standing committee designations and names vary across time and how we group them for the purposes of including fixed effects in our regression models, as well as supplementary results disaggregated by standing committee; and (5) supplementary results disaggregated by cabinet, rather than institutional time period.

1   Suffix Classification

Table **??** and Table **??** report the top 50 suffixes across the entire data period (1947-2016) for the House of Representatives and House of Councillors, respectively. Suffixes are classified into eight categories: Bureaucrat, Prime Minister (PM), Minister, Junior Minister, Vice Minister, Parliamentary Secretary, Member of Parliament (MP), Other. In our analysis, we group Prime Minister and Minister into a single category ("Minister"), and also group Junior Minister, Vice Minister, Parliamentary Secretary into a single category ("Junior Minister"). The Other category includes outside witnesses called to testify in committees, as well as any speaker or suffix ("Unclear") that could not be categorized due to data irregularities.

Most suffixes correspond to a single category, but some common suffixes (such as committee member, 委員, or "Mr.," 君) require disambiguation. To disambiguate ministers and junior ministers from backbench MPs and non-MPs for these ambiguous suffixes, we match the speaker names to known MPs in *The Reed-Smith Japanese House of Representatives Elections Dataset*.[1] This also allows us to disambiguate government committee members (政府委員) who are bureaucrats from those who are elected MPs serving as parliamentary secretaries.

Other suffixes with small numbers in different categories are due to the disambiguation rules (e.g., the one subcommittee member, 分科員, classified as Minister). Some of these suffixes do not correspond to the assigned category because of errors in the record; others are because a speaker who is coded as having an office in the Reed-Smith data might have resigned mid-cabinet, or have not yet been appointed. In general, we are able to identify and categorize the vast majority of speakers and suffixes, so the remaining irregularities can be regarded as small amounts "noise" among the millions of speeches, and should not pose serious concerns with regard to measurement error.

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[1] Available at https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/QFEPXD.

2 Alternative Periodization Decisions

This section examines the robustness of our main results to alternative definitions of the instituti-
onal time periods, as outlined in Table A.1. The numbers in the table correspond to the sequence
of cabinets in the postwar period, beginning with the Cabinet of Katayama Tetsu, inaugurated
May 24, 1947 (1st cabinet), and ending with the end of our data sample in the Second Reshuffle
of the Third Cabinet of Abe Shinzō, inaugurated August 3, 2016 (97th cabinet).

Our main analyses presented in the text are based on the periodization labeled *Law Enactment.*
We use the period from the 44th cabinet (First Cabinet of Suzuki Zenkō, inaugurated July 17,
1980) up to and including the 63rd cabinet (First Cabinet of Hashimoto Ryūtarō, inaugurated
January 11, 1996) as the Pre-Reform period. The Reform 1 and Reform 2 periods are delimited
by the *enactment* of the reforms—Reform 1 coming into effect from the Second Cabinet of Hashi-
moto Ryūtarō, inaugurated November 7, 1996, and Reform 2 coming into effect from the Second
Reshuffle of the Second Cabinet of Mori Yoshirō, inaugurated January 6, 2001.

Table A.1: Alternative Definitions of Institutional Periods

	Early Period	Pre-Reform	Reform 1	Reform 2
(a) Law Enactment	1-43	44-63	64-71	72-97
(b) Law Passage	1-43	44-59	60-65	66-97
(c) LDP Loss	1-43	44-58	59-71	72-97
(d) Extended Pre-Reform	1-11	12-63	64-71	72-97

Because it is possible that behavior might have shifted after the laws were passed, but before
the laws went into effect, we also consider a periodization delimited by the *passage* of the laws (*Law
Passage*). The electoral reform law was passed in January, 1994, during the 59th cabinet (Cabinet
of Hosokawa Morihiro, inaugurated August 9, 1993). The Reform 1 period thus begins with the
following, 60th cabinet (Cabinet of Hata Tsutomu, which was inaugurated April 28, 1994). The
Reform 2 period begins with the 66th cabinet (First Cabinet of Obuchi Keizō, inaugurated July
30, 1998), since the administrative reform bills were passed in the preceding 65th cabinet (First
Reshuffle of the Second Cabinet of Hashimoto Ryūtarō).

We also consider whether the behavioral effects of Reform 1 might have preceded the actual
passage of the law, given that the 1993 general election that resulted in the Liberal Democratic
Party losing power for the first time since 1955 was in large part driven by defections from the
LDP and new parties running on a platform of reform. When these new parties came into power,
legislative behavior might have shifted, *even before the electoral reform law was passed.* The
LDP Loss periodization thus begins the Reform 1 period one cabinet earlier, with the Cabinet of
Hosokawa Morihiro.

Finally, in order to rule out that our results are not caused by our decision to use only cabinets
from the 44th cabinet and later for our Pre-Reform comparison, we extend the Pre-Reform period
to include all cabinets from the 12th cabinet up until the 63rd cabinet when the first reform was
enacted (*Extended Pre-Reform*). This period includes all of the so-called "1955 System" era, which
began November 22, 1955, with the inauguration of the Third Cabinet of Hatoyama Ichirō and the
merger of the Liberal and Democratic parties into the LDP. Note that the Early Period data is
not included in any regressions, as Japanese party politics and legislative behavior were in relative
flux during these early years of postwar democracy.

Figure A.1 replicates the descriptive patterns in Figure 1 of the main text, but with a zoomed-
in view of the main time period under consideration and clear demarcations of important political
and reform events. This figure shows there was no pre-existing trend toward increasing ministerial
activity in the cabinets leading up to the LDP's loss in 1993 (a potential threat to our interpretation
of the observed shift being a result of changed electoral incentives). We do see, however, that the
initial decrease in ministerial activity began with the LDP's loss of power in 1993 and passage of
the electoral system reform law. This means that our main analysis, which using the enactment

of the law as a cutoff for categorizing institutional periods, is likely to be bias in a conservative direction, i.e., toward smaller estimated effects of the reform.

Figure A.2 replicates the results of Figure 2 in the main text with each of the alternative periodizations—showing how the activity of each of the speaker groups we consider changes in response to the institutional environment. The top-left panel (a) for *Law Enactment* is identical to Figure 2. All model specifications throughout are identical to those in the main analysis, with the only difference in panels (b), (c), and (d) being how the periods are defined. Figure A.3 does the same replication for Figure 3 of the main text—showing changes in discursive accountability (i.e., which type of speaker responds to opposition speakers) with each of the alternative periodizations.

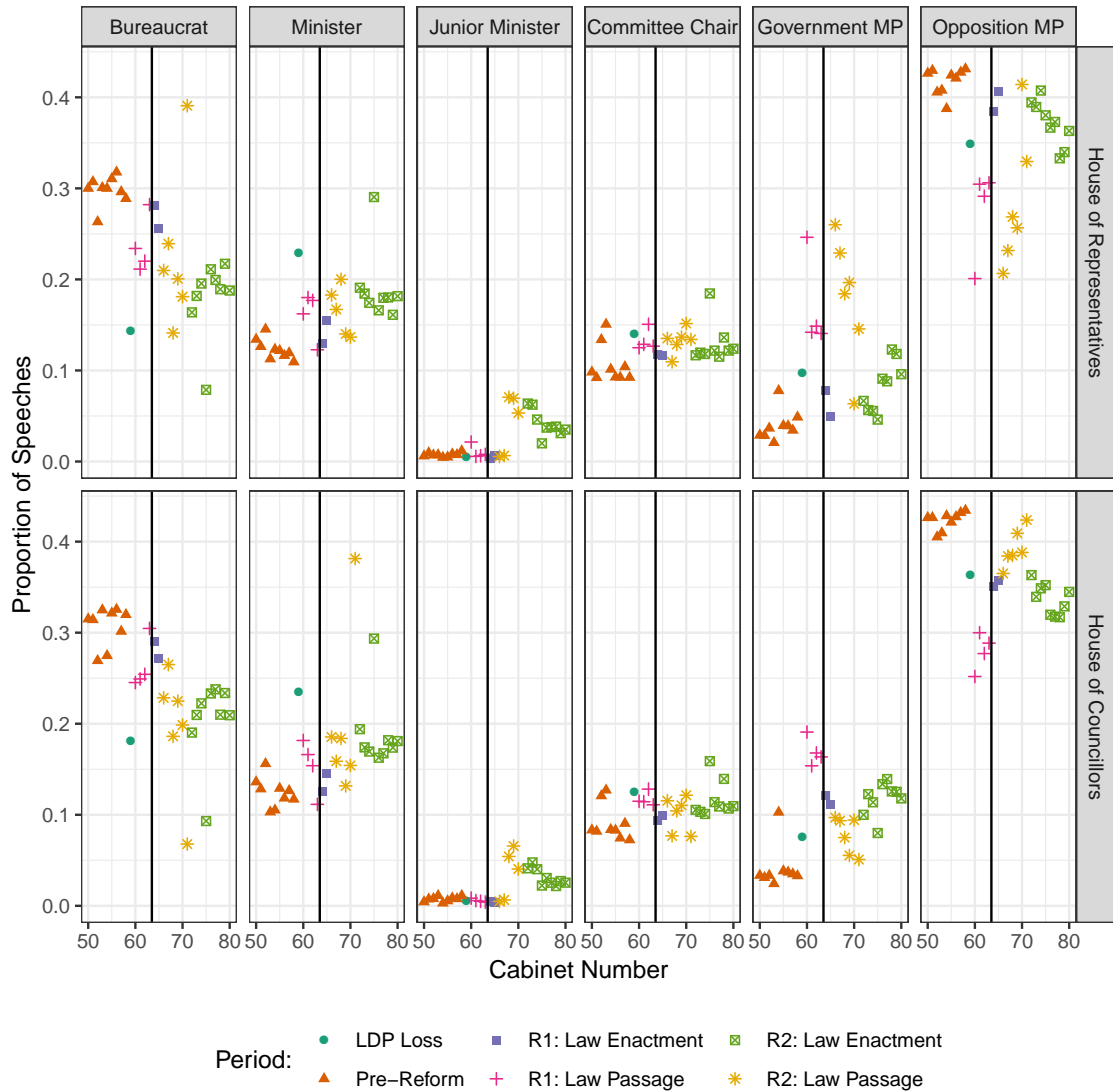Figure A.1: Descriptive Trends in Speaker Type: Closer View

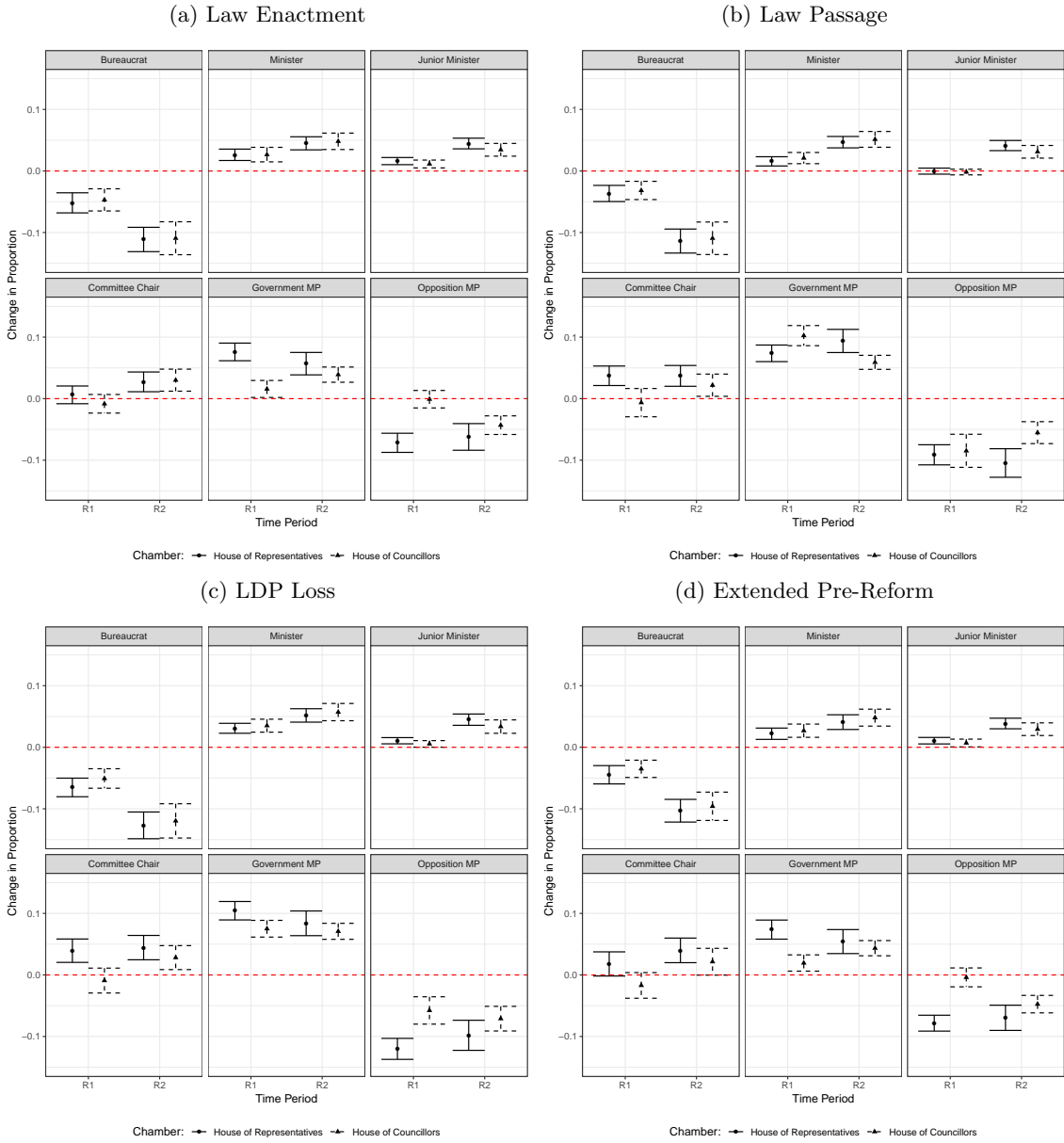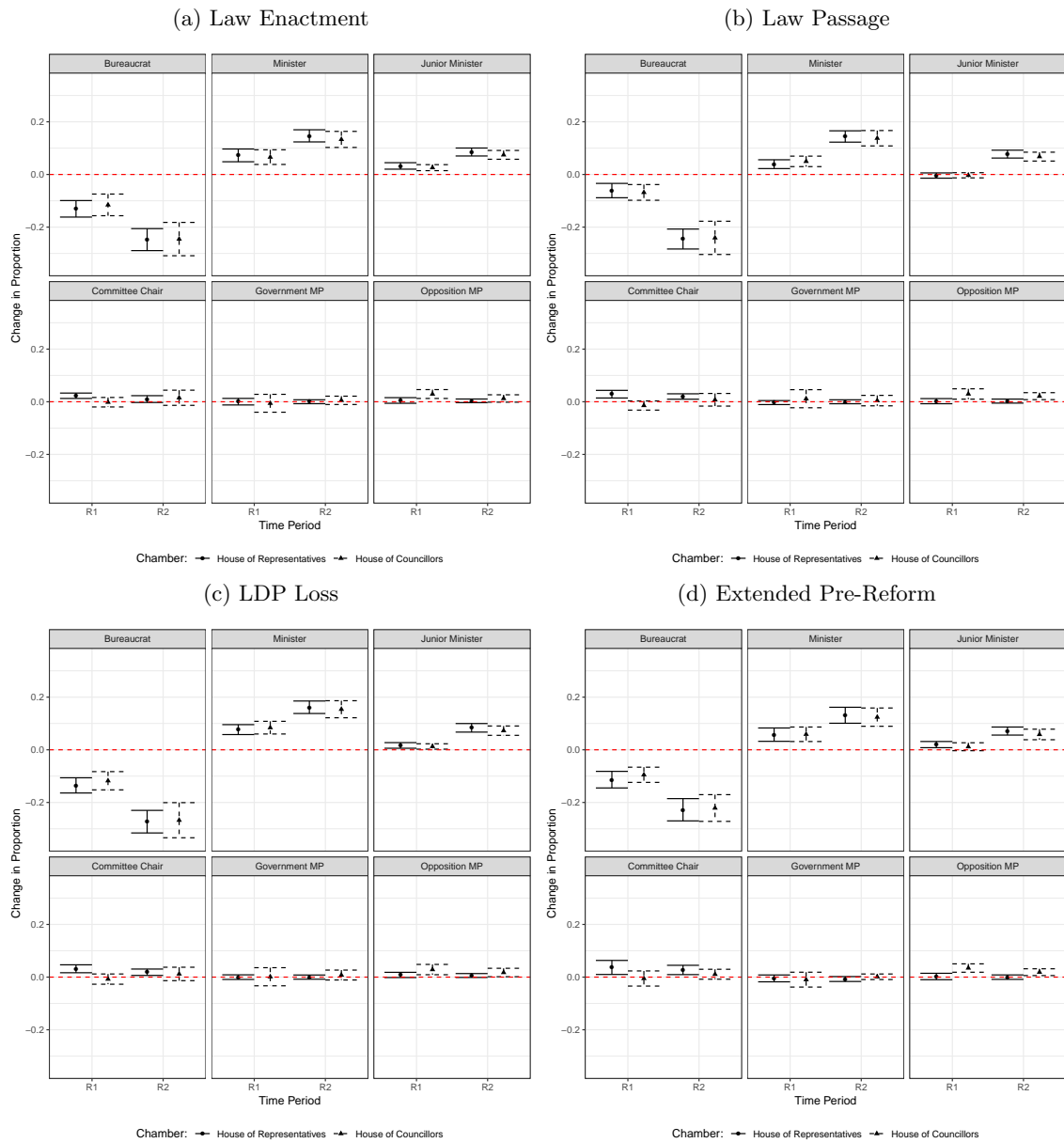Figure A.2: Activity of Speaker Groups: Alternative Definitions of Institutional Periods

(a) Law Enactment

(b) Law Passage

(c) LDP Loss

(d) Extended Pre-Reform

Figure A.3: Discursive Accountability: Alternative Definitions of Institutional Periods

(a) Law Enactment

(b) Law Passage

(c) LDP Loss

(d) Extended Pre-Reform

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3   Alternative Outcome Variable Based on Volume of Speech

Our main analysis is based on the proportion of speech using the *number* of speeches. Here, we examine the robustness of our results to using the *volume* or words (characters) spoken in those speeches. Effectively, this means that we weight the speeches by length in characters. Note that a very small number of speeches are reported as having zero length (this is an issue with the OCR from the Diet API), and these speeches are given zero weight in this analysis. Figure A.4 and Figure A.5 shows the results.

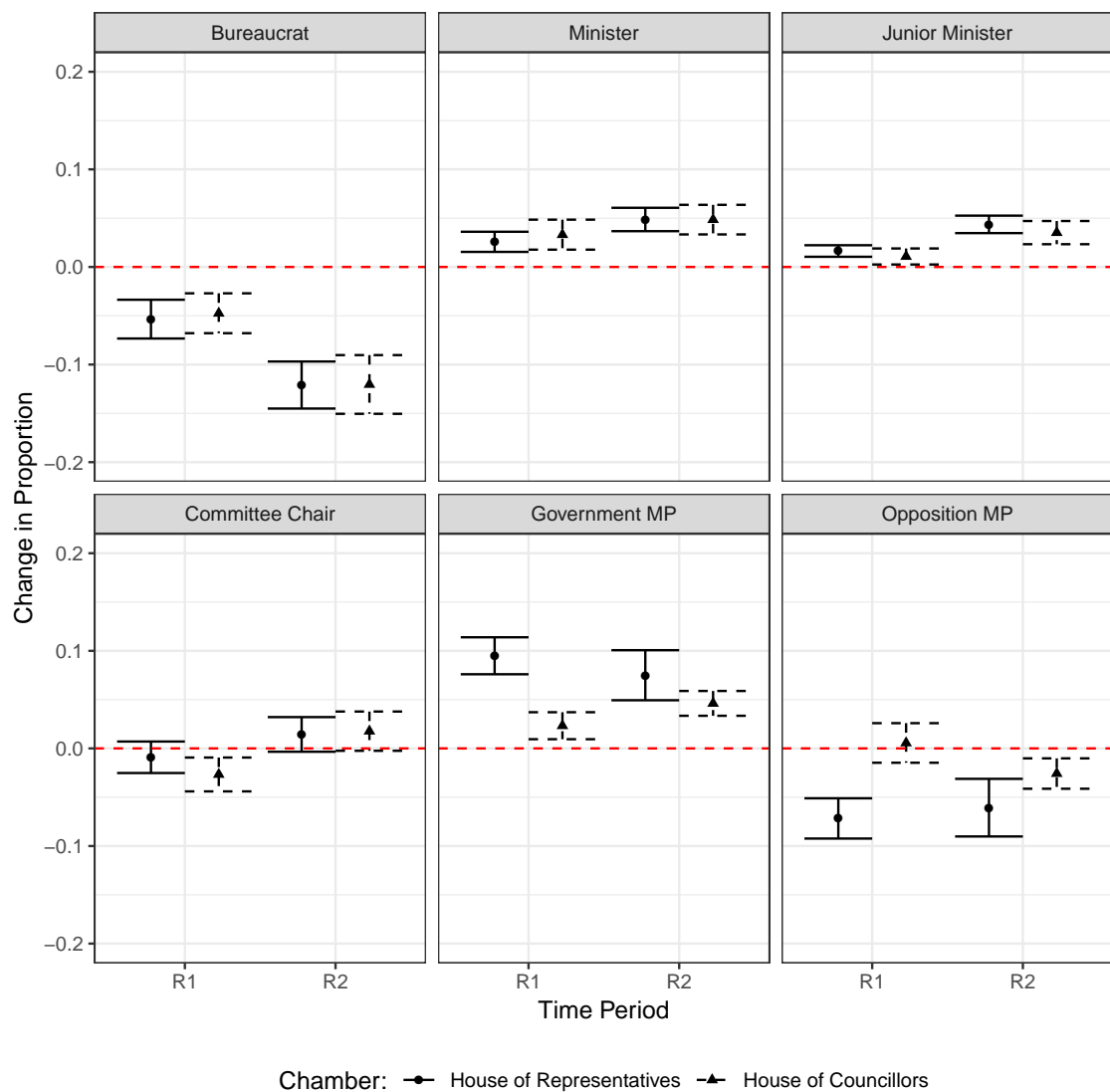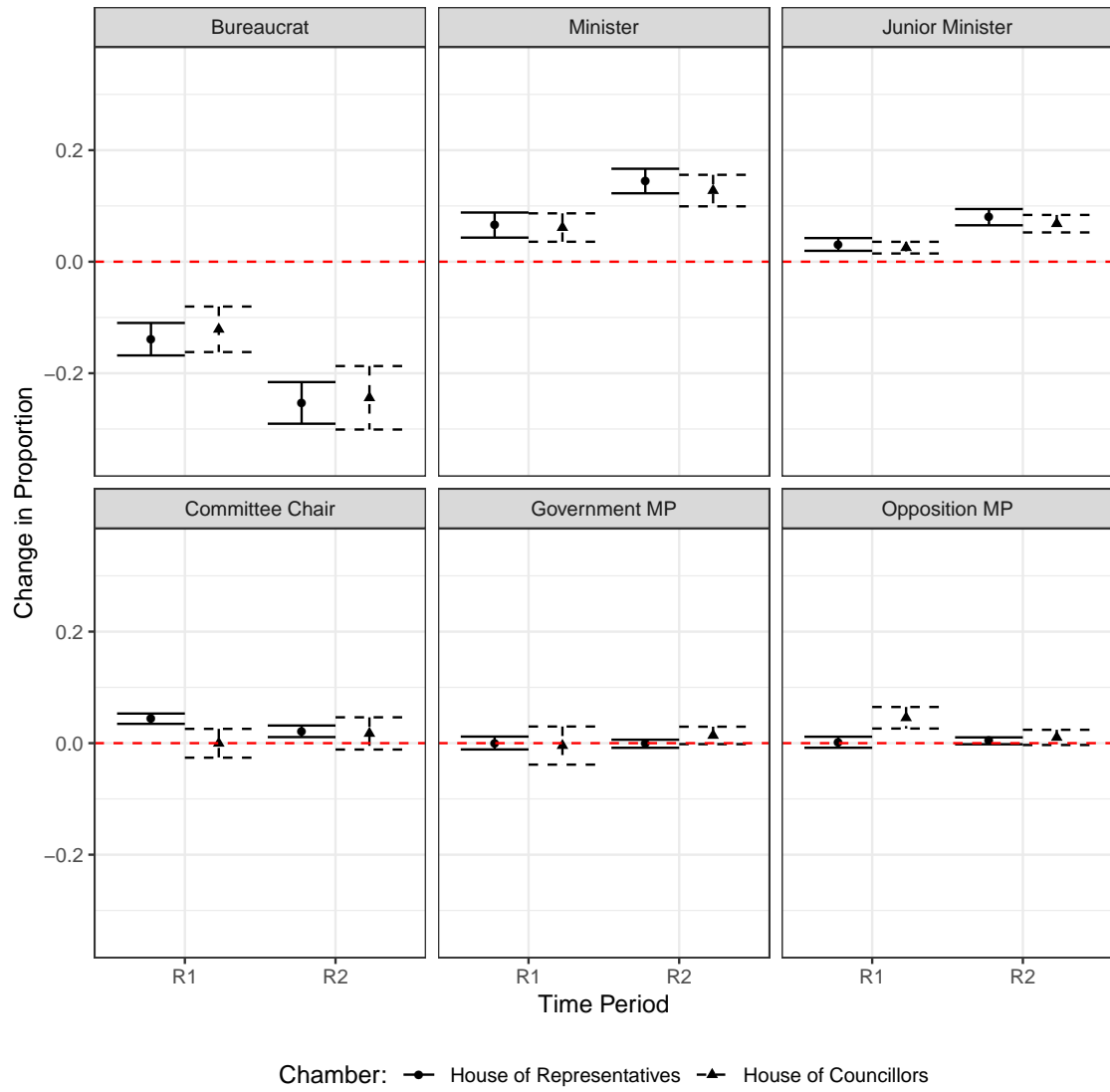Figure A.4: Activity of Speaker Groups: Proportion of Characters

Figure A.5: Discursive Accountability: Proportion of Characters

4 Standing Committees and Disaggregated Results

In the main analysis, we split committees into "Budget," "Standing" (all other standing committees apart from Budget) and "Other" (all other committees and subcommittees). The standing committees generally correspond to the major policy jurisdictions of the bureaucratic ministries, but vary somewhat across chambers and time. Table **??** lists the standing committees of the House of Councillors over time; Table **??** provides the corresponding information for the House of Representatives.

The left column in each table gives an English name, while the subsequent columns give the Japanese name at specific dates (yyyy-mm-dd) when reorganizations occurred. Committees in the same row are grouped together for the purposes of including committee fixed effects in the regression analyses, and we used our best judgment in determining which committees should be grouped together, given the policy jurisdictions and importance. For example, following the consolidation of ministries and committees in 2001, we group the post-reform Education, Science, and Technology (文部科学) Committee in the House of Representatives with the pre-reform Education (文教) Committee. Similarly, we group the post-reform Land Planning (国土交通) Committee with the pre-reform Construction (建設) Committee, the post-reform Health and Labor (厚生労働) Committee with the pre-reform Health (厚生) Committee, and so on, as indicated. Empty rows in each table indicate that the committee did not exist for that chamber.

In addition to the main results with committees pooled altogether or into three types (Budget, Standing, Other), we can also investigate whether our findings are robust when analyzing speech in each standing committee separately. The purpose of this analysis is to ensure that no single standing committee is driving the main results. As there is more limited data per committee, however, we expect the standard errors to be larger for any given committee.

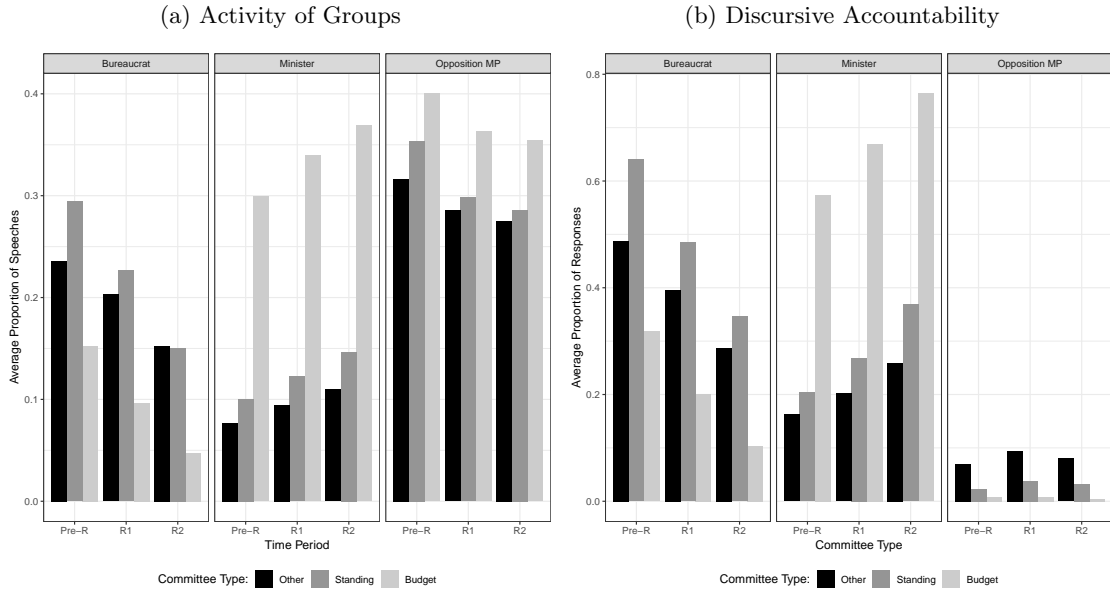(a) Activity of Groups   (b) Discursive Accountability

Figure A.6: Disaggregating the Results by Committee Type

Note: Figure shows the proportion of speech by each type of speaker in each reform period, disaggregated into three types of committee: Budget, Standing (non-Budget), and Other.

The results in Figure A.7 and Figure A.8 confirm the aggregate expectations for both activity of each speaker group and discursive accountability. Most standing committees exhibit the same trends in the Reform 1 and Reform 2 periods as the pooled result (bureaucrats' speech went down; ministers' speech went up, etc.). The statistical significance of the effects varies by committee, particularly in the Reform 1 period, but in the Reform 2 period almost all standing committees show the same pattern as the aggregate, pooled committee results. These results give us confidence that our main results (as well as the results split by Budget, Standing, and Other committees) are not being driven by changes in a few "outlier" standing committees.

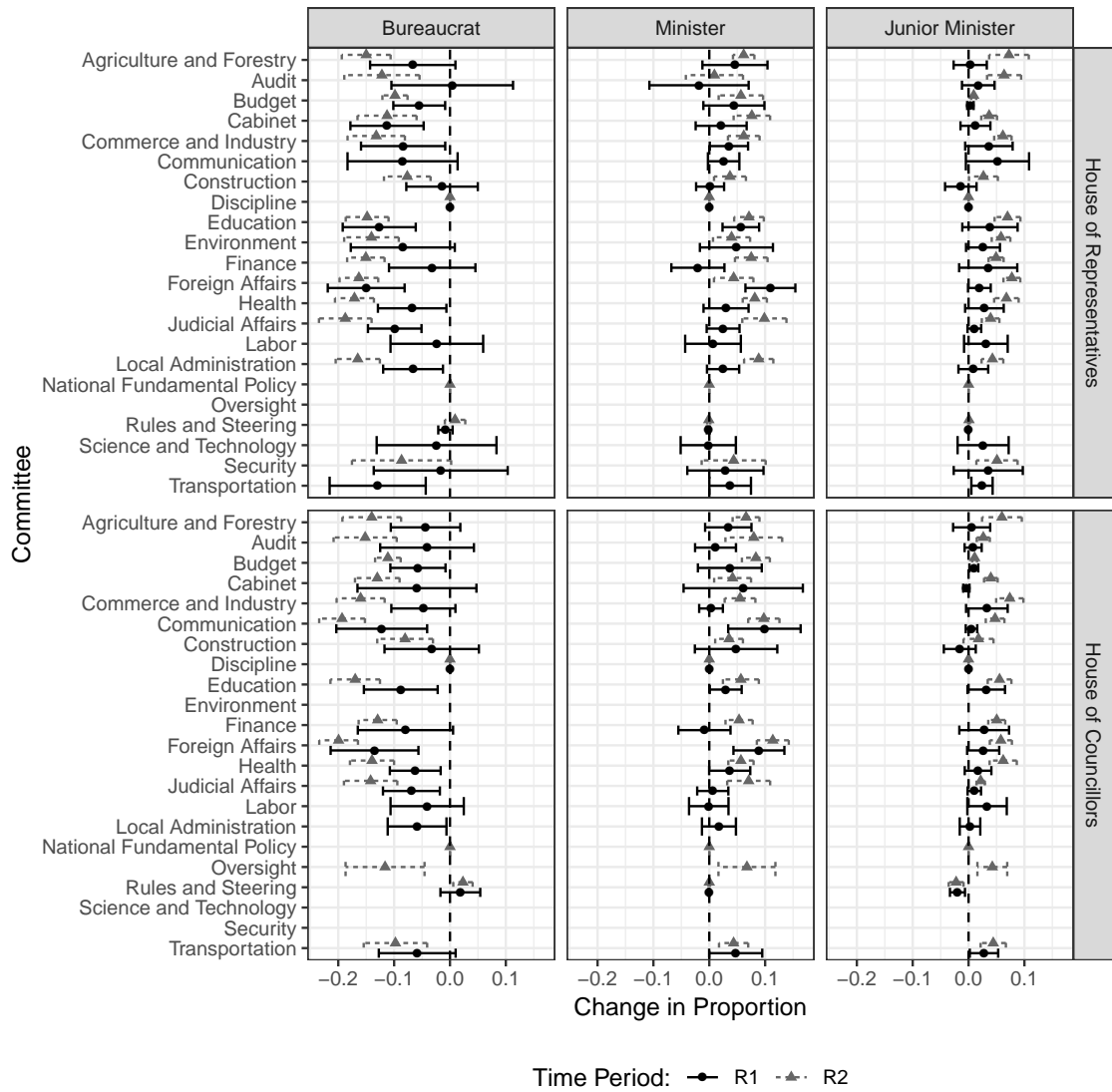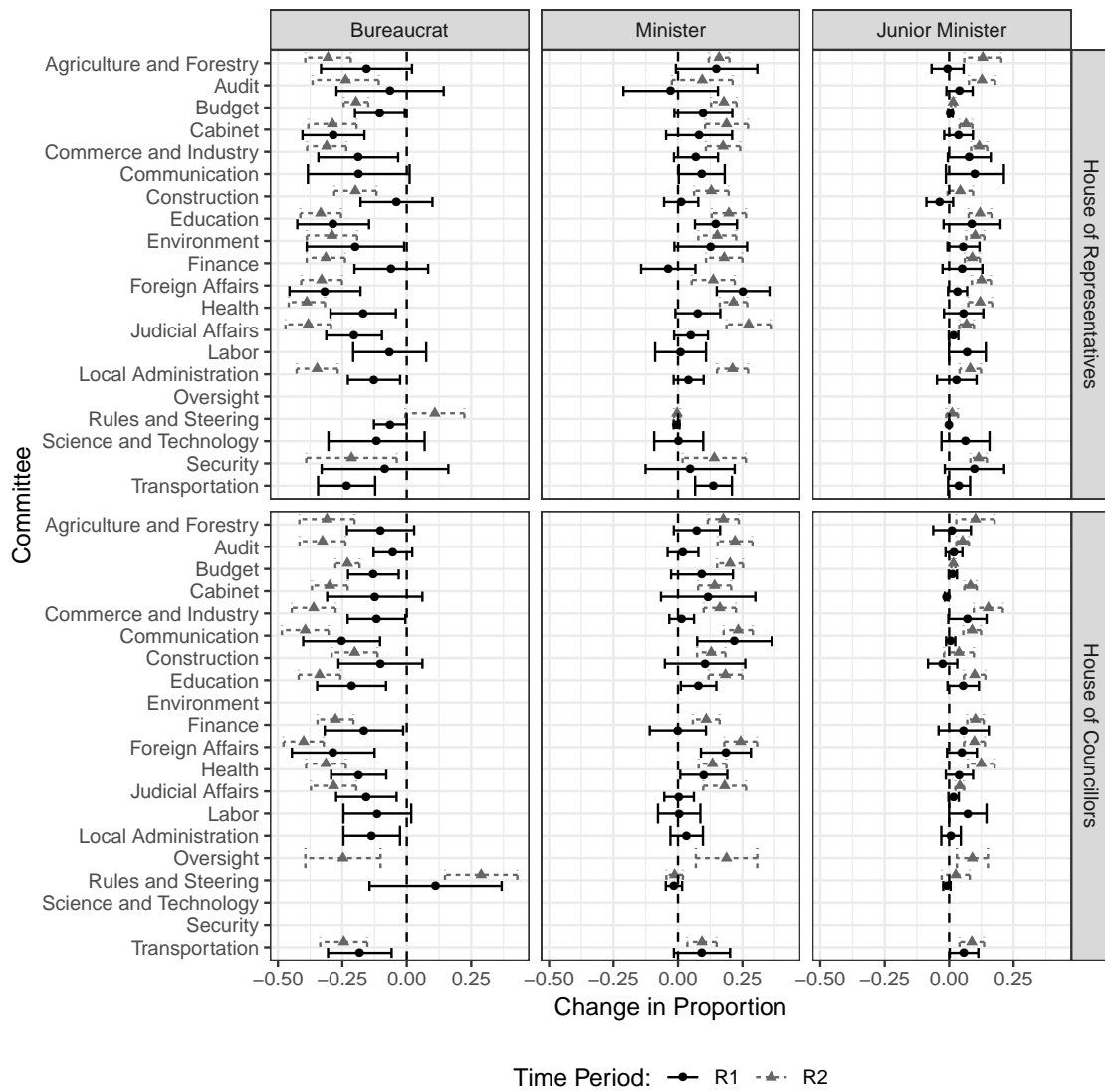Figure A.7: Activity of Speaker Groups: By Standing Committee

Figure A.8: Discursive Accountability: By Standing Committee

5 Cabinet-by-Cabinet Speaking Patterns

As another robustness test, we use fixed-effects for cabinet number rather than institutional time periods, allowing us to present a more fine-grained (but noisier) picture of legislative speaking behavior before and after each reform. Using the 63rd cabinet as the baseline (i.e., the cabinet immediately before the start of the Reform 1 period in our main periodization), Figure A.9 and Figure A.10 plot the fixed effects for cabinet, colored by period, for the activity of speaker groups and discursive accountability, respectively. These analyses reveal remarkable consistency in the effects we present in the main text.
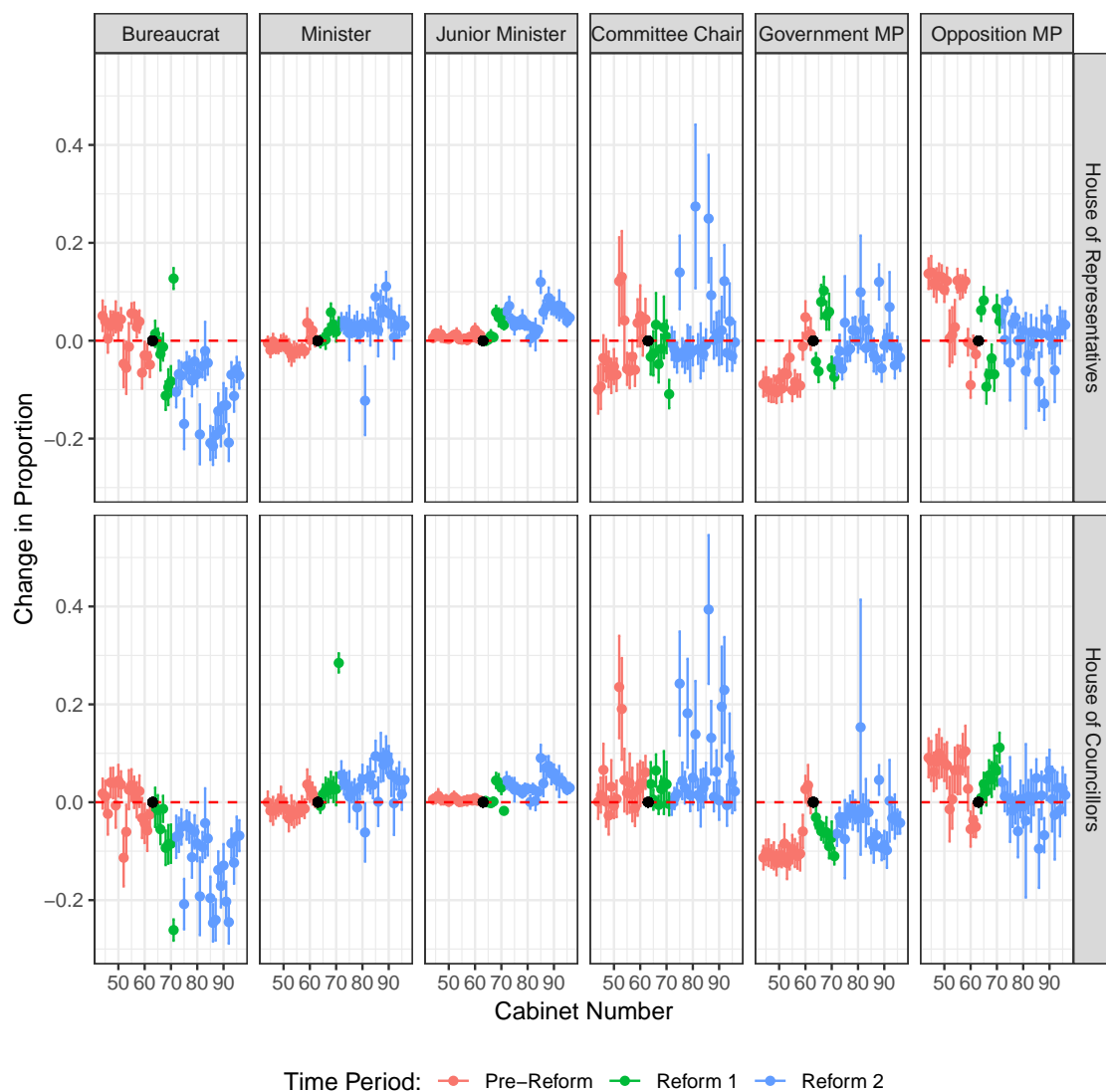
Figure A.9: Activity of Speaker Groups: Cabinet-by-Cabinet

Figure A.10: Discursive Accountability: Cabinet-by-Cabinet