

**FRANK BATTEN SCHOOL OF LEADERSHIP AND PUBLIC POLICY
UNIVERSITY OF VIRGINIA**

**RESEARCH METHODS AND DATA ANALYSIS I
PPOL 6150**

MIDTERM EXAM

*****DUE NOON, THURS., OCT. 23*****

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Office hours: Weds. 3:00-4:00 (or by appt.)
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This is an individual project. It is designed to help assess your grasp of the material covered in class to date. Do not consult other students. Any questions should be raised directly with Ms. Collier or Prof. Volden.

Although you should conduct extensive analyses to explore the data, your report should not detail all of the work you did, but only that work which provided insights into the policymaking role of women (and men) in Congress between 2009 and 2012.

To begin your analysis, download the file "WomenInCongress.dta" from the course UVaCollab site. The dataset contains one observation for each member of the House of Representatives in each of the 111th and 112th Congresses, compiled from the *Almanac of American Politics* and from the "Thomas" website of the Library of Congress. Variables capture the characteristics of each member, including gender, institutional position, number of bills introduced, and number of laws produced, among many other considerations. All variables are described in their *Stata* "labels." Become familiar with the variables and the data as a whole before launching into the midterm exam itself.

The assignment:

THE LEGISLATIVE EFFECTIVENESS OF WOMEN IN CONGRESS

In 2007, Nancy Pelosi (D-CA) became Speaker of the U.S. House of Representatives, potentially ushering in a new era for women in the lawmaking process. Although there seemed to have been an initial boost in the lawmaking productivity of women, some have questioned whether that finding has held up as Congress became even more polarized and as Democrats lost control of the House in the 2010 elections.

For example, there is reason to believe that the bills introduced by women in the 112th Congress (2011-12) experienced less legislative success than those introduced by men. For approximately every ten women lawmakers, three of their sponsored bills became law, relative to an average of about five laws for every ten male lawmakers (with therefore more than a 50% greater productivity for men over women!). However, any such differences were not present in the 111th Congress. What may account for such a change or for lawmaking differences across genders more broadly?

Generate a brief research memo (no more than 10 pages, plus cover page and Appendix, written in Microsoft Word) that uses *limited data analysis tools* to explore differences in the roles and productivity of women and men in the U.S. House of Representatives between the 111th and 112th Congresses. Ideally, you will leave the reader with a better understanding of the workings of Congress based on the data available to you, and will offer your best assessment of whether gender plays any major role in changing outcomes in American policymaking.

Through your analysis, you are NOT allowed to use techniques we have not yet covered in class. You ARE allowed to find standard and creative ways to partition the data, as was the case in Assignment #3. And now you can (and should) discuss differences both in terms of statistical and substantive significance.

Please follow the format below.

1. Introduction (one page or less)

An introduction to a report of this sort includes a paragraph providing motivation, a paragraph providing some indication of how you conducted the analysis, and a brief summary of the principal findings.

2. The data on lawmaking differences between men and women

Describe the data used in your research.

Among other summaries, note: how many laws (on average) did female lawmakers and male lawmakers produce in each Congress? (Hint: When examining only one Congress or one gender, be sure to rely on the proper “if” statements, such as “sum LawsProduced if Female==1 & Congress==111”.) What was the probability that a bill introduced by a woman (compared to those of male lawmakers) passed through the committee stage in each Congress (you will need to create or construct this variable from those in the dataset)? What was the probability that a bill introduced by a woman (compared to those of male lawmakers) in each Congress became law? Relying on the central limit theorem, calculate the probability of true underlying differences between the fates of legislation sponsored by male and female lawmakers, based on something other than randomness. (Hint: consider means, standard errors, and z-scores here.)

You may also want to offer some description of other key variables used later in your analysis or relevant throughout the report. For example, it is difficult to imagine a full accounting of women in Congress that fails to note the relative number of men and women or the party in control of the House in each time period. While several variables may therefore demand some discussion, this should not merely be a recounting of *all* variables, nor an inaccessible table with too much information. Make this section relevant and to the point.

Feel free to include brief tables or figures (here or in the sections below) that help the reader understand the data, but only if they *enhance* your argument and *not* if they *distract/detract* from it. For all tables and figures used in ANY report, be sure to offer an informative title, and make sure the variables can be clearly understood just by looking at the figure (correct labeling).

3. Other gender differences

Examining these two Congresses, are there any other possible differences that should be noted between male and female lawmakers? For instance, some scholars of Congress believe that majority party status, committee chair positions, and seniority are important determinants of legislative success. Do any differences exist between men and women along these lines? What other male-female differences do you note that may help readers understand lawmaking differences? Be creative.

To what extent do the same gender differences arise in both the 111th Congress and the 112th Congress?

4. Analysis

This is where you seek to explain *why* lawmaking differences between men and women occur and why they may differ across legislative institutions. For example, suppose in section 3 you had found that women tended to be underrepresented as committee chairs in the 112th Congress (relative to men and relative to their positions in the 111th Congress). Here, you should assess whether being a committee chair is important in understanding the number (or proportion) of a member's sponsored bills that become law. If so, offer an assessment of whether *this factor alone* seems to be sufficient to account for any lawmaking differences you find in section 2 (for example, consider looking for male-female differences only among members who are NOT committee chairs). Well-explained conditional probabilities may serve you well in this section, as may a series of figures or tables.

Be thorough and creative in your assessments in this section. Try to leave the reader far more informed and enlightened than befuddled and overwhelmed.

5. Caveats and concerns

Provide a brief discussion of possible errors or limitations of the data. Include here other factors that you believe to be highly relevant above and beyond your analysis in the previous section.

6. Summary

Briefly summarize what you've found, how, and why it matters. This should not be the same as the introduction, but should allow you to build upon the information conveyed in the report. Yet, it should not be so technical and jargon-laden that an intelligent (but time-pressed) reader who looks only at your introduction and summary has difficulty following.

The above six sections (and all tables and figures used in them) all count toward the ten-page limit. The cover page and appendices do not.

7. Appendices

A. Include a descriptive statistics table of all key variables used in your analysis, using the following sort of format, perhaps offered *separately for each Congress*:

	Description	Mean	Std. dev.	Min.	Median	Max.
Female	<i>Indicator variable taking value 1 for women, 0 for men</i>	0.175	0.380	0	0	1
Committee Chair						
Majority Party						
and so on						

(Hint: any variable that shows up in any of the Stata commands in your .do file needed for the above analysis should be included in this table.)

B. Include a well-documented (with comments) *Stata* do-file used to produce all of the findings and figures for your report. From running that .do file on the dataset provided, all information used in your report should be immediately reproduced. This file should be organized in the same order as any results given in your report, and comments should be included to match the major section headings, table numbers, and figure numbers from your report. If you create new variables, comments should indicate what you are doing and how any new variables will be used in your analysis. (Hint: this should NOT be a dump of all commands you tried in your exploratory analysis. Rather,

it should be the end product of your efforts providing evidentiary support for all of your report's claims.)

Upload your report to Collab, both as the final Word document and as a separate .do file that produces all of your major results when run on the original dataset.