

Online Appendix

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A Email to authors of private/gated PAPs

Dear Author (Dr. XXX),

As part of an ongoing research project on pre-registration and research transparency in the social sciences, we are collecting pre-analysis plans of studies that have been pre-registered on the AEA (socialscienceregistry.org) and EGAP (egap.org) registries. We see that your study, “[study title]” (registration # “[registration number]”) is currently private (or gated), which means that we are unable to view your pre-analysis plan.

We are writing to ask if you would be willing to share your pre-analysis plan with us. We pledge not share it publicly and to use it only for our analysis.

We would very much appreciate receiving your response within the next two weeks. You can send your pre-analysis plan to us as an attachment to PAPstudy2018@gmail.com.

Thank for your help in advance.

Best regards,

B Summary statistics

Table B.1: Summary statistics of population and sample of PAPs

Features	Population N=591	Sample (coded) N=195
With publication	0.396	0.477
Private (gated)	0.514	0.503
Registry		
American Economic Association	0.455	0.467
Evidence in Governance and Politics	0.545	0.533
Year		
2011	0.003	0.005
2012	0.012	0.010
2013	0.071	0.077
2014	0.149	0.169
2015	0.299	0.287
2016	0.465	0.451

C Coding rubric for PAPs with papers

Coding Instrument for PAPs with Papers

Coding Instrument

Study identification

1. Enter PAP code:

2. What kind of study does the PAP describe?

Mark only one oval.

- Field experiment
- Lab experiment
- Lab-in-field experiment
- Natural experiment
- Observational study
- Other: _____

Hypotheses

3. Does the PAP specify a clear hypothesis (hypotheses) to be tested? A "clear hypothesis" is one that describes a relationship between a clearly identified independent and dependent variable in which the direction of the effect is specified.

Note: "providing citizens with information about service delivery will increase political participation" would be coded "yes"

Mark only one oval.

- Yes
- No

4. Does the PAP specify more than one hypothesis to be tested?

Mark only one oval.

- Yes
- No

5. If yes, how many in total?

6. If the PAP specifies more than one hypothesis, are some of the hypotheses designated as primary and some as secondary/exploratory?

Mark only one oval.

- Yes
- No
- Not applicable (the PAP specifies just one hypothesis)

7. If the PAP distinguishes between primary and secondary/exploratory hypotheses, is this distinction maintained in the paper? (That is, are the primary hypotheses still presented as primary and the secondary hypotheses as secondary, or are some hypotheses that were pre-specified as secondary presented in the paper as primary, and vice versa?)

Mark only one oval.

- Yes
- No
- Not applicable (the PAP specifies just one hypothesis)

8. If the PAP specifies more than one hypothesis, how many are classified as primary?

9. How many of the primary hypotheses that were pre-registered in the PAP are presented in the main body of the paper?

10. How many of the primary hypotheses that were pre-registered in the PAP are presented in the appendix to the paper?

11. How many of the primary hypotheses that were pre-registered in the PAP and are presented in the main body of the paper are supported by the research findings?

12. How many of the primary hypotheses that were pre-registered in the PAP and are presented in the appendix are supported by the research findings?

13. How many of the secondary/exploratory hypotheses that were pre-registered in the PAP and are presented in the main body of the paper?

14. How many of the secondary/exploratory hypotheses that were pre-registered in the PAP and are presented in the appendix of the paper?

15. **Are there any results highlighted in the paper based on entirely new hypotheses that were not mentioned in the PAP?**

Mark only one oval.

- Yes
- No

16. **If yes, do the researchers point out that these analyses were not pre-specified?**

Mark only one oval.

- Yes
- No
- Not applicable (no results highlighted in the paper that were not based on pre-specified hypotheses)

Clarity of variable definitions

17. **Is (are) the primary dependent variable(s) in the study operationalized sufficiently clearly so as to prevent post-hoc adjustments?**

Note: Following Olken, "a good rule of thumb is that if you gave the PAP to two different programmers, and asked each to prepare the data for the primary dependent variable(s), they should be both able to do so without asking any questions, and they should both be able to get the same answer." If multiple primary DVs are specified, code based on whether, in general, they are operationalized clearly. Where some dependent variables are designated as primary, focus only on those.

Mark only one oval.

- Yes
- No

18. **Are there any results highlighted in the paper that are based on changes in the operationalization of the primary dependent variable(s) that were pre-specified in the PAP?**

Mark only one oval.

- Yes, significant changes that might plausibly affect estimates
- Yes, minor changes that probably do not affect estimates
- No changes in variable operationalization

19. **If there are changes in the operationalization of the primary dependent variable(s), do the authors note that they are different from what was pre-specified?**

Mark only one oval.

- Yes
- No
- Not applicable (no changes in variable operationalization)

20. **Briefly describe these deviations from the PAP with respect to the operationalization of the primary dependent variable(s)**

21. If secondary/exploratory dependent variables are specified, are they operationalized sufficiently clearly so as to prevent post-hoc adjustments?

Note: Following Olken, "a good rule of thumb is that if you gave the PAP to two different programmers, and asked each to prepare the data for the secondary/exploratory dependent variable(s), they should be both able to do so without asking any questions, and they should both be able to get the same answer."

Mark only one oval.

- Yes
- No
- Not Applicable (secondary/exploratory DVs are not specified in the PAP)

22. Is the treatment or main explanatory variable specified sufficiently clear so as to prevent post-hoc adjustments?

Following Olken, "a good rule of thumb is that if you gave the PAP to two different programmers, and asked each to prepare the data for the treatment/main explanatory variable, they should be both able to do so without asking any questions, and they should both be able to get the same answer."

Mark only one oval.

- Yes
- No

23. Are there any results highlighted in the paper that are based on changes in the operationalization of the treatment or main explanatory variable that were pre-specified in the PAP?

Mark only one oval.

- Yes, significant changes that might plausibly affect estimates
- Yes, minor changes that probably do not affect estimates
- No changes in variable operationalization

24. If there are changes in the operationalization of the treatment or main explanatory variable, do the authors note that they are different from what was pre-specified?

Mark only one oval.

- Yes
- No
- Not applicable (no changes in variable operationalization)

25. Briefly describe these deviations from the PAP with respect to the operationalization of the treatment or main explanatory variable

26. How many control or other independent variables are pre-specified?

27. **How many of these control or independent variables are specified sufficiently clear so as to prevent post-hoc adjustments?**
-

Sampling and power analysis

28. **Does the PAP specify the population of interest and unit of analysis?**

Mark only one oval.

- Yes
 No

29. **Does the PAP specify the sampling frame?**

Mark only one oval.

- Yes
 No

30. **Does the PAP specify the sampling strategy?**

Mark only one oval.

- Yes
 No

31. **Does the PAP specify the conditions under which participants/units may be excluded from the sample?**

Mark only one oval.

- Yes
 No

32. **Does the PAP use a power analysis to justify the sample size required for the study?**

Mark only one oval.

- Yes
 No

Data collection

33. **Is the treatment/main independent variable under the control of (randomized by) the researchers?**

Mark only one oval.

- Yes
 No

34. **If yes, does the PAP specify how participants/units will be assigned to treatment (i.e., the randomization procedure)?**

Mark only one oval.

- Yes
 No
 Not Applicable (treatment is not controlled by researcher)

35. **Does the PAP specify a manipulation check (i.e. variables to report in a balance table)?**

Mark only one oval.

- Yes
 No

36. **If yes, does the PAP specify what to do in the event of an imbalance?**

Mark only one oval.

- Yes
 No
 Not Applicable (PAP does not specify a manipulation check)

Inclusion and exclusion rules

37. **Does the PAP specify rules on how to handle missing values and attrition?**

Mark only one oval.

- Yes
 No

38. **Does the paper follow the pre-specified protocols with respect to missing values and attrition?**

Mark only one oval.

- Yes
 No
 Not applicable

39. **Does the PAP specify rules for dealing with outliers?**

Mark only one oval.

- Yes
 No

40. **Does the paper follow the pre-specified protocols with respect to dealing with outliers?**

Mark only one oval.

- Yes
 No
 Not applicable

41. **Does the PAP specify rules for dealing with noncompliance?**

Mark only one oval.

- Yes
 No
 Not applicable (noncompliance is not an issue in the study)

42. Does the paper follow the pre-specified protocols with respect to noncompliance?

Mark only one oval.

- Yes
- No
- Not applicable

Statistical model specification

43. Does the PAP spell out the precise statistical model to be tested including functional forms and estimator (ordinary least squares, probit, logit, Poisson, instrumental variables, and so on)?

Mark only one oval.

- Yes
- No

44. Are the results presented in the paper based on the exact model specifications that were pre-specified?

Mark only one oval.

- Yes
- No, minor deviations from pre-registered specifications that probably do not affect estimates
- No, minor deviations from pre-registered specifications that might plausibly affect estimates
- No, major deviations from pre-registered specifications

45. If there are deviations from the pre-registered model specifications, do the authors point out that the specifications they use are different from what was pre-registered?

Mark only one oval.

- Yes
- No

46. Briefly describe these deviations from the PAP with respect to model specifications.

47. Does the PAP state how standard errors will be treated (robust, clustering, bootstrapping, or other techniques)?

Mark only one oval.

- Yes
- No

48. Does the PAP specify a multiple testing adjustment?*Mark only one oval.*

- Yes
- No
- Not Applicable (too few DVs for a multiple testing adjustment to be necessary)

49. Does the PAP commit the researchers to presenting a simple difference-in-means test?*Mark only one oval.*

- Yes
- No

50. If yes, do the authors specify whether the test will be one-tailed or two-tailed?*Mark only one oval.*

- Yes
- No
- Not applicable (no difference-in-means test is specified)

51. Does the PAP specify whether/how covariates (including fixed effects) will be included in the regression model?*Mark only one oval.*

- Yes
- No

Other features

52. When was the PAP initially registered?*Mark only one oval.*

- Prior to data collection
- After data collection but before authors had access to/analyzed data
- After analysis of data had begun
- Other: _____

53. Was the PAP ever gated/private?*Mark only one oval.*

- Yes
- No

54. Was the PAP ever updated/refiled?*Mark only one oval.*

- Yes
- No

55. If the PAP was updated/refiled, how many updates were registered?

Mark only one oval.

- One
- Two
- Three or more
- Not applicable (PAP never updated)

56. If the PAP was updated/refiled, were the updates clearly identified as changes from the original PAP?

Mark only one oval.

- Yes
- No
- Not Applicable (PAP never updated)

57. Does the PAP specify that the study has received IRB approval (or that such approval is pending)?

Mark only one oval.

- Yes
- No
- Not Applicable (IRB approval is not necessary for a study of this type)

58. Do authors pre-specify what will guide their decisions when issues arise that were not anticipated in the PAP (i.e., the SOPs described in Lin and Green 2015)?

Mark only one oval.

- Yes
- No

59. How many pages long is the PAP (in single-spaced pages)?

Note: Divide double-spaced documents by two.

60. Do the authors provide a link to their replication data in the paper?

Note: Divide double-spaced documents by two.

Mark only one oval.

- Yes, a link is provided and it works
- Yes, a link is provided but it does not work
- Authors indicate that the replication data is "available on request"
- No mention of replication data

61. Do the authors provide a link to their do files in the paper?

Note: Divide double-spaced documents by two.

Mark only one oval.

- Yes, a link is provided and it works
- Yes, a link is provided but it does not work
- Authors indicate that the do files are "available on request"
- No mention of the do files

62. Do the authors make available their data collection instruments and/or lab protocols?

Note: Divide double-spaced documents by two.

Mark only one oval.

- Yes, they are provided in an appendix (including an online appendix)
 - Authors indicate that these materials are "available on request"
 - No mention is made of these materials
-

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D Potential PAP users' survey

Pre-analysis plans survey

Survey Flow

Standard: Introduction (1 Question)

Block: Pre-registration practice (13 Questions)

Standard: PAPs in the paper writing process (4 Questions)

Standard: PAPs in the review process (6 Questions)

Standard: Open-ended questions (5 Questions)

Page Break

Start of Block: Introduction

We thank you for your participation. The survey will take only 5-10 minutes to complete. Please, feel free to skip any questions that you prefer not to answer.

End of Block: Introduction

Start of Block: Pre-registration practice

Q2.1 Have you ever registered a pre-analysis plan (PAP) for a research project?

- Yes (1)
- No (2)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q32 How many PAPs have you registered?

- 1-2 (1)
- 3-4 (2)
- 5 or more (3)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q2.2 Have you ever kept one or more of your PAPs gated/private for a period of time?

- Yes (1)
 - No (2)
-

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q2.3 Do you have any ongoing research projects for which you did not register a PAP?

- Yes (1)
- No (2)

Display This Question:

If Do you have any ongoing research projects for which you did not register a PAP? = Yes

Q2.4 How many?

- 1-2 (1)
- 3-4 (2)
- 5 or more (3)

Q2.5 In contemplating registering a PAP, did you have any concern that others might scoop your ideas?

- No concern whatsoever (1)
- Slight concern (2)
- Significant concern (3)
- The PAP was gated (4)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q2.6 How long does it take you to draft a PAP for a typical project?

- A few days (1)
- About a week (2)
- 2-4 weeks (3)
- More than a month (4)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q2.7 Did writing the PAP cause you to discover anything about your project that led to refinements in your research protocols and/or data analysis plans

- Yes (1)
- No (2)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q2.8 Did writing the PAP put you in a position to receive useful feedback on your project design that you might not otherwise have received?

- Yes (1)
- No (2)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q2.9 Did writing the PAP delay the implementation of your project?

- Yes (1)
- No (2)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q2.10 Did you experience any downstream time savings from having written a PAP?

- Yes (1)
- No (2)

Display This Question:

If Did you experience any downstream time savings from having written a PAP? = Yes

Q2.11 Were these downstream time savings greater than the time spent to draft the PAP in the first place?

- Yes (1)
- No (2)
- About equal (3)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q2.12 Which of the following best characterizes your feelings about the time it takes to write and register a PAP?

- It doesn't take much time, so the cost is low. (1)
- It takes a considerable amount of time, but it is worth it. (2)
- It takes a considerable amount of time, and I am not certain of the value in the end. (3)

End of Block: Pre-registration practice

Start of Block: PAPs in the paper writing process

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q3.1 To what extent do you think the existence of a PAP restricted your ability to fully explore and analyze your data?

- Not at all (1)
- Somewhat (2)
- Quite a bit (3)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q3.2 To what extent do you think the existence of a PAP made it more difficult to write a theoretically interesting paper?

- Not at all (1)
- Somewhat (2)
- Quite a bit (3)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q3.3 To what extent do you think the existence of a PAP prevented you from stumbling on unexpected, surprise results?

- Not at all (1)
 - Somewhat (2)
 - Quite a bit (3)
 - Don't know (4)
-

Q3.4 Have you ever consulted a registry (EGAP, AEA) to learn whether studies on a particular research topic have ever been initiated?

- Yes (1)
- No (2)

End of Block: PAPs in the paper writing process

Start of Block: PAPs in the review process

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q4.1 Have you ever included a PAP with a paper you have submitted to a journal?

- Yes (1)
 - No (2)
 - No, but the paper mentions the PAP and I have assumed that reviewers could easily find it (3)
-

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q4.2 When you have submitted a pre-registered paper for publication, have reviewers ever mentioned your PAP?

Yes (1)

No (2)

Display This Question:

If When you have submitted a pre-registered paper for publication, have reviewers ever mentioned you... = Yes

Q4.3 Did they (please choose all that apply):

compare pre-specified hypotheses with those presented in the main paper? (1)

compare pre-specified variable definitions with those presented in the main paper? (2)

compare pre-specified inclusion of control variables with those presented in the main paper? (3)

refer to the PAP for some other reason (Please specify) (4)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q4.4 Have you ever invoked your PAP to respond to the suggestions of reviewers or workshop participants regarding additional analyses to run?

Yes (1)

No (2)

Q4.5 As a reviewer, have you ever consulted the PAP of a paper you are reviewing for a journal?

Yes (1)

No (2)

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q4.6 Outside of the formal review process at a journal, has another researcher ever invoked your PAP when discussing your paper?

Yes (1)

No (2)

End of Block: PAPs in the review process

Start of Block: Open-ended questions

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q5.1 Thinking back to the part of your scholarly career before you began regularly pre-registering your studies, how, if at all, has preregistration changed the way you conduct research? *(Please write your response in the box below. You can write as much or as little as you want).*

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q5.2 If you answered earlier that you have ongoing research studies for which you have not registered a PAP, what was it about those studies that made you decide that pre-registration was not necessary? *(Please write your response in the box below. You can write as much or as little as you want).*

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q5.3 How have you dealt in your research papers with deviations from what you pre-registered in your PAP? *(Please write your response in the box below. You can write as much or as little as you want).*

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q5.4 Has pre-registration ever been helpful for dealing with implementing partners or funders? If so, how? *(Please write your response in the box below. You can write as much or as little as you want).*

Display This Question:

If Have you ever registered a pre-analysis plan (PAP) for a research project? = Yes

Q5.5 Have your views on pre-registration changed over time? If so, how? *(Please write your response in the box below. You can write as much or as little as you want).*

End of Block: Open-ended questions
