Replication for: Chiefs' Endorsements and Voter Behavior

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1 Load required packages for codebook and replication of results

```
```{r}
#| label: load-packages
#| results: hide

#Install/load pacman
if(!require(pacman)){install.packages("pacman");require(pacman)}

#Install/load required packages

p_load(xtable,stargazer, plyr, tidyverse, rio,kableExtra,
       RColorBrewer,rgdal, maptools,rgeos,
       Rmisc,data.table,ggthemes,DiagrammeR,
       margins,ggpubr,mediation,
       broom,ggpubr,gridExtra,vtable,memisc)
```
```

2 Codebook

```
```{r}
survey_data <- read_csv("replication_bo_chiefsurvey_masterdata.csv")
data <- data.set(survey_data)
names(data) <- names(survey_data)
class(data)


data <- within(data, {
description(instanceID)<- "Respondent ID"
description(age)<- "Respondent age"
description(female)<- "Respondent gender (female)"
description(primaryeduc_or_less)<- "Respondent education level (=primary
 ↪  education or less)"
description(agric_worker)<- "Employment type (= farmer)"
description(close_party)<- "Respondent reports being close to a political
 ↪  party"
description(close_to_npp)<- "Respondent report being close to the incumbent
 ↪  party (New Patriotic Party (NPP))"
description(npp_scale)<- "Feeling thermometer: how close respondent feel to
 ↪  the incumbent party (NPP)"
```
```

```
description(correct_chiefname)<- "Whether Respondent was able to correctly
 ↪  name traditional leader"
description(chief_performance_rate)<- "Respondent's rating of the chief's
 ↪  performance with traditional area with X months"
description(treatment)<- "Endorsement teatment"
description(turnout_int_2020)<- "Whether respondent intended to vote in the
 ↪  election"
description(vote_int_2020_endorsed_voters)<- "Respondent intend to vote for
 ↪  the endorsed candidate"
description(education)<- "Education level of respondent"
description(total_assets)<- "Total assets"
description(electoral_area)<- "Electoral area"
description(constituency)<- "Constituency"
description(turnout_actual_binary)<- "Respondent reported voting in the 2020
 ↪  election"
description(vote_2020_endorsed)<- "Respondent voted for the endorsed in the
 ↪  2020 elections"
description(like_nana)<- "How likeable do you think Nana Akufo-Addo is as a
 ↪  presidential candidate?"
description(trust_nana)<- "How trustworthy do YOU think Nana
Akufo-Addo is as a presidential candidate?"
description(agree_local_nana_rev)<- "How likely do you think it is that Nana
 ↪  Akuffo-Addo will do a good job at constructing new infrastructure in
 ↪  your local area?"
description(agree_national_nana_rev)<- "How likely do you think it is that
 ↪  Nana Akuffo-Addo will do a good job atworking in Accra to make good
 ↪  policies for the country"
description(ear_nana_rev)<- "How likely is it that [chief name] would have
 ↪  the listening ear of Nana Akufo-Addo if he were to be elected?"
description(devt_nana_rev)<- "How likely is it that [chief name] would be
 ↪  able to work with Nana Akufo-Addo to advance development in your local
 ↪  area?"
description(personal_nana_rev)<- "Should Nana Akufo-Addo win, how likely is
 ↪  it that [chief name] will provide more benefits to you personally or
 ↪  your family?"
description(fear)<- "Assuming that [chief name] did endorse a candidate, how
 ↪  fearful are you that if you do not vote for the candidate that [chief
 ↪  name] endorses you or your community will be disadvantaged?"
description(pettytrader)<- "Employment type (= petty trader)"
description(artisans)<- "Employment type (= artisan)"
description(close_to_ndc)<- "Respondent report being close to the incumbent
 ↪  party (New Patriotic Party (NPP))"
```

```
description(turnout_2016)<- "Respondent report voting in the 2016
 ↪  presidential election"
description(asante)<- "Ethnicity: Asante"
description(bono)<- "Ethnicity: Bono"
description(dagati)<- "Ethnicity: Dagati"
description(ahafo)<- "Ethnicity: Ahafo"
description(ewe_anglo)<- "Ethnicity: Ewe/Anglo"
description(classify_code)<- "Respondents says 'Yes' to the question:
 ↪  'Thinking back to the audio I just played to you, do you think it was an
 ↪  endorsement for Nana Akufo-Addo'"
description(trad_area)<- "Name of traditional area"
description(tribe)<- "Ethnic identity"
description(vote_2012)<- "Thinking back to the presidential election in
 ↪  2012, which party's presidential candidate did you vote for?"
description(vote_2016)<- "Thinking back to the presidential election in
 ↪  2016, which party's presidential candidate did you vote for?"
description(party_rating)<- "Scale of likability of the incumbent party
 ↪  vesus the opposition party"
description(partyid_cont)<- "Categorization of respondents to partisan
 ↪  groups according to party ratings"
description(know_chief_endorse)<- "To your knowledge, has ${chiefname}
 ↪  endorsed any of the presidential candidates for the upcoming election?"
description(know_endorse)<- "Which presidential candidate has ${chiefname}
 ↪  endorsed?"
description(hear_before)<- "Did you hear about the chiefs endorsement before
 ↪  I came to you today?"
description(hear_endorse1)<- "Where did you hear about the chief endorsing
 ↪  this candidate?"
description(psname)<- "Polling station name"
description(vote_nana)<- "In the election on December 7th, if you vote, how
 ↪  likely are you to vote in the Presidential election for Nana Akufo-Addo
 ↪  of the NPP?"
description(confirm_name)<- "Indicator for confirmed respondents in the
 ↪  second wave of survey"
description(close_party2)<- "Which party respondent is close to"
description(vote_int_2020) <- "I am going to show you a list of the
 ↪  political parties that are competing in the upcoming presidential
 ↪  elections.  Please take a look at the list.  Please click on the party
 ↪  that you would vote for if the upcoming presidential elections were held
 ↪  today.  You will be able to answer this question in private.  Remember,
 ↪  the survey is anonymous, so please feel free to answer honestly."
description(vote_actual1) <- "I am going to pass you the tablet. Please may
 ↪  you select the candidate you voted for in the presidential election?"
```

```
foreach(x=c(female,primaryeduc_or_less,agric_worker,close_party,close_to_npp,correct_chiefna
 ↪  <- c("Yes" = 1,                                                    "No" = 0,
 ↪  "Missing" = NA                                    )
    })

measurement(education) <- "ordinal"
labels (education)<- c( "No formal schooling" =1,
"Informal schooling only" = 2,
"Some primary schooling" = 3,
"Primary school completed (JHS)" =4,
"Some secondary school (SHS)" = 5,
"Secondary school completed (SHS)" = 6,
"Some diploma or degree from polytechnic" = 7,
"Diploma or degree from a polytechnic completed" =8,
"Some university" = 9,
"University completed" = 10,
"Post-graduate completed" = 11,
"Don't know" = 98,
"Refused to answer" = 99)

labels(know_chief_endorse) <- c("Yes" =1, "No" =2, "Don't know"= 98)
measurement(treatment) <- "nominal"
labels(treatment) <- c("Control" = "placebo", "Endorsement
 ↪  only"="onlyendorse", "Endorsement + rationale" = "full")
labels(know_endorse) <- c("Correct response"= 1, "Incorrect response"= 2,
 ↪  "Couldn't say name" = 99)

labels(hear_before) <- c("Yes" =1, "No" =2, "Don't know"= 98)


labels (tribe) <- c("Ahafo" =   4,
"Akuapem"=  30,
"Akyem"=    2,
"Asante"=1,
"Basari"=   29,
"Bassani"=  14,
"Bimoba"=   16,
"Bono"= 3,
"Busanga"=  21,
"Dagati"=   23,
"Dagomba"   =12,
"Ewe/Anglo"=    9,
```

```
"Fante"=    5,
"Frafra"    =25,
"Ga/Adangbe"    =10,
"Gonja" =24,
"Grusi"=26,
"Guan" =    11,
"Hausa"=    19,
"Kokomba"=  13,
"Kusasi"=   27,
"Mamprusi"  =15,
"Mossi" =20,
"Nabdam"=17,
"Sefwi" =6,
"Sisaala"   = 22,
"Talensi" = 18,
"Wala"= 28,
"Wangara"   =31,
"Ghanaian only or doesn't think of self in those terms" =   7,
"Other (please specify)"=   8,
"Don't know"    =98,
"Refused to answer"=    99)

foreach(x=c(vote_2012, vote_2016),{measurement(x) <- "nominal"  })

foreach(x=c(vote_2012, vote_2016),{labels(x) <- c("National Democratic
 ↪  Congress (NDC)" = 1, "New Patriotic Party (NPP)"= 2, "Convention
 ↪  People's Party (CPP)" = 3, "Progressive People's Party (PPP)" = 4,
 ↪  "Other" =5, "Did not vote in that election (too young)"= 96,    "Did not
 ↪  vote in that election (other reason)"= 97,  "Refused to answer"= 98,
 ↪  "Don't know"= 99 )
    })

labels(partyid_cont) <- c("NPP"= "NPP","NDC"="NDC", "MODERATE"="MODERATE")

labels(hear_endorse1) <- c("canvass"= "canvass", "friend"="friend",
 ↪  "myself"="myself", "other"="other", "radio"= "radio", "tv"="tv")

measurement(vote_nana) <- "ordinal"

measurement(confirm_name) <- "ordinal"

labels(confirm_name) <- c("Yes" =1, "No" =2)
```

```
labels(close_party2) <- c("National Democratic Congress (NDC)" = 1, "New
 ↪  Patriotic Party (NPP)"= 2, "Convention People's Party (CPP)" = 3,
 ↪  "Progressive People's Party (PPP)" = 4, "Other" =5, "Refused to answer"=
 ↪  98, "Don't know"= 99 )

foreach(x= c(vote_int_2020,vote_actual1), {labels(x) <- c(
    "NPP - Nana Addo Dankwa Akufo-Addo"=1,
    "NDC - John Dramani Mahama"=2,
"GUM - Christian Kwabena Andrews"=3,
    "CPP - Ivor Kobina Greenstreet"=4,
"GFP - Madam Akua Donkor"=5,
    "GCPP - Henry Herbert Lartey" = 6,
"APC - Hassan Ayariga" = 7,
"LPG - Kofi Akpaloo" = 8,
"PNC - David Apasera" =9,
"PPP - Brigitte Dzogbenuku" =10,
    "NDP - Nana Konadu Agyeman-Rawlings" = 11,
"Independent candidate - Asiedu Walker" =12,
"I won't vote/I did not vote" = 13,
    "Don't know"=99
)})

})
```

```{r}
#| eval: true
#| results: markup
memisc::codebook(data)
```

```
================================================================================

   instanceID 'Respondent ID'

--------------------------------------------------------------------------------

   Storage mode: character
   Measurement: nominal

   Min: "uuid:0008ad79-7cae-4e25-bf0e-ba29224b72b6"
   Max: "uuid:fff355c8-04e5-4541-a954-51c5b0b5120b"

================================================================================

   age 'Respondent age'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min:  18.000
        Max: 103.000
       Mean:  39.488
   Std.Dev.:  15.184

================================================================================

   female 'Respondent gender (female)'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels       N Percent
```

```
   0   'No'              869    50.7
   1   'Yes'             846    49.3

        Min: 0.000
        Max: 1.000
       Mean: 0.493
   Std.Dev.: 0.500
```

```
   primaryeduc_or_less 'Respondent education level (=primary education or
   less)'
```

```
   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'           480  28.2  27.8
    1   'Yes'         1224  71.8  70.9
   NA M 'Missing'       11         0.6
   NA M                 11         0.6

        Min: 0.000
        Max: 1.000
       Mean: 0.718
   Std.Dev.: 0.450
```

```
   agric_worker 'Employment type (= farmer)'
```

```
   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'           901  52.6  52.5
    1   'Yes'          813  47.4  47.4
   NA M 'Missing'        1         0.1
```

```
   NA M                  1         0.1

        Min: 0.000
        Max: 1.000
       Mean: 0.474
   Std.Dev.: 0.499

================================================================================

   close_party 'Respondent reports being close to a political party'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels       N Percent

   0   'No'              593    34.6
   1   'Yes'            1122    65.4

        Min: 0.000
        Max: 1.000
       Mean: 0.654
   Std.Dev.: 0.476

================================================================================

   close_to_npp 'Respondent report being close to the incumbent party (New
   Patriotic Party (NPP))'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'           374  33.3  16.2
    1   'Yes'          748  66.7  32.4
   NA M 'Missing'      593        25.7
   NA M                593        25.7

        Min: 0.000
```

```
     Max: 1.000
    Mean: 0.667
Std.Dev.: 0.471

================================================================================

npp_scale 'Feeling thermometer: how close respondent feel to the incumbent
party (NPP)'

--------------------------------------------------------------------------------

Storage mode: double
Measurement: interval

     Min: 0.000
     Max: 7.000
    Mean: 4.112
Std.Dev.: 2.895

================================================================================

correct_chiefname 'Whether Respondent was able to correctly name traditional
leader'

--------------------------------------------------------------------------------

Storage mode: double
Measurement: interval

Values and labels       N Percent

0   'No'              878    51.2
1   'Yes'             837    48.8

     Min: 0.000
     Max: 1.000
    Mean: 0.488
Std.Dev.: 0.500

================================================================================

chief_performance_rate 'Respondent's rating of the chief's performance with
traditional area with X months'
```

```
-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 0.000
        Max: 7.000
       Mean: 4.762
   Std.Dev.: 2.199

===============================================================================

   treatment 'Endorsement teatment'

-------------------------------------------------------------------------------

   Storage mode: character
   Measurement: nominal

   Values and labels                            N Percent

          full 'Endorsement + rationale'     584    34.1
   onlyendorse 'Endorsement only'            547    31.9
       placebo 'Control'                     584    34.1

===============================================================================

   turnout_int_2020 'Whether respondent intended to vote in the election'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'           137   8.0   8.0
    1   'Yes'         1570  92.0  91.1
   NA M 'Missing'        8         0.5
   NA M                  8         0.5

        Min: 0.000
        Max: 1.000
       Mean: 0.920
```

```
   Std.Dev.: 0.272

================================================================================

   vote_int_2020_endorsed_voters 'Respondent intend to vote for the endorsed
   candidate'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'           443  30.9  22.2
    1   'Yes'          989  69.1  49.5
   NA M 'Missing'      283        14.2
   NA M                283        14.2

        Min: 0.000
        Max: 1.000
       Mean: 0.691
   Std.Dev.: 0.462

================================================================================

   education 'Education level of respondent'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: ordinal

   Values and labels                                          N Valid Total

    1   'No formal schooling'                               209  12.3  12.2
    2   'Informal schooling only'                            18   1.1   1.0
    3   'Some primary schooling'                            399  23.4  23.3
    4   'Primary school completed (JHS)'                    598  35.1  34.9
    5   'Some secondary school (SHS)'                       127   7.5   7.4
    6   'Secondary school completed (SHS)'                  210  12.3  12.2
    7   'Some diploma or degree from polytechnic'            27   1.6   1.6
    8   'Diploma or degree from a polytechnic completed'     36   2.1   2.1
    9   'Some university'                                    27   1.6   1.6
```

```
   10   'University completed'                                53   3.1   3.1
   11   'Post-graduate completed'                              0   0.0   0.0
   98   'Don't know'                                           0   0.0   0.0
   99   'Refused to answer'                                    0   0.0   0.0
   NA M                                                       11         0.6

================================================================================

   total_assets 'Total assets'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 0.000
        Max: 7.000
       Mean: 2.401
   Std.Dev.: 1.340

================================================================================

   electoral_area 'Electoral area'

--------------------------------------------------------------------------------

   Storage mode: character
   Measurement: nominal

   Min: "ABIRIKASU"
   Max:     "ZONGO"

================================================================================

   constituency 'Constituency'

--------------------------------------------------------------------------------

   Storage mode: character
   Measurement: nominal

   Min:    "JAMAN_SOUTH"
   Max: "TECHIMAN_SOUTH"
```

```
================================================================================

   turnout_actual_binary 'Respondent reported voting in the 2020 election'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'           121   8.2   6.2
    1   'Yes'         1363  91.8  70.0
   NA M 'Missing'      231        11.9
   NA M                231        11.9

        Min: 0.000
        Max: 1.000
       Mean: 0.918
   Std.Dev.: 0.274

================================================================================

   vote_2020_endorsed 'Respondent voted for the endorsed in the 2020 elections'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'           390  28.6  18.9
    1   'Yes'          973  71.4  47.1
   NA M 'Missing'      352        17.0
   NA M                352        17.0

        Min: 0.000
        Max: 1.000
       Mean: 0.714
   Std.Dev.: 0.452

================================================================================
```

```
   like_nana 'How likeable do you think Nana Akufo-Addo is as a presidential
   candidate?'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 1.000
        Max: 7.000
       Mean: 5.826
   Std.Dev.: 1.585

===============================================================================

   trust_nana 'How trustworthy do YOU think Nana Akufo-Addo is as a
   presidential candidate?'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 1.000
        Max: 7.000
       Mean: 5.601
   Std.Dev.: 1.734

===============================================================================

   agree_local_nana_rev 'How likely do you think it is that Nana Akuffo-Addo
   will do a good job at constructing new infrastructure in your local area?'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 1.000
        Max: 7.000
       Mean: 5.189
   Std.Dev.: 1.922

===============================================================================
```

```
   agree_national_nana_rev 'How likely do you think it is that Nana Akuffo-Addo
   will do a good job atworking in Accra to make good policies for the country'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 1.000
        Max: 7.000
       Mean: 5.530
   Std.Dev.: 1.712

===============================================================================

   ear_nana_rev 'How likely is it that [chief name] would have the listening
   ear of Nana Akufo-Addo if he were to be elected?'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 1.000
        Max: 7.000
       Mean: 5.818
   Std.Dev.: 1.378

===============================================================================

   devt_nana_rev 'How likely is it that [chief name] would be able to work with
   Nana Akufo-Addo to advance development in your local area?'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 1.000
        Max: 7.000
       Mean: 5.688
   Std.Dev.: 1.474
```

```
================================================================================

   personal_nana_rev 'Should Nana Akufo-Addo win, how likely is it that [chief
   name] will provide more benefits to you personally or your family?'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 1.000
        Max: 7.000
       Mean: 4.364
   Std.Dev.: 2.182

================================================================================

   fear 'Assuming that [chief name] did endorse a candidate, how fearful are
   you that if you do not vote for the candidate that [chief name] endorses you
   or your community will be disadvantaged?'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

        Min: 1.000
        Max: 5.000
       Mean: 1.345
   Std.Dev.: 0.947

================================================================================

   pettytrader 'Employment type (= petty trader)'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'          1482  86.5  86.4
    1   'Yes'          232  13.5  13.5
```

```
   NA M 'Missing'        1         0.1
   NA M                  1         0.1

        Min: 0.000
        Max: 1.000
       Mean: 0.135
   Std.Dev.: 0.342
```

```
   artisans 'Employment type (= artisan)'
```

```
   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'          1501  87.6  87.5
    1   'Yes'          213  12.4  12.4
   NA M 'Missing'        1         0.1
   NA M                  1         0.1

        Min: 0.000
        Max: 1.000
       Mean: 0.124
   Std.Dev.: 0.330
```

```
   close_to_ndc 'Respondent report being close to the incumbent party (New
   Patriotic Party (NPP))'
```

```
   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    0   'No'           777  69.3  33.7
    1   'Yes'          345  30.7  14.9
   NA M 'Missing'      593        25.7
```

```
   NA M                593        25.7

        Min: 0.000
        Max: 1.000
       Mean: 0.307
   Std.Dev.: 0.461

-------------------------------------------------------------------------------

   turnout_2016 'Respondent report voting in the 2016 presidential election'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels       N Percent

   0   'No'              380    22.2
   1   'Yes'            1335    77.8

        Min: 0.000
        Max: 1.000
       Mean: 0.778
   Std.Dev.: 0.415

-------------------------------------------------------------------------------

   asante 'Ethnicity: Asante'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels       N Percent

   0   'No'             1453    84.7
   1   'Yes'             262    15.3

        Min: 0.000
        Max: 1.000
       Mean: 0.153
   Std.Dev.: 0.360
```

```
================================================================================

   bono 'Ethnicity: Bono'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels       N Percent

   0   'No'              844    49.2
   1   'Yes'             871    50.8

        Min: 0.000
        Max: 1.000
       Mean: 0.508
   Std.Dev.: 0.500

================================================================================

   dagati 'Ethnicity: Dagati'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels       N Percent

   0   'No'             1619    94.4
   1   'Yes'              96     5.6

        Min: 0.000
        Max: 1.000
       Mean: 0.056
   Std.Dev.: 0.230

================================================================================

   ahafo 'Ethnicity: Ahafo'

--------------------------------------------------------------------------------
```

```
   Storage mode: double
   Measurement: interval

   Values and labels       N Percent

   0   'No'             1662    96.9
   1   'Yes'              53     3.1

        Min: 0.000
        Max: 1.000
       Mean: 0.031
   Std.Dev.: 0.173
```

```
   ewe_anglo 'Ethnicity: Ewe/Anglo'
```

```
   Storage mode: double
   Measurement: interval

   Values and labels       N Percent

   0   'No'             1663    97.0
   1   'Yes'              52     3.0

        Min: 0.000
        Max: 1.000
       Mean: 0.030
   Std.Dev.: 0.171
```

```
   classify_code 'Respondents says 'Yes' to the question: 'Thinking back to the
   audio I just played to you, do you think it was an endorsement for Nana
   Akufo-Addo''
```

```
   Storage mode: double
   Measurement: interval
```

```
   Values and labels     N Valid Total

    0   'No'           661  39.3  37.8
    1   'Yes'         1021  60.7  58.4
   NA M 'Missing'       33         1.9
   NA M                 33         1.9

        Min: 0.000
        Max: 1.000
       Mean: 0.607
   Std.Dev.: 0.488
```

==========

```
   trad_area 'Name of traditional area'
```

```
   Storage mode: character
   Measurement: nominal

   Min:    "Drobo"
   Max: "Techiman"
```

==========

```
   tribe 'Ethnic identity'
```

```
   Storage mode: double
   Measurement: interval

   Values and labels                                                    N Percent

    1 'Asante'                                                        262    15.3
    2 'Akyem'                                                           4     0.2
    3 'Bono'                                                          871    50.8
    4 'Ahafo'                                                          53     3.1
    5 'Fante'                                                          20     1.2
    6 'Sefwi'                                                           4     0.2
    7 'Ghanaian only or doesn't think of self in those terms'           4     0.2
    8 'Other (please specify)'                                        138     8.0
    9 'Ewe/Anglo'                                                      52     3.0
```

```
   10 'Ga/Adangbe'                                                  8     0.5
   11 'Guan'                                                        3     0.2
   12 'Dagomba'                                                     9     0.5
   13 'Kokomba'                                                     7     0.4
   14 'Bassani'                                                    10     0.6
   15 'Mamprusi'                                                   22     1.3
   16 'Bimoba'                                                      3     0.2
   17 'Nabdam'                                                      0     0.0
   18 'Talensi'                                                     0     0.0
   19 'Hausa'                                                       2     0.1
   20 'Mossi'                                                      15     0.9
   21 'Busanga'                                                    10     0.6
   22 'Sisaala'                                                     8     0.5
   23 'Dagati'                                                     96     5.6
   24 'Gonja'                                                       5     0.3
   25 'Frafra'                                                      9     0.5
   26 'Grusi'                                                      10     0.6
   27 'Kusasi'                                                     21     1.2
   28 'Wala'                                                       19     1.1
   29 'Basari'                                                     21     1.2
   30 'Akuapem'                                                    13     0.8
   31 'Wangara'                                                    11     0.6
   98 'Don't know'                                                  5     0.3
   99 'Refused to answer'                                           0     0.0

        Min:  1.000
        Max: 98.000
       Mean:  7.064
   Std.Dev.:  9.283

================================================================================

   vote_2012 'Thinking back to the presidential election in 2012, which party's
   presidential candidate did you vote for?'

--------------------------------------------------------------------------------

   Storage mode: double
   Measurement: nominal

   Values and labels                                        N Valid Total

    1   'National Democratic Congress (NDC)'              509  32.8  29.7
    2   'New Patriotic Party (NPP)'                       669  43.1  39.0
```

3	'Convention People's Party (CPP)'	8	0.5	0.5
4	'Progressive People's Party (PPP)'	6	0.4	0.3
5	'Other'	3	0.2	0.2
96	'Did not vote in that election (too young)'	145	9.3	8.5
97	'Did not vote in that election (other reason)'	155	10.0	9.0
98	'Refused to answer'	48	3.1	2.8
99	'Don't know'	10	0.6	0.6
NA M		162		9.4

==========

vote_2016 'Thinking back to the presidential election in 2016, which party's presidential candidate did you vote for?'

Storage mode: double
Measurement: nominal

Values and labels		N	Valid	Total
1	'National Democratic Congress (NDC)'	385	28.8	22.4
2	'New Patriotic Party (NPP)'	857	64.2	50.0
3	'Convention People's Party (CPP)'	11	0.8	0.6
4	'Progressive People's Party (PPP)'	7	0.5	0.4
5	'Other'	1	0.1	0.1
96	'Did not vote in that election (too young)'	3	0.2	0.2
97	'Did not vote in that election (other reason)'	16	1.2	0.9
98	'Refused to answer'	52	3.9	3.0
99	'Don't know'	3	0.2	0.2
NA M		380		22.2

==========

party_rating 'Scale of likability of the incumbent party vesus the opposition party'

Storage mode: double
Measurement: interval

Min: -7.000
Max: 7.000

```
       Mean: -1.591
  Std.Dev.:  4.819

================================================================================

  partyid_cont 'Categorization of respondents to partisan groups according to
  party ratings'

--------------------------------------------------------------------------------

  Storage mode: character
  Measurement: nominal

  Values and labels         N Valid Total

  MODERATE   'MODERATE'   582  35.3  33.9
       NDC   'NDC'        444  26.9  25.9
       NPP   'NPP'        623  37.8  36.3
        NA M               66         3.8

================================================================================

  know_chief_endorse 'To your knowledge, has ${chiefname} endorsed any of the
  presidential candidates for the upcoming election?'

--------------------------------------------------------------------------------

  Storage mode: double
  Measurement: interval

  Values and labels     N Valid Total

   1   'Yes'          178  21.3  10.4
   2   'No'           541  64.6  31.5
  98   'Don't know'   118  14.1   6.9
  NA M                878        51.2

       Min:  1.000
       Max: 98.000
      Mean: 15.321
  Std.Dev.: 33.497

================================================================================
```

```
   know_endorse 'Which presidential candidate has ${chiefname} endorsed?'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels             N Valid Total

    1   'Correct response'     174  97.8  10.1
    2   'Incorrect response'     3   1.7   0.2
   99   'Couldn't say name'      1   0.6   0.1
   NA M                       1537        89.6

        Min:  1.000
        Max: 99.000
       Mean:  1.567
   Std.Dev.:  7.325

===============================================================================

   hear_before 'Did you hear about the chiefs endorsement before I came to you
   today?'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: interval

   Values and labels     N Valid Total

    1   'Yes'          101  56.7   5.9
    2   'No'            76  42.7   4.4
   98   'Don't know'     1   0.6   0.1
   NA M               1537        89.6

        Min:  1.000
        Max: 98.000
       Mean:  1.972
   Std.Dev.:  7.235

===============================================================================

   hear_endorse1 'Where did you hear about the chief endorsing this candidate?'
```

```
-------------------------------------------------------------------------------

   Storage mode: character
   Measurement: nominal

   Values and labels       N Valid Total

   canvass   'canvass'     5   5.0   0.3
    friend   'friend'     21  20.8   1.2
    myself   'myself'     25  24.8   1.5
     other   'other'       4   4.0   0.2
     radio   'radio'      41  40.6   2.4
        tv   'tv'          5   5.0   0.3
        NA M            1614        94.1

===============================================================================

   psname 'Polling station name'

-------------------------------------------------------------------------------

   Storage mode: character
   Measurement: nominal

   Min:  "G052101"
   Max: "G183201B"

===============================================================================

   vote_nana 'In the election on December 7th, if you vote, how likely are you
   to vote in the Presidential election for Nana Akufo-Addo of the NPP?'

-------------------------------------------------------------------------------

   Storage mode: double
   Measurement: ordinal

   Values               N Percent

     (unlab.val.)    1715   100.0

===============================================================================
```

confirm_name 'Indicator for confirmed respondents in the second wave of survey'

Storage mode: double
Measurement: ordinal

Values and labels		N	Valid	Total
1	'Yes'	1487	99.9	86.7
2	'No'	2	0.1	0.1
NA	M	226		13.2

==========

close_party2 'Which party respondent is close to'

Storage mode: double
Measurement: interval

Values and labels		N	Valid	Total
1	'National Democratic Congress (NDC)'	345	30.7	20.1
2	'New Patriotic Party (NPP)'	748	66.7	43.6
3	'Convention People's Party (CPP)'	4	0.4	0.2
4	'Progressive People's Party (PPP)'	0	0.0	0.0
5	'Other'	8	0.7	0.5
98	'Refused to answer'	13	1.2	0.8
99	'Don't know'	4	0.4	0.2
NA	M	593		34.6

Min: 1.000
Max: 99.000
Mean: 3.176
Std.Dev.: 11.803

==========

vote_int_2020 'I am going to show you a list of the political parties that are competing in the upcoming presidential elections. Please take a look at the list. Please click on the party that you would vote for if the upcoming

presidential elections were held today. You will be able to answer this question in private. Remember, the survey is anonymous, so please feel free to answer honestly.'

Storage mode: double
Measurement: interval

Values and labels		N	Percent
1	'NPP - Nana Addo Dankwa Akufo-Addo'	989	57.7
2	'NDC - John Dramani Mahama'	404	23.6
3	'GUM - Christian Kwabena Andrews'	25	1.5
4	'CPP - Ivor Kobina Greenstreet'	6	0.3
5	'GFP - Madam Akua Donkor'	1	0.1
6	'GCPP - Henry Herbert Lartey'	1	0.1
7	'APC - Hassan Ayariga'	0	0.0
8	'LPG - Kofi Akpaloo'	0	0.0
9	'PNC - David Apasera'	0	0.0
10	'PPP - Brigitte Dzogbenuku'	3	0.2
11	'NDP - Nana Konadu Agyeman-Rawlings'	2	0.1
12	'Independent candidate - Asiedu Walker'	1	0.1
13	'I won't vote/I did not vote'	58	3.4
99	'Don't know'	225	13.1

Min:	1.000
Max:	99.000
Mean:	14.577
Std.Dev.:	32.882

==========

vote_actual1 'I am going to pass you the tablet. Please may you select the candidate you voted for in the presidential election?'

Storage mode: double
Measurement: interval

Values and labels		N	Valid	Total
1	'NPP - Nana Addo Dankwa Akufo-Addo'	973	71.4	56.7

```
 2   'NDC - John Dramani Mahama'                334  24.5  19.5
 3   'GUM - Christian Kwabena Andrews'           12   0.9   0.7
 4   'CPP - Ivor Kobina Greenstreet'              5   0.4   0.3
 5   'GFP - Madam Akua Donkor'                    0   0.0   0.0
 6   'GCPP - Henry Herbert Lartey'                0   0.0   0.0
 7   'APC - Hassan Ayariga'                       0   0.0   0.0
 8   'LPG - Kofi Akpaloo'                         0   0.0   0.0
 9   'PNC - David Apasera'                        1   0.1   0.1
10   'PPP - Brigitte Dzogbenuku'                  0   0.0   0.0
11   'NDP - Nana Konadu Agyeman-Rawlings'         0   0.0   0.0
12   'Independent candidate - Asiedu Walker'      0   0.0   0.0
13   'I won't vote/I did not vote'                7   0.5   0.4
99   'Don't know'                                31   2.3   1.8
NA M                                            352        20.5

     Min:  1.000
     Max: 99.000
    Mean:  3.570
Std.Dev.: 14.592
```

3 Recoding of variables

3.1 Wrangling of data

```
```{r}
#| label: load-wrangle-data
#| results: hide

# read survey data
master <- readr::read_csv("replication_bo_chiefsurvey_masterdata.csv")

# read data on respondents' distances from the chief's palace

respdist <- readr::read_csv("respondents_location_withdist.csv")


#names(master)
master <- dplyr::left_join(master, respdist, by= "instanceID")

# Replace distance over 30km with NA's (seem)

master <- dplyr::mutate(master, dis_to_palace_KM=
 ↪  ifelse(dis_to_palace_KM>30, NA, dis_to_palace_KM))

# Calculate average distances to palace for each polling station

ps_ave_resdist <- master%>%
  dplyr::group_by(psname)%>%
  dplyr::summarise(dis_to_palace_KM_psave = mean(dis_to_palace_KM,na.rm =
 ↪  T))


# Merge average distances to palace back into dataset
master <- dplyr::left_join(master, ps_ave_resdist)

master <- dplyr::mutate(master, dis_to_palace_KM_impt =
 ↪  ifelse(is.na(dis_to_palace_KM),dis_to_palace_KM_psave,dis_to_palace_KM))

## RECODING ----
# Add ID variable
master <- setDT(master, keep.rownames = TRUE)[]

# Create binary treatment indicator (collapsing T2 and T3)
```
```

```r
master$treatment_binary <- 1
master$treatment_binary[master$treatment=="placebo"] <- 0
#table(master$treatment_binary)

# Make placebo/control as reference category for treatment variable
master$treatment <- as_factor((master$treatment))
master <- within(master, treatment <- relevel(treatment, ref = "placebo"))

# Create vote dummies for 2012
master$vote_2012_ndc <- 0
master$vote_2012_ndc[master$vote_2012==1] <- 1
master$vote_2012_ndc[is.na(master$vote_2012)==TRUE] <- NA

master$vote_2012_npp <- 0
master$vote_2012_npp[master$vote_2012==2] <- 1
master$vote_2012_npp[is.na(master$vote_2012)==TRUE] <- NA

master$vote_2012_dnv <- 0
master$vote_2012_dnv[master$vote_2012==96] <- 1
master$vote_2012_dnv[master$vote_2012==97] <- 1
master$vote_2012_dnv[is.na(master$vote_2012)==TRUE] <- NA



# Create vote dummies for 2016
master$vote_2016_ndc <- 0
master$vote_2016_ndc[master$vote_2016==1] <- 1
master$vote_2016_ndc[is.na(master$vote_2016)==TRUE] <- NA

master$vote_2016_npp <- 0
master$vote_2016_npp[master$vote_2016==2] <- 1
master$vote_2016_npp[is.na(master$vote_2016)==TRUE] <- NA

master$vote_2016_dnv <- 0
master$vote_2016_dnv[master$vote_2016==96] <- 1
master$vote_2016_dnv[master$vote_2016==97] <- 1
master$vote_2016_dnv[is.na(master$vote_2016)==TRUE] <- NA

# Create party_rating cluster variable
#table(master$party_rating)

master$partyid_cluster <- NA
master$partyid_cluster[master$party_rating <= -5] <- "1. -7 to -5"
```

```
master$partyid_cluster[master$party_rating > -5 & master$party_rating <=-2]
 ↪  <- "2. -4 to -2"
master$partyid_cluster[master$party_rating > -2 & master$party_rating <=-1]
 ↪  <- "3. -1 to 1"
master$partyid_cluster[master$party_rating > 1 & master$party_rating <=4] <-
 ↪  "4. 2 to 4"
master$partyid_cluster[master$party_rating > 4] <- "5. 5 to 7"
master$partyid_cluster <- as.factor(master$partyid_cluster)

#table(master$partyid_cluster)

# Create party_rating cluster variable that collapses NDC/Moderate
#table(master$npp_scale)

master$party_cluster_collapse2 <- NA
master$party_cluster_collapse2[master$npp_scale <=2] <- "NDC/Moderate"
master$party_cluster_collapse2[master$npp_scale > 2] <- "NPP"
master$party_cluster_collapse2 <- as.factor(master$party_cluster_collapse2)

#table(master$party_cluster_collapse2)

master$party_cluster_collapse3 <- NA
master$party_cluster_collapse3[master$npp_scale <=3] <- "NDC/Moderate"
master$party_cluster_collapse3[master$npp_scale > 3] <- "NPP"
master$party_cluster_collapse3 <- as.factor(master$party_cluster_collapse3)

#table(master$party_cluster_collapse3)

# Recoded partyid_cont variable
master$partyid_cont_re <- NA
master$partyid_cont_re[master$partyid_cont == "NPP"] <- "1 NPP"
master$partyid_cont_re[master$partyid_cont == "MODERATE"] <- "2 MODERATE"
master$partyid_cont_re[master$partyid_cont == "NDC"] <- "3 NDC"
#table(master$partyid_cont_re)
master$partyid_cont_re <- NA
master$partyid_cont_re[master$partyid_cont == "NPP"] <- "1 NPP"
master$partyid_cont_re[master$partyid_cont == "MODERATE"] <- "2 MODERATE"
master$partyid_cont_re[master$partyid_cont == "NDC"] <- "3 NDC"
#table(master$partyid_cont_re)

# Party ID groups
## CREATE SEPARATE DATAFRAMES FOR PARTYID_CONT and PARTY_CLUSTER_COLLAPSE
 ↪  ----
```

```
## partyid_cont
## Full sample
data_full <- master

## NPP
data_npp <- master[master$partyid_cont == 'NPP',]

## NDC
data_ndc <- master[master$partyid_cont == 'NDC',]

## Moderate
data_moderate <- master[master$partyid_cont == 'MODERATE',]

## party_cluster_collapse 0-2 is NDC/Moderate
## NPP
data_collapse_npp2 <- master[master$party_cluster_collapse2=="NPP"]

## NDC/Moderate
data_collapse_ndc_moderate2 <-
 ↪  master[master$party_cluster_collapse2=="NDC/Moderate"]

## party_cluster_collapse 0-3 is NDC/Moderate
## NPP
data_collapse_npp3 <- master[master$party_cluster_collapse3=="NPP"]

## NDC/Moderate
data_collapse_ndc_moderate3 <-
 ↪  master[master$party_cluster_collapse3=="NDC/Moderate"]

## Rename variables ----
#master <- master %>%
  #dplyr::rename(dis_to_palace_KM = dis_to_palace_KM.x)

master <- dplyr::mutate(master, vote_nana_lk=ifelse(vote_nana > 7, NA,
 ↪  vote_nana))


##take out duplicates
master <- dplyr::filter(master,! duplicated(instanceID))

###Code for attrition
master <- dplyr::mutate(master, attrit = ifelse(is.na(confirm_name), 0, 1))
```

```
## different coding of partisanship
## NDC/other, NPP, not close to party

master <- dplyr::mutate(master,
                        partyid_close_cat= factor(ifelse(close_party==0,
                         ↪  "Unaligned",ifelse(close_party2==2,"NPP",
                         ↪  ifelse(close_party2==1|close_party2>2 , "NDC",
                         ↪  NA))), ordered = FALSE),
                        partyid_cat_hist = factor(ifelse(vote_2012==1 &
                         ↪  vote_2016==1,"NDC",ifelse(vote_2012==2 &
                         ↪  vote_2016==2,"NPP",
                         ↪  ifelse(vote_2012==96|vote_2012==97|vote_2012==98|vote_2012==99,N
                         ↪  "Swing/minor" ))),ordered = FALSE),
                        like_trust_nana = round(7*(like_nana+
                         ↪  trust_nana)/14)
                        )
```

3.2 Descriptive statistics of treatment assignment and attrition

```
```{r}
#| label: treatment-cond-att
#| results: asis


#Table 2: Treatment conditions


tr_tab_a <- master%>%
  dplyr::count(treatment,sort = T)%>%
  dplyr::mutate(Proportion = n/sum(n))


full <- tibble(treatment="Total", n=sum(tr_tab_a$n),Proportion=1)

tr_tab_a <- bind_rows(tr_tab_a,full)

tr_tab_ab <- bind_rows(tr_tab_a[1,],tr_tab_a[3,],tr_tab_a[2,],tr_tab_a[4,] )

tr_wv2 <- master%>%
  dplyr::group_by(treatment)%>%
```
```

```
  dplyr::summarise(n_wave2= sum(attrit))%>%dplyr::mutate(Proportion_W2 =
 ↪  n_wave2/sum(n_wave2))

tr_wv2 <- bind_rows(tr_wv2, tibble(treatment="Total",
 ↪  n_wave2=sum(tr_wv2$n_wave2),Proportion_W2=1))

tr_tab_ab <- dplyr::left_join(tr_tab_ab,tr_wv2)%>%
  dplyr::mutate(`Attrition rate`= (n-n_wave2)/n)


tr_tab_ab %>%
  dplyr::mutate(varlab= c("Control", "Endorsement (A)", "Endorsement (A) +
 ↪  rationale (B)", "Total"))%>%
  dplyr::select(varlab, n: `Attrition rate`)%>%
  kbl(caption= "Treatment conditions", digits = 3,col.names = c("Treatment
   ↪  condition", "# Resp.", "Prop.","# Resp.", "Prop.", "Attrition
   ↪  rate"),booktabs = T,label = "tr_sum") %>%
    add_header_above(c(" " = 1, "Wave 1" = 2, "Wave 2" = 2, " " = 1))%>%
  kable_classic(full_width = T, html_font = "Cambria",font_size =
   ↪  9)%>%column_spec(1, width = "14em")
```

3.3 Descriptive statistics of respondents

```
```{r}
#| label: load-wrangle-data
#| results: asis



#Table 3 : Descriptive statistics of respondents

resp_char <- master%>%dplyr::select(age, female,primaryeduc_or_less,
 ↪  agric_worker,close_party, close_to_npp,npp_scale,
 ↪  correct_chiefname,dis_to_palace_KM_impt,chief_performance_rate)%>%
  dplyr::mutate(app_chief =ifelse(is.na(chief_performance_rate), NA,
 ↪  ifelse(chief_performance_rate>3,1,0)))%>%
psych::describe(fast = TRUE) %>%
  as_tibble(rownames="rowname")%>%
  dplyr::select(rowname,mean,sd,n)
```
```

```
resp_char %>%
  dplyr::mutate(varlab= c("Age", "Gender (Female=1)", "Education (Primary or
 ↪  less =1)", "Employment (Farming=1)", "Feel close to a party","Feel close
 ↪  to the incumbent party ( NPP)","Closeness to incumbent party on Likert
 ↪  scale (0--7)","Correctly name chief", "Distance to chief's palace
 ↪  (KMs)","Approval of chief performance (0-7)","Approve of chief
 ↪  (4-7)"))%>%
  dplyr::select(varlab, mean,sd,n)%>%
  kbl(caption= "Descriptive statistics of respondents", digits = 3,col.names
   ↪  = c("Variable", "Mean", "Std. Dev.","N"),booktabs = T,label =
   ↪  "desc_stat") %>%
  kable_classic(full_width = T,font_size = 10)%>%
  column_spec(1, width = "25em")%>%
  pack_rows("Demography", 1,4)%>%
  pack_rows("Partisanship", 5,7)%>%
  pack_rows("Chieftaincy", 8,11)
```

4 Main results

```
```{r}
#| label: main-results
#| results: asis
#| message: FALSE
#| echo: true
#| eval: true
#| warning: true


# data analysis for main results


## select data for pre-election survey results

trydat_pr <- master%>%

 ↪  dplyr::select(turnout_int_2020,vote_int_2020_endorsed_voters,treatment_binary,treatment,
 ↪  education, total_assets, npp_scale, electoral_area,
 ↪  party_cluster_collapse3,vote_nana_lk,dis_to_palace_KM_impt,constituency)%>%
  dplyr::mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3,
 ↪  "NPP"),
```
```

```
        age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
        ↪  age <= 55,2,3))),
        dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
        ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
        ↪  0))),
        treatment_endorseonly_ref = relevel(treatment, "onlyendorse")
        )

## select data for post-election survey results



trydat_post <- master%>%
  dplyr::select(turnout_actual_binary,
↪  vote_2020_endorsed,treatment_binary,treatment,age, education,
↪  total_assets, npp_scale, electoral_area,
↪  party_cluster_collapse3,dis_to_palace_KM_impt,constituency)%>%
  mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3, "NPP"),
        age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
        ↪  age <= 55,2,3))),
        dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
        ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
        ↪  0 ))),
        treatment_endorseonly_ref = relevel(treatment, "onlyendorse")
        )



## generate difference in means estimates using OLS


## Full sample (any treatment)
### pre-election survey
h2_intention_full_no_controls <- lm(vote_int_2020_endorsed_voters ~
↪  treatment_binary, data=trydat_pr)

h2_intention_full_controls <- lm(vote_int_2020_endorsed_voters ~
↪  treatment_binary + age + education + total_assets + npp_scale +
↪  electoral_area, data=trydat_pr)

### post election survey
```

```
h2_actual_full_no_controls <- lm(vote_2020_endorsed ~ treatment_binary,
 ↪  data=trydat_post)
h2_actual_full_controls <- lm(vote_2020_endorsed ~ treatment_binary + age +
 ↪  education + total_assets + npp_scale + as.factor(electoral_area),
 ↪  data=trydat_post)



## Full sample (treatment type)

## pre-election survey
h2_1_2 <- lm(vote_int_2020_endorsed_voters ~ treatment, data=trydat_pr)

h2_1_2_controls <-
lm(vote_int_2020_endorsed_voters ~ treatment + age + education +
 ↪  total_assets + npp_scale + electoral_area, data=trydat_pr)


## post election-survey
h2_1_2_actual <- lm(vote_2020_endorsed ~ treatment, data=trydat_post)


h2_1_2_actual_controls <- lm(vote_2020_endorsed ~ treatment + age +
 ↪  education + total_assets + npp_scale + as.factor(electoral_area),
 ↪  data=trydat_post)



##------ note for deletion if no longer needed
###Change reference category for different treatments

h2_1_2b <- lm(vote_int_2020_endorsed_voters ~ treatment_endorseonly_ref,
 ↪  data=trydat_pr)

h2_1_2_controlsb <-
lm(vote_int_2020_endorsed_voters ~ treatment_endorseonly_ref + age +
 ↪  education + total_assets + npp_scale + electoral_area, data=trydat_pr)

h2_1_2_actualb <- lm(vote_2020_endorsed ~ treatment_endorseonly_ref,
 ↪  data=trydat_post)
```

```
h2_1_2_actual_controlsb <- lm(vote_2020_endorsed ~ treatment_endorseonly_ref
 ↪  + age + education + total_assets + npp_scale +
 ↪  as.factor(electoral_area), data=trydat_post)

##

itt_estimates <- tibble(rowname= c("itt_pre_vote",
 ↪  "itt_post_vote"),group1=as.character(2),
                         itt =
                          ↪  c(summary(h2_intention_full_controls)$coefficients[2,1],
                          ↪  summary(h2_actual_full_controls)$coefficients[2,1]),
                          ↪

                          ↪  itt_se=c(summary(h2_intention_full_controls)$coefficients[2,2],
                          ↪  summary(h2_actual_full_controls)$coefficients[2,2]))
```

```{r}
#| label: main-mns
#| results: asis
#| message: FALSE
#| echo: true
#| eval: true
#| warning: true


# Generate summary statistics for plotting estimates

main_outsum_pr <- trydat_pr%>%
  dplyr::select(vote_int_2020_endorsed_voters)%>%
  psych::describeBy(group = trydat_pr$treatment_binary,mat = TRUE)%>%
  as_tibble(rownames="rowname")%>%
  dplyr::select(rowname,n,group1,mean,se)


main_outsum_post <- trydat_post%>%
  dplyr::select(vote_2020_endorsed)%>%
  psych::describeBy(group = trydat_post$treatment_binary,mat = TRUE)%>%
  as_tibble(rownames="rowname")%>%
  dplyr::select(rowname,n,group1,mean,se)
```

```
mainrestab <-
 ↪  dplyr::bind_rows(main_outsum_pr,main_outsum_post,itt_estimates)

mainrestab <- mutate(mainrestab, y_points=ifelse(group1=="0"|group1=="2", 1,
 ↪  2),estimate_type=ifelse(group1=="0"|group1=="1", "Group means", "ITT"),
 ↪  Wave=factor( c(rep("Pre-election",2), rep("Post-election",2),
 ↪  "Pre-election", "Post-election"), levels = c("Pre-election",
 ↪  "Post-election"),ordered = TRUE), type=c( "Vote", "Vote", "Vote",
 ↪  "Vote", "Vote", "Vote"))
```

```{r}
#| label: main-vote
#| results: asis
#| message: FALSE
#| echo: true
#| eval: true
#| warning: true
#|fig.align: center
#|fig.height: 9
#|fig.width: 11
#|fig.cap: 'Average intention-to-treat effect of chiefly endorsement on vote
 ↪  choice'


## formatting for plots

plottheme <- theme(axis.title = element_text(face = "bold",size = 18,colour
 ↪  = "black"),legend.title = element_text(face = "bold"),panel.background
 ↪  =element_blank(),panel.border = element_rect(size = 2,fill =
 ↪  NA),legend.key =element_rect(fill = "white"),axis.ticks =
 ↪  element_line(size = 2),axis.line = element_line(size = 1, linetype =
 ↪  "solid"),axis.line.y.right=element_line(size = 2, linetype = "solid"),
 ↪  title = element_text(family = "serif",size=16,colour = "black",face =
 ↪  "bold"),axis.text.y = element_text(family = "serif",size=16,colour =
 ↪  "black"),axis.text.x = element_text(family = "serif",size=16,colour =
 ↪  "black"),legend.text = element_text(size = 16),strip.text.x =
 ↪  element_text(size = 18, face = "bold"),panel.grid.major.y =
 ↪  element_line(colour="gray", size=0.5),panel.grid.major.x =
 ↪  element_line(colour="gray", size=0.5),panel.spacing = unit(2, "lines"))
```

```
##

p3 <- ggplot(filter(mainrestab, type=="Vote"&estimate_type=="Group
 ↪  means"),mapping = aes(x=mean, y=y_points))+
  geom_point(size=5)+
  geom_errorbar(mapping=aes(y=y_points, xmin=mean -1.96*se,
   ↪  xmax=mean+1.96*se),size=1,width=.01)+
  scale_y_continuous(breaks=c(1, 2),labels = c( "Control",
   ↪  "Treatment"),limits = c(0.5,2.2))+
  #scale_x_continuous(limits = c(-0.05,1))+
  labs(x ="Proportion of respondents voting for endorsed candidate",
   ↪  y="Treatment condition", title= "Panel A")+
  theme_tufte()+
  plottheme +
  facet_wrap(~Wave,ncol = 2)



p4 <- ggplot(filter(mainrestab, type=="Vote"&estimate_type=="ITT"),mapping =
 ↪  aes(x=itt, y=y_points))+
  geom_point(size=5)+
  geom_errorbar(mapping=aes(y=y_points, xmin=itt -1.96*itt_se, xmax=itt
   ↪  +1.96*itt_se),size=1,width=.01)+
  scale_y_continuous(breaks=c(1),labels = c( "Treatment"),limits =
   ↪  c(0.5,1.5))+
  geom_vline(xintercept =0,size=0.8,linetype=2,color="black")+
  #scale_x_continuous(limits = c(-0.05,1))+
  labs(x ="Average ITT effect", y="", title = "Panel B")+
  theme_tufte()+
   plottheme +
  facet_wrap(~Wave,ncol = 2)+theme(strip.text.x =
   ↪  element_blank(),axis.text.y =element_text(colour = "white"))


gt2 <- arrangeGrob(p3, p4, ncol = 1)
as_ggplot(gt2)
```

4.1 Heterogeneous effects by partisanship and prior approval of chief

```r
```{r}
#| label: main-results
#| results: asis


## partisanship is coded here to imply whether you are close to a party or
 ↪  not/ and if so, which party


dat_pr_rb <- master%>%

 ↪  dplyr::select(turnout_int_2020,vote_int_2020_endorsed_voters,treatment_binary,treatment,
 ↪  education, total_assets, npp_scale,
 ↪  electoral_area,vote_nana_lk,dis_to_palace_KM_impt,constituency,partyid_close_cat,partyid
  dplyr::mutate(partyid_close_cat = relevel(partyid_close_cat,
 ↪  "NPP"),partyid_cat_hist = relevel(partyid_cat_hist, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
          ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
          ↪  0))),
         npp_scale_cat = relevel(factor(ifelse(is.na(npp_scale), NA,
          ↪  ifelse(npp_scale==0|npp_scale==1, "NDC",
          ↪  ifelse(npp_scale==6|npp_scale==7, "NPP", "Moderate")))),"NPP"),
         app_chief =ifelse(is.na(chief_performance_rate), NA,
          ↪  ifelse(chief_performance_rate>3,1,0))
         )

dat_post_rb <- master%>%
  dplyr::select(turnout_actual_binary,
 ↪  vote_2020_endorsed,treatment_binary,treatment,age, education,
 ↪  total_assets, npp_scale,
 ↪  electoral_area,dis_to_palace_KM_impt,constituency,partyid_close_cat,partyid_cat_hist,chi
  mutate(partyid_close_cat = relevel(partyid_close_cat,
   ↪  "NPP"),partyid_cat_hist = relevel(partyid_cat_hist, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
          ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
          ↪  0 ))),
```
```

```
        npp_scale_cat = relevel(factor(ifelse(is.na(npp_scale), NA,
         ↪  ifelse(npp_scale==0|npp_scale==1, "NDC",
         ↪  ifelse(npp_scale==6|npp_scale==7, "NPP", "Moderate")))),
         ↪  "NPP"),
        app_chief =ifelse(is.na(chief_performance_rate), NA,
         ↪  ifelse(chief_performance_rate>3,1,0))
        )


## regression estimates for pre-election estimates:

h2part_rb <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*partyid_close_cat, data=dat_pr_rb)

h2part_c_rb <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*partyid_close_cat + age + education + total_assets +
 ↪  electoral_area, data=dat_pr_rb)

#### estimate marginal effects

h2part_c_m_rb <- margins::margins(h2part_c_rb,data=data.frame(dat_pr_rb), at
 ↪  = list("partyid_close_cat" =c("NPP","NDC", "Unaligned")))


sumtab_rb <-
 ↪  summary(h2part_c_m_rb)[summary(h2part_c_m_rb)$factor=="treatment_binary",
 ↪  c("partyid_close_cat","AME","SE","p")]

## regression estimates for post-election estimates:


h2actual_rb <- lm(vote_2020_endorsed ~ treatment_binary*partyid_close_cat,
 ↪  data=dat_post_rb)

h2actual_c_rb <- lm(vote_2020_endorsed ~ treatment_binary*partyid_close_cat
 ↪  + age + education + total_assets+ electoral_area, data=dat_post_rb)

h2actual_c_m_rb <-
 ↪  margins::margins(h2actual_c_rb,data=data.frame(dat_post_rb), at =
 ↪  list("partyid_close_cat" =c("NPP","NDC", "Unaligned")))
```

```
sumtab1_rb <-
 ↪  summary(h2actual_c_m_rb)[summary(h2actual_c_m_rb)$factor=="treatment_binary",
 ↪  c("partyid_close_cat","AME","SE","p")]
```

```{r}
#| label: mainparty-rb1
#| results: asis
#|fig.align: center
#|fig.height: 9
#|fig.width: 11
#|fig.cap: 'Average marginal effect of chiefly endorsement on vote choice by
 ↪  partisanship'


tab_party_het_rb1 = bind_rows(sumtab_rb,sumtab1_rb)%>%
  dplyr::mutate(Period= factor(c("Pre-election",
 ↪  "Pre-election","Pre-election", "Post-election",
 ↪  "Post-election","Post-election"), levels = c("Pre-election",
 ↪  "Post-election"), ordered = TRUE),point=c(0.9,1.9,2.9,1.1,2.1,3.1))

ggplot(tab_party_het_rb1,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1,2,3),labels = c("Incumbent", "Opposition",
   ↪  "Unaligned"),limits = c(0.5,3.5))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="black")+
  geom_vline(xintercept = c(1.5,2.5),linetype=2, color="grey",size=1.3)+
  labs(x ="Which party are you close to?", y="Average marginal effect of
   ↪  chiefly endorsement")+
  theme_tufte()+
  plottheme
```

```{r}
#| label: chief-approval
#| results: asis
```

```r
trydat_pr_chap <- master%>%

 ↪  dplyr::select(turnout_int_2020,vote_int_2020_endorsed_voters,treatment_binary,treatment,
 ↪  education, total_assets, npp_scale, electoral_area,
 ↪  party_cluster_collapse3,vote_nana_lk,dis_to_palace_KM_impt,constituency,chief_performanc
  mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
          ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
          ↪  0))),app_chief =ifelse(is.na(chief_performance_rate), NA,
          ↪  ifelse(chief_performance_rate>3,1,0))
)

trydat_post_chap <- master%>%
  dplyr::select(turnout_actual_binary,
 ↪  vote_2020_endorsed,treatment_binary,treatment,age, education,
 ↪  total_assets, npp_scale, electoral_area,
 ↪  party_cluster_collapse3,dis_to_palace_KM_impt,constituency,chief_performance_rate)%>%
  mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
          ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
          ↪  0 ))),
         app_chief =ifelse(is.na(chief_performance_rate), NA,
          ↪  ifelse(chief_performance_rate>3,1,0)) )

#dim(trydat_pr)
trydat_pr_chap <- na.omit(trydat_pr_chap)
#dim(trydat_pr_chap)

#dim(trydat_post)
trydat_post_chap <- na.omit(trydat_post_chap)
#dim(trydat_post_chap)



## OLS estimates for treatment effects by respondent's approval of chief's
 ↪  performance
```

```r
### pre-election estimates
h2chap <- lm(vote_int_2020_endorsed_voters ~ treatment_binary*app_chief,
 ↪  data=trydat_pr_chap)
h2chap_c <- lm(vote_int_2020_endorsed_voters ~ treatment_binary*app_chief +
 ↪  age + education + total_assets + electoral_area, data=trydat_pr_chap)


h2chap_c_m <- margins::margins(h2chap_c,data=data.frame(trydat_pr_chap), at
 ↪  = list("app_chief" =c(0,1)))
sumtab_chap <-
 ↪  summary(h2chap_c_m)[summary(h2chap_c_m)$factor=="treatment_binary",
 ↪  c("app_chief","AME","SE","p")]

### post-election estimates

h2chap_actual <- lm(vote_2020_endorsed ~ treatment_binary*app_chief,
 ↪  data=trydat_post_chap)
h2chap_actual_c <- lm(vote_2020_endorsed ~ treatment_binary*app_chief + age
 ↪  + education + total_assets+ electoral_area, data=trydat_post_chap)


h2chap_actual_c_m <-
 ↪  margins::margins(h2chap_actual_c,data=data.frame(trydat_post_chap), at =
 ↪  list("app_chief" =c(0,1)))
sumtab1_chap1 <-
 ↪  summary(h2chap_actual_c_m)[summary(h2chap_actual_c_m)$factor=="treatment_binary",
 ↪  c("app_chief","AME","SE","p")]
```

```{r}
#| label: chief-approval-partyrb
#| results: asis
#|fig.align: center
#|fig.height: 12
#|fig.width: 18
#|fig.cap: 'Average marginal effect of chiefly endorsement by partisanship
 ↪  and evaluation of chief'


tab_party_hetchief_rb = bind_rows(sumtab_rb_capp,sumtab1_rb_capp)%>%
```

```
  dplyr::mutate(Period= factor(
 ↪  c(rep("Pre-election",6),rep("Post-election",6)), levels =
 ↪  c("Pre-election", "Post-election"), ordered =
 ↪  TRUE),point=c(0.9,1.9,0.9,1.9,0.9,1.9,1.1,2.1,1.1,2.1,1.1,2.1),
 ↪  label=factor(
 ↪  ifelse(partyid_close_cat=="Unaligned","Unaligned",ifelse(partyid_close_cat=="NPP","Incum
 ↪  "Opposition")), levels = c("Incumbent", "Opposition", "Unaligned"),
 ↪  ordered = FALSE))


ggplot(tab_party_hetchief_rb,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=2,width=.01)+
  scale_x_continuous(breaks=c(1, 2),labels = c("Disapprove",
   ↪  "Approve"),limits = c(0.5,2.5))+
  scale_y_continuous(limits = c(-0.2,0.35))+
  geom_hline(yintercept = 0,linetype=2, color="black")+
  geom_vline(xintercept = 1.5,linetype=2, color="grey",size=1.3)+
  labs(x ="Assessment of chief", y="Average marginal effect of chiefly
   ↪  endorsement")+
  theme_tufte()+
  plottheme+
  facet_wrap(~label)
```

```
```{r}
#| label: tab-chief-approval-partyrb
#| results: asis
#| include: false




## check, which table this is in paper


stargazer::stargazer(h2part_rb_capp,h2part_c_rb_capp,
 ↪  h2actual_rb_capp,h2actual_c_rb_capp,
  #font.size="footnotesize",
```
```

```
  type = "latex",
  title = "",
  #column.labels = c("Model A", "Model B", "Model C", "Model D"),
  dep.var.caption  = "Voted for endorsed",
  dep.var.labels = c("Pre-election","Post-election"),
    covariate.labels = c("Treatment", "Close to NDC", "Close to no
     ↪  party","Approve of chief", "Treatment x Close to NDC", "Treatment x
     ↪  Close to no party","Treatment x Approve of chief","Close to NDC x
     ↪  Approve of chief", "Close to no party x Approve of chief",
     ↪  "Treatment x Close to NDC x Approve of chief", "Treatment x Close to
     ↪  no party x Approve of chief"),

  add.lines = list(c("EA fixed effects", rep(c("No","Yes"),2)),c("Controls",
   ↪  rep(c("No","Yes"),2))),
  multicolumn = T,
  omit = c("age", "education","total_assets", "electoral_area"),
  keep.stat = c("n","rsq"),
  notes.align = "l",
  style = "apsr",
  label="het_party_approve_rb1",
  header=F
  )
```

5 Mechanisms

5.1 Does the rationale for the endorsement matter?

```
```{r}
#| label: treatment-decomposition
#| results: asis
#| message: false
#| echo: true
#| eval: true
#| warning: true
#| include: true


## decompose effects by treatment type among unaligned voters

### pre-election period
```
```

```r
h2party_tcomp <- lm(vote_int_2020_endorsed_voters ~ treatment,
 ↪  data=dplyr::filter(master, partyid_close_cat=="Unaligned"))

h2party_tcomp_c <- lm(vote_int_2020_endorsed_voters ~ treatment + age +
 ↪  education + total_assets + electoral_area, data=dplyr::filter(master,
 ↪  partyid_close_cat=="Unaligned"))

#### post-election period

h2actual_tcomp <- lm(vote_2020_endorsed ~ treatment,
 ↪  data=dplyr::filter(master, partyid_close_cat=="Unaligned"))

h2actual_tcomp_c <- lm(vote_2020_endorsed ~ treatment+ age + education +
 ↪  total_assets + electoral_area, data=dplyr::filter(master,
 ↪  partyid_close_cat=="Unaligned"))

mechtab_trpart <-as_tibble( rbind(summary(h2party_tcomp_c)$coef[c(2,3),
 ↪  c(1,2,4)],summary(h2actual_tcomp_c)$coef[c(2,3), c(1,2,4)]))

mechtab_trpart <- dplyr::mutate(mechtab_trpart, points=c(0.9, 1.9, 1.1,
 ↪  2.1), Period=factor(c("Pre-election","Pre-election", "Post-election",
 ↪  "Post-election"),levels = c("Pre-election", "Post-election"), ordered =
 ↪  TRUE), Treatment= factor(c("Endorsement only", "Endorsement +
 ↪  rationale","Endorsement only", "Endorsement + rationale"), levels =
 ↪  c("Endorsement only", "Endorsement + rationale")) , points2=c(0.9,1.1,
 ↪  1.9, 2.1))



# stargazer::stargazer(h2party_tcomp,h2party_tcomp_c,
 ↪  h2actual_tcomp,h2actual_tcomp_c,
#   #font.size="footnotesize",
#   type = "latex",
#   title = "ITT effect of chiefly endorsement type on vote choice by
 ↪  treatment type",
#   #column.labels = c("Model A", "Model B", "Model C", "Model D"),
#   dep.var.caption  = "Voted for endorsed",
#   dep.var.labels = c("Pre-election","Post-election"),
#     covariate.labels = c("Endorsement only", "Endorsement + rationale"),
#
#   add.lines = list(c("EA fixed effects",
 ↪  rep(c("No","Yes"),2)),c("Controls", rep(c("No","Yes"),2))),
#   multicolumn = T,
```

```
#   omit = c("age", "education","total_assets", "electoral_area"),
#   keep.stat = c("n","rsq"),
#   notes.align = "l",
#   style = "apsr",
#   label="unaligned",
#   header=F
#   )
```

5.2 Effect on intermediate variables and causal mediation analyses

```{r}
#| label: mech-mediation
#| results: asis


mechdat_pr <- master%>%

 ↪  dplyr::select(like_nana,trust_nana,agree_local_nana_rev,agree_national_nana_rev,ear_nana
 ↪  fear, treatment_binary,treatment,age, education, total_assets,
 ↪  npp_scale, electoral_area,
 ↪  party_cluster_collapse3,like_trust_nana,partyid_close_cat)%>%
  mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3)))
         )


#dim(mechdat_pr)
mechdat_pr <- na.omit(mechdat_pr)
#dim(mechdat_pr)




## Simple difference in means Table

## summary statistics
#like_nana,trust_nana,

mech_outsum_pr <- mechdat_pr%>%
```

```
  filter(partyid_close_cat=="Unaligned")%>%
  dplyr::select(treatment_binary,like_trust_nana,
 ↪  agree_local_nana_rev,agree_national_nana_rev,ear_nana_rev,devt_nana_rev,personal_nana_re
 ↪  fear)%>%
  psych::describeBy(group ="treatment_binary",mat = TRUE)%>%
  as_tibble(rownames="rowname")%>%
  dplyr::select(rowname,n,group1,mean,se)


sum_stats_grp_bind <- cbind(mech_outsum_pr[mech_outsum_pr$group1==0, c(
 ↪  "mean", "se")], mech_outsum_pr[mech_outsum_pr$group1==1, c("mean",
 ↪  "se")])

### Disaggregate by treatment type

mech_outsum_pr_DT <- mechdat_pr%>%
  filter(partyid_close_cat=="Unaligned")%>%
  dplyr::select(treatment,like_trust_nana,
 ↪  agree_local_nana_rev,agree_national_nana_rev,ear_nana_rev,devt_nana_rev,personal_nana_re
 ↪  fear)%>%
  psych::describeBy(group ="treatment",mat = TRUE)%>%
  as_tibble(rownames="rowname")%>%
  dplyr::select(rowname,n,group1,mean,se)


sum_stats_grp_bind_DT <-
 ↪  cbind(mech_outsum_pr_DT[mech_outsum_pr_DT$group1=="placebo", c( "mean",
 ↪  "se")], mech_outsum_pr_DT[mech_outsum_pr_DT$group1=="onlyendorse",
 ↪  c("mean", "se")], mech_outsum_pr_DT[mech_outsum_pr_DT$group1=="full",
 ↪  c("mean", "se")])



##pre-election: difference in means with binary treatment

md1 <- lm(like_trust_nana~ treatment_binary + age + education + total_assets
 ↪  + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

#md2 <- lm(trust_nana~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,party_cluster_collapse3 !="NPP"))
```

```r
md3 <- lm(agree_local_nana_rev~ treatment_binary + age + education +
 ↪  total_assets + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md4 <- lm(agree_national_nana_rev~ treatment_binary + age + education +
 ↪  total_assets + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md5 <- lm(ear_nana_rev~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md6 <- lm(devt_nana_rev~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md7 <- lm(personal_nana_rev~ treatment_binary + age + education +
 ↪  total_assets + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md8 <- lm(fear~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

mechtab <- rbind(summary(md1)$coef[2, c(1,2,4)],summary(md3)$coef[2,
 ↪  c(1,2,4)],summary(md4)$coef[2, c(1,2,4)],summary(md5)$coef[2,
 ↪  c(1,2,4)],summary(md6)$coef[2, c(1,2,4)],summary(md7)$coef[2,
 ↪  c(1,2,4)],summary(md8)$coef[2, c(1,2,4)])


#summary(md2)$coef[2, c(1,2,4)],

mechtab_main <- cbind(sum_stats_grp_bind[-1,],mechtab)

colnames(mechtab_main) <- c("Mean in control", "SE in control", "Mean in
 ↪  treatment", "SE in tr", "Estimated ITT","SE_itt", "P-value")


mechtab_main <- mechtab_main%>%
  as_tibble()%>%
```

```
  dplyr::mutate(var= c("Personal quality (likable and trustworthy)", "Bring
 ↪  local development", "National policy","Listening ear of endorsed","Work
 ↪  well with endorsed for local development", "Chief can provide private
 ↪  benefits","Fear of personal or community disadvantage"))%>%
  dplyr::select(var,`Mean in control`:`P-value`)


## disaggregated by treatment groups


md1_dt <- lm(like_trust_nana~ treatment + age + education + total_assets +
 ↪  npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))


md3_dt <- lm(agree_local_nana_rev~ treatment + age + education +
 ↪  total_assets + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md4_dt <- lm(agree_national_nana_rev~ treatment + age + education +
 ↪  total_assets + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md5_dt <- lm(ear_nana_rev~ treatment + age + education + total_assets +
 ↪  npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md6_dt <- lm(devt_nana_rev~ treatment + age + education + total_assets +
 ↪  npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md7_dt <- lm(personal_nana_rev~ treatment + age + education + total_assets +
 ↪  npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))

md8_dt <- lm(fear~ treatment + age + education + total_assets + npp_scale +
 ↪  electoral_area, data=filter(mechdat_pr,partyid_close_cat=="Unaligned"))




## means
```

```r
mn_like_trust <-
 ↪  mean(mechdat_pr$like_trust_nana[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])

mn_like <- mean(mechdat_pr$like_nana[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])

mn_trust <- mean(mechdat_pr$trust_nana[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])

mn_locdev <-
 ↪  mean(mechdat_pr$agree_local_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])

mn_locdev_tr <-
 ↪  mean(mechdat_pr$agree_local_nana_rev[mechdat_pr$treatment_binary==1&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])

mn_locdev_sd <-
 ↪  sd(mechdat_pr$agree_local_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])

mn_natdev <-
 ↪  mean(mechdat_pr$agree_national_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])



mn_earnana <- mean(mechdat_pr$ear_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])

mn_worknana <- mean(mechdat_pr$devt_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])


mn_pers <- mean(mechdat_pr$personal_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])


mn_fear <- mean(mechdat_pr$fear[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"])
```

```
mn_community <- mean(master$disadv[
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"]==2, na.rm = T)

mn_personal <- mean(master$disadv[
 ↪  mechdat_pr$partyid_close_cat=="Unaligned"]==1, na.rm = T)
```

```{r}
#| label: mech-mediation
#| results: asis
#| message: false
#| echo: true
#| eval: true
#| warning: true
#| include: true



mechdat_pr <- master%>%
  dplyr::select(vote_int_2020_endorsed_voters,
 ↪  like_nana,trust_nana,agree_local_nana_rev,agree_national_nana_rev,ear_nana_rev,devt_nana
 ↪  fear, treatment_binary,treatment,age, education, total_assets,
 ↪  npp_scale, electoral_area,
 ↪  party_cluster_collapse3,like_trust_nana,partyid_close_cat)%>%
  mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3)))
         )


#dim(mechdat_pr)
mechdat_pr <- na.omit(mechdat_pr)
#dim(mechdat_pr)


mechdat_pr_opp <- filter(mechdat_pr,partyid_close_cat=="Unaligned")


set.seed(45755)

# personal qualities
##like
```

```r
md1_medlike <- lm(like_trust_nana~ treatment_binary + age + education +
 ↪  total_assets+npp_scale+ electoral_area, data=mechdat_pr_opp)

md1_outlike <- lm(vote_int_2020_endorsed_voters~ like_trust_nana+
 ↪  treatment_binary + age + education + total_assets+npp_scale+
 ↪  electoral_area, data=mechdat_pr_opp)


## mediation analysis
med_out_like <- mediate(md1_medlike, md1_outlike, treat =
 ↪  "treatment_binary", mediator = "like_trust_nana", robustSE = FALSE)

med_out_liketab <- tidy(med_out_like,conf.int = TRUE)[1,]

# local public goods

md1_medloc <- lm(agree_local_nana_rev~ treatment_binary + age + education +
 ↪  total_assets+npp_scale+ electoral_area, data=mechdat_pr_opp)

md1_outloc <- lm(vote_int_2020_endorsed_voters~ agree_local_nana_rev+
 ↪  treatment_binary + age + education + total_assets+npp_scale+
 ↪  electoral_area , data=mechdat_pr_opp)


## mediation analysis
med_out_loc <- mediate(md1_medloc, md1_outloc, treat = "treatment_binary",
 ↪  mediator = "agree_local_nana_rev", robustSE = FALSE)

med_out_loctab <- tidy(med_out_loc,conf.int = TRUE)[1,]


## national policy
md1_mednatpol <- lm(agree_national_nana_rev~ treatment_binary + age +
 ↪  education + total_assets+npp_scale+ electoral_area, data=mechdat_pr_opp)

md1_outnatpol <- lm(vote_int_2020_endorsed_voters~ agree_national_nana_rev+
 ↪  treatment_binary + age + education + total_assets+npp_scale+
 ↪  electoral_area, data=mechdat_pr_opp)


## mediation analysis
```

```r
med_out_natpol <- mediate(md1_mednatpol, md1_outnatpol, treat =
 ↪  "treatment_binary", mediator = "agree_national_nana_rev", robustSE =
 ↪  FALSE)

med_out_natpoltab <- tidy(med_out_natpol,conf.int = TRUE)[1,]



## chief relations
#ear of president

md1_medear <- lm(ear_nana_rev~ treatment_binary + age + education +
 ↪  total_assets+npp_scale+ electoral_area, data=mechdat_pr_opp)

md1_outear <- lm(vote_int_2020_endorsed_voters~ ear_nana_rev+
 ↪  treatment_binary + age + education + total_assets+npp_scale+
 ↪  electoral_area , data=mechdat_pr_opp)

## mediation analysis
med_out_ear <- mediate(md1_medear, md1_outear, treat = "treatment_binary",
 ↪  mediator = "ear_nana_rev", robustSE =FALSE)

med_out_eartab <- tidy(med_out_ear ,conf.int = TRUE)[1,]



#work well with president

md1_medwdevtch <- lm(devt_nana_rev~ treatment_binary + age + education +
 ↪  total_assets+npp_scale+ electoral_area, data=mechdat_pr_opp)

md1_outwdevtch <- lm(vote_int_2020_endorsed_voters~ devt_nana_rev+
 ↪  treatment_binary + age + education + total_assets+npp_scale+
 ↪  electoral_area, data=mechdat_pr_opp)

## mediation analysis
med_out_wdevtch <- mediate(md1_medwdevtch, md1_outwdevtch, treat =
 ↪  "treatment_binary", mediator = "devt_nana_rev", robustSE = FALSE)

med_out_wdevtchtab <- tidy(med_out_wdevtch ,conf.int = TRUE)[1,]


## put chief in a position to provide personal benefit
```

```r
md1_medper <- lm(personal_nana_rev~ treatment_binary + age + education +
 ↪  total_assets+npp_scale+ electoral_area, data=mechdat_pr_opp)

md1_outper <- lm(vote_int_2020_endorsed_voters~ personal_nana_rev+
 ↪  treatment_binary + age + education + total_assets+npp_scale+
 ↪  electoral_area, data=mechdat_pr_opp)

## mediation analysis
med_out_per <- mediate(md1_medper, md1_outper, treat = "treatment_binary",
 ↪  mediator = "personal_nana_rev", robustSE = FALSE)

med_out_pertab <- tidy(med_out_per ,conf.int = TRUE)[1,]


# fear

md1_medfear <- lm(fear~ treatment_binary + age + education +
 ↪  total_assets+npp_scale+ electoral_area, data=mechdat_pr_opp)

md1_outfear <- lm(vote_int_2020_endorsed_voters~ fear+ treatment_binary +
 ↪  age + education + total_assets+npp_scale+ electoral_area,
 ↪  data=mechdat_pr_opp)

## mediation analysis
med_out_fear <- mediate(md1_medfear, md1_outfear, treat =
 ↪  "treatment_binary", mediator = "fear", robustSE = FALSE)

med_out_feartab <- tidy(med_out_fear ,conf.int = TRUE)[1,]
```

```{r}
#| label: mech-mediation-tab
#| results: asis
#| message: false
#| echo: true
#| eval: true
#| warning: true
#| include: true

## Replication: Table 4
```

```
mechtab_main%>%
  dplyr::mutate(med_est= round(c(med_out_liketab$estimate,
 ↪  med_out_loctab$estimate,med_out_natpoltab$estimate,
 ↪  med_out_eartab$estimate,med_out_wdevtchtab$estimate,
 ↪  med_out_pertab$estimate, med_out_feartab$estimate),3),med_se=
 ↪  round(c(med_out_liketab$std.error,
 ↪  med_out_loctab$std.error,med_out_natpoltab$std.error,
 ↪  med_out_eartab$std.error,med_out_wdevtchtab$std.error,
 ↪  med_out_pertab$std.error, med_out_feartab$std.error),3), prop_med=
 ↪  round(c(med_out_like$n.avg, med_out_loc$n.avg,med_out_natpol$n.avg,
 ↪  med_out_ear$n.avg,med_out_wdevtch$n.avg, med_out_per$n.avg,
 ↪  med_out_fear$n.avg)*100,2),prop_med_p= round(c(med_out_like$n.avg.p,
 ↪  med_out_loc$n.avg.p,med_out_natpol$n.avg.p,
 ↪  med_out_ear$n.avg.p,med_out_wdevtch$n.avg.p, med_out_per$n.avg.p,
 ↪  med_out_fear$n.avg.p),3))%>%
  kbl(caption = "Average ITT effects of chiefly endorsement on intermediate
   ↪  outcomes",digits = 3,col.names = c("Variable","Mean", "SE",
   ↪  "Mean","SE", "ITT effect","SE", "P-value","ACME","SE","% of total
   ↪  effect mediated","P-value"),booktabs = T,label = "itt_mediate") %>%
  add_header_above(c(" " = 1, "Control group\n N=178" = 2, "Treatment
   ↪  group\n N=334" = 2, "Estimated ITT"=3, "Mediation"=4))%>%
  kable_classic(full_width = F, html_font = "Cambria",font_size=8)%>%
  column_spec(1, width = "18em")%>%
  pack_rows("Personal quality", 1,1)%>%
  pack_rows("Expected performance", 2,3)%>%
  pack_rows("Chief-politician relationship", 4,5)%>%
  pack_rows("Voter's private gain", 6,6)%>%
  pack_rows("Fear", 7,7)
```

Appendix

A Balance statistics

```
```{r}
#| label: balance-tab
#| results: hide
#| message: FALSE
#| echo: true
#| eval: true
```
```

```
#| warning: true



resp_char <- master%>%dplyr::select(age, female,primaryeduc_or_less,
 ↪  agric_worker,pettytrader,artisans, close_party, close_to_ndc,
 ↪  close_to_npp, turnout_2016, asante:ewe_anglo,
 ↪  correct_chiefname,dis_to_palace_KM_impt, treatment, treatment_binary)%>%
  mutate(tr_full_cont=
   ↪  ifelse(treatment=="placebo",0,ifelse(treatment=="full", 1,
   ↪  NA)),tr_endorse_cont =
   ↪  ifelse(treatment=="placebo",0,ifelse(treatment=="onlyendorse", 1,
   ↪  NA)))

pvalue_fulsamp <- with(resp_char, c(t.test(age~treatment_binary)$p.value,
  t.test(female~treatment_binary)$p.value,
  t.test(primaryeduc_or_less~treatment_binary)$p.value,
  t.test(agric_worker~treatment_binary)$p.value,
  t.test(pettytrader~treatment_binary)$p.value,
  t.test(artisans~treatment_binary)$p.value,
  t.test(close_party~treatment_binary)$p.value,
  t.test(close_to_ndc~treatment_binary)$p.value,
  t.test(close_to_npp~treatment_binary)$p.value,
  t.test(turnout_2016~treatment_binary)$p.value,
  t.test(asante~treatment_binary)$p.value,
  t.test(bono~treatment_binary)$p.value,
  t.test(dagati~treatment_binary)$p.value,
  t.test(ahafo~treatment_binary)$p.value,
  t.test(ewe_anglo~treatment_binary)$p.value,
  t.test(correct_chiefname~treatment_binary)$p.value,
    t.test(dis_to_palace_KM_impt~treatment_binary)$p.value))


pvalue_endc <- with(resp_char, c(t.test(age~tr_endorse_cont)$p.value,
  t.test(female~tr_endorse_cont)$p.value,
  t.test(primaryeduc_or_less~tr_endorse_cont)$p.value,
  t.test(agric_worker~tr_endorse_cont)$p.value,
  t.test(pettytrader~tr_endorse_cont)$p.value,
  t.test(artisans~tr_endorse_cont)$p.value,
  t.test(close_party~tr_endorse_cont)$p.value,
  t.test(close_to_ndc~tr_endorse_cont)$p.value,
  t.test(close_to_npp~tr_endorse_cont)$p.value,
  t.test(turnout_2016~tr_endorse_cont)$p.value,
```

```
  t.test(asante~tr_endorse_cont)$p.value,
  t.test(bono~tr_endorse_cont)$p.value,
  t.test(dagati~tr_endorse_cont)$p.value,
  t.test(ahafo~tr_endorse_cont)$p.value,
  t.test(ewe_anglo~tr_endorse_cont)$p.value,
  t.test(correct_chiefname~tr_endorse_cont)$p.value,
    t.test(dis_to_palace_KM_impt~tr_endorse_cont)$p.value))

pvalue_fc <- with(resp_char, c(t.test(age~tr_full_cont)$p.value,
  t.test(female~tr_full_cont)$p.value,
  t.test(primaryeduc_or_less~tr_full_cont)$p.value,
  t.test(agric_worker~tr_full_cont)$p.value,
  t.test(pettytrader~tr_full_cont)$p.value,
  t.test(artisans~tr_full_cont)$p.value,
  t.test(close_party~tr_full_cont)$p.value,
  t.test(close_to_ndc~tr_full_cont)$p.value,
  t.test(close_to_npp~tr_full_cont)$p.value,
  t.test(turnout_2016~tr_full_cont)$p.value,
  t.test(asante~tr_full_cont)$p.value,
  t.test(bono~tr_full_cont)$p.value,
  t.test(dagati~tr_full_cont)$p.value,
  t.test(ahafo~tr_full_cont)$p.value,
  t.test(ewe_anglo~tr_full_cont)$p.value,
  t.test(correct_chiefname~tr_full_cont)$p.value,
    t.test(dis_to_palace_KM_impt~tr_full_cont)$p.value))

bal_tab <- tibble(var= rep(c("Age", "Gender (Female=1)", "Education (Primary
 ↪  or less =1)", "Employment (Farming=1)","Employment (Petty trading=1)",
 ↪  "Employment (Artisan=1)", "Close to a political party", "Close to the
 ↪  NDC", "Close to the NPP", "2016 Turnout", "Asante", "Bono", "Dagati",
 ↪  "Ahafo", "Ewe Anglo", "Correctly name chief", "Distance to chief's
 ↪  palace (KMs)"),3),`P-value`= c(pvalue_fulsamp, pvalue_endc,pvalue_fc),
 ↪  `Balance statistic`=c(rep(c("Treatment (any) vs. ctrl.", "Endorse vs.
 ↪  ctrl.", "Endorse/rationale vs. ctrl."),
 ↪  each=length(pvalue_endc))),y=c(rep(c(1:length(pvalue_endc)),3)))
```

```
```{r}
#| label: bal-stat
#| results: hide
#| message: FALSE
#| echo: true
```
```

```
#| eval: true
#| warning: true
#| fig.cap: 'Balance statistics'
#| fig.align: 'center'
#| fig.height: 9
#| fig.width: 15


varlab <-c("Age", "Gender (Female=1)", "Education (Primary or less =1)",
 ↪  "Employment (Farming=1)","Employment (Petty trading=1)", "Employment
 ↪  (Artisan=1)", "Close to a political party", "Close to the NDC", "Close
 ↪  to the NPP", "2016 Turnout", "Asante", "Bono", "Dagati", "Ahafo", "Ewe
 ↪  Anglo", "Correctly name chief", "Distance to chief's palace (KMs)")


ggplot(bal_tab,mapping = aes(x=`P-value`,y=y))+
  geom_point()+
  geom_vline(xintercept =0.05,size=1.5,linetype=2,color="black")+
  scale_x_continuous(breaks=c(0.05, 0.5),limits = c(0,1))+
  scale_y_continuous(breaks=1:17,label=varlab,limits = c(0.5,17.5))+
  labs(y="",title="")+
  theme_tufte()+
  plottheme +
  facet_wrap(~`Balance statistic`)
```

B Manipulation check

```{r}
#| label: mani-check
#| results: hide
#| message: FALSE
#| echo: true
#| eval: true
#| warning: true

tab_manck <-master%>%
  dplyr::group_by(treatment)%>%
  dplyr::summarise(Yes=mean(classify_code,na.rm = T))


tab_manck %>%
  dplyr::mutate(varlab= c("Placebo", "Endorsement (A)", "Endorsement (A) +
 ↪  rationale (B)"))%>%
  dplyr::select(varlab, Yes)%>%
  kbl(caption = "Manipulation check", digits = 3,col.names = c("Treatment
   ↪  condition", "Proportion"),booktabs = T,label = "manicheck", longtable
   ↪  = T) %>%
  kable_classic(full_width = F)%>% footnote(general= "Proportion of
   ↪  respondents saying 'Yes' to the question: 'Thinking back to the audio
   ↪  I just played to you, do you think it was an endorsement for Nana
   ↪  Akufo-Addo' ", footnote_as_chunk = T, threeparttable = T)
```

C Main results tables

C.1 Effect of chiefly endorsement on vote choice

```r
#| label: main-tab1
#| results: hide

m1 <-h2_intention_full_no_controls
m2 <- h2_intention_full_controls
m3 <- h2_1_2
m4 <- h2_1_2_controls

m5 <- h2_1_2b
m6 <- h2_1_2_controlsb



stargazer::stargazer(m1,m2,m3,m4
   ,m5,m6,
  #font.size="scriptsize",
  type = "latex",
  title = "Average ITT effect of chiefly endorsement on vote choice
   ↪  (Pre-election)",
  #column.labels = c("Model A", "Model B", "Model C", "Model D"),
  dep.var.labels = c("Chose endorsed candidate"),
  covariate.labels = c("Any endorsement message", "Age", "Education", "Total
   ↪  assets", "Closeness to incumbent party (NPP)", "Endorsement Only",
   ↪  "Endorsement and rationale", "Placebo video", "Endorsement and
   ↪  rationale"),
  add.lines = list(c("EA fixed effects", rep(c("No","Yes"),3))),
  multicolumn = T,
  omit = "electoral_area",
  keep.stat = c("n","rsq"),
  notes.align = "l",
  style = "apsr",
  label = "mainvote",
  header=F
  )
```

```r
m7 <- h2_actual_full_no_controls
m8 <- h2_actual_full_controls
m9 <- h2_1_2_actual
```

```r
m10 <- h2_1_2_actual_controls
m11 <- h2_1_2_actualb
m12 <- h2_1_2_actual_controlsb



stargazer::stargazer(m7,m8,m9,m10,m11,m12,
  #font.size="scriptsize",
  type = "latex",
  title = "Average ITT effect of chiefly endorsement on vote choice
   ↪  (post-election survey)",
  #column.labels = c("Model A", "Model B", "Model C", "Model D"),
  dep.var.labels = c("Voted endorsed candidate"),
  covariate.labels = c("Any endorsement message", "Age", "Education", "Total
   ↪  assets", "Closeness to incumbent party (NPP)", "Endorsement Only",
   ↪  "Endorsement and rationale", "Placebo video", "Endorsement and
   ↪  rationale"),
  add.lines = list(c("EA fixed effects", rep(c("No","Yes"),3))),
  multicolumn = T,
  omit = "electoral_area",
  keep.stat = c("n","rsq"),
  notes.align = "l",
  style = "apsr",
  label = "mainpost",
  header=F
  )
```

C.2 Do results hold if we exclude respondents who failed the manipulation check?

```r
```{r}
#| label: main-vote-exmanip
#| results: hide
#| message: FALSE
#| echo: true
#| eval: true
#| warning: true
#| fig.cap: 'Average intention-to-treat effect of chiefly endorsement on
 ↪  vote choice restricting sample to only those who passed manipulation
 ↪  check'
#| fig.align: 'center'
#| fig.height: 9
```
```

```
#| fig.width: 11



p3 <- ggplot(filter(mainrestab_mani, type=="Vote"&estimate_type=="Group
 ↪  means"),mapping = aes(x=mean, y=y_points))+
  geom_point(size=5)+
  geom_errorbar(mapping=aes(y=y_points, xmin=mean -1.96*se,
   ↪  xmax=mean+1.96*se),size=1,width=.01)+
  scale_y_continuous(breaks=c(1, 2),labels = c( "Control",
   ↪  "Treatment"),limits = c(0.5,2.2))+
  #scale_x_continuous(limits = c(-0.05,1))+
  labs(x ="Mean vote for endorsed", y="Treatment condition", title= "Panel
   ↪  A: treatment condition means")+
  theme_tufte()+
  plottheme +
  facet_wrap(~Wave,ncol = 2)



p4 <- ggplot(filter(mainrestab_mani,
 ↪  type=="Vote"&estimate_type=="ITT"),mapping = aes(x=mean, y=y_points))+
  geom_point(size=5)+
  geom_errorbar(mapping=aes(y=y_points, xmin=mean -1.96*se,
   ↪  xmax=mean+1.96*se),size=1,width=.01)+
  scale_y_continuous(breaks=c(1),labels = c( "Treatment"),limits =
   ↪  c(0.5,1.5))+
  geom_vline(xintercept =0,size=0.8,linetype=2,color="black")+
  #scale_x_continuous(limits = c(-0.05,1))+
  labs(x ="Change in vote for endorsed", y="Average ITT effect", title =
   ↪  "Panel B: effect of chiefly endorsement")+
  theme_tufte()+
   plottheme +
  facet_wrap(~Wave,ncol = 2)+theme(strip.text.x =
   ↪  element_blank(),axis.text.y =element_text(colour = "white"))


gt2_mani <- arrangeGrob(p3, p4, ncol = 1)
as_ggplot(gt2_mani)
```

D Heterogeneous effects

D.1 Partisanship

```
```{r}
#| label: het-part-main
#| results: hide
#| message: FALSE
#| echo: true
#| eval: true
#| warning: true
#| include: true


stargazer::stargazer(h2part_rb,h2part_c_rb, h2actual_rb,h2actual_c_rb,
  #font.size="footnotesize",
  type = "latex",
  title = "ITT effect of chiefly endorsement on vote choice by
   ↪  partisanship",
  #column.labels = c("Model A", "Model B", "Model C", "Model D"),
  dep.var.caption  = "Voted for endorsed",
  dep.var.labels = c("Pre-election","Post-election"),
  covariate.labels = c("Treatment", "Close to NDC", "Close to no party",
   ↪  "Treatment x Close to NDC", "Treatment x Close to no party"),
  add.lines = list(c("EA fixed effects", rep(c("No","Yes"),2)),c("Controls",
   ↪  rep(c("No","Yes"),2))),
  multicolumn = T,
  omit = c("age", "education","total_assets", "electoral_area"),
  keep.stat = c("n","rsq"),
  notes.align = "l",
  style = "apsr",
  label="het_party_rb1",
  header=F
  )
```
```

D.2 Alternative specification of partisanship

```
```{r}
#| label: alternative-partisan-coding

dat_pr_rb <- master%>%
```
```

```
 ↪  dplyr::select(turnout_int_2020,vote_int_2020_endorsed_voters,treatment_binary,treatment,
 ↪  education, total_assets, npp_scale,
 ↪  electoral_area,vote_nana_lk,dis_to_palace_KM_impt,constituency,partyid_close_cat,partyid
  dplyr::mutate(partyid_close_cat = relevel(partyid_close_cat,
 ↪  "NPP"),partyid_cat_hist = relevel(partyid_cat_hist, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
          ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
          ↪  0))),
         npp_scale_cat = relevel(factor(ifelse(is.na(npp_scale), NA,
          ↪  ifelse(npp_scale==0|npp_scale==1, "NDC",
          ↪  ifelse(npp_scale==6|npp_scale==7, "NPP", "Moderate")))),"NPP"),
         app_chief =ifelse(is.na(chief_performance_rate), NA,
          ↪  ifelse(chief_performance_rate>3,1,0))
         )

dat_post_rb <- master%>%
  dplyr::select(turnout_actual_binary,
 ↪  vote_2020_endorsed,treatment_binary,treatment,age, education,
 ↪  total_assets, npp_scale,
 ↪  electoral_area,dis_to_palace_KM_impt,constituency,partyid_close_cat,partyid_cat_hist,chi
  mutate(partyid_close_cat = relevel(partyid_close_cat,
   ↪  "NPP"),partyid_cat_hist = relevel(partyid_cat_hist, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
          ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
          ↪  0 ))),
         npp_scale_cat = relevel(factor(ifelse(is.na(npp_scale), NA,
          ↪  ifelse(npp_scale==0|npp_scale==1, "NDC",
          ↪  ifelse(npp_scale==6|npp_scale==7, "NPP", "Moderate")))),
          ↪  "NPP"),
         app_chief =ifelse(is.na(chief_performance_rate), NA,
          ↪  ifelse(chief_performance_rate>3,1,0))
         )


##1. partisanship is coded here to vote choices in the last two elections

h2part_rb2 <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*partyid_cat_hist, data=dat_pr_rb)
```

```r
h2part_c_rb2 <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*partyid_cat_hist + age + education + total_assets +
 ↪  electoral_area, data=dat_pr_rb)

h2part_c_m_rb2 <- margins::margins(h2part_c_rb2,data=data.frame(dat_pr_rb),
 ↪  at = list("partyid_cat_hist" =c("NPP","NDC", "Swing/minor")))


sumtab_rb2 <-
 ↪  summary(h2part_c_m_rb2)[summary(h2part_c_m_rb2)$factor=="treatment_binary",
 ↪  c("partyid_cat_hist","AME","SE")]



h2actual_rb2 <- lm(vote_2020_endorsed ~ treatment_binary*partyid_cat_hist,
 ↪  data=dat_post_rb)

h2actual_c_rb2 <- lm(vote_2020_endorsed ~ treatment_binary*partyid_cat_hist
 ↪  + age + education + total_assets+ electoral_area, data=dat_post_rb)


h2actual_c_m_rb2 <-
 ↪  margins::margins(h2actual_c_rb2,data=data.frame(dat_post_rb), at =
 ↪  list("partyid_cat_hist" =c("NPP","NDC", "Swing/minor")))


sumtab1_rb2 <-
 ↪  summary(h2actual_c_m_rb2)[summary(h2actual_c_m_rb2)$factor=="treatment_binary",
 ↪  c("partyid_cat_hist","AME","SE")]



##2. partisanship coded on the npp scale (NPP=6/7, NDC= 0/1, Moderate 2-5)

h2part_rb3 <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*npp_scale_cat, data=dat_pr_rb)

h2part_c_rb3 <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*npp_scale_cat + age + education + total_assets +
 ↪  electoral_area, data=dat_pr_rb)
```

```r
h2part_c_m_rb3 <- margins::margins(h2part_c_rb3,data=data.frame(dat_pr_rb),
 ↪  at = list("npp_scale_cat" =c("NPP","NDC", "Moderate")))


sumtab_rb3 <-
 ↪  summary(h2part_c_m_rb3)[summary(h2part_c_m_rb3)$factor=="treatment_binary",
 ↪  c("npp_scale_cat","AME","SE")]



h2actual_rb3 <- lm(vote_2020_endorsed ~ treatment_binary*npp_scale_cat,
 ↪  data=dat_post_rb)

h2actual_c_rb3 <- lm(vote_2020_endorsed ~ treatment_binary*npp_scale_cat +
 ↪  age + education + total_assets+ electoral_area, data=dat_post_rb)


h2actual_c_m_rb3 <-
 ↪  margins::margins(h2actual_c_rb3,data=data.frame(dat_post_rb), at =
 ↪  list("npp_scale_cat" =c("NPP","NDC", "Moderate")))


sumtab1_rb3 <-
 ↪  summary(h2actual_c_m_rb3)[summary(h2actual_c_m_rb3)$factor=="treatment_binary",
 ↪  c("npp_scale_cat","AME","SE")]
```

```r
#| label: alter-patisan-tab1

## Table F.2

stargazer::stargazer(h2part_rb3,h2part_c_rb3, h2actual_rb3,h2actual_c_rb3,
  #font.size="footnotesize",
  type = "latex",
  title = "ITT effect of chiefly endorsement on vote choice by partisanship
   ↪  (closeness to NPP)",
  #column.labels = c("Model A", "Model B", "Model C", "Model D"),
  dep.var.caption  = "Voted for endorsed",
  dep.var.labels = c("Pre-election","Post-election"),
  covariate.labels = c("Treatment", "Moderate [2-5]", "NDC [0-1]",
   ↪  "Treatment x Moderate [2-5]", "Treatment x NDC [0-1]"),
```

```
  add.lines = list(c("EA fixed effects", rep(c("No","Yes"),2)),c("Controls",
   ↪  rep(c("No","Yes"),2))),
  multicolumn = T,
  omit = c("age", "education","total_assets", "electoral_area"),
  keep.stat = c("n","rsq"),
  notes.align = "l",
  style = "apsr",
  label="het_party_rb3",
  header=F
  )
```

```{r}
#| label: mainparty-rb3
#| results: asis
#| fig.align:center
#| fig.height: 6
#| fig.width: 10
#| fig.cap: Robust 1: Average Marginal Effect of Chiefly Endorsement on Vote
 ↪  Choice by Partisanship"


## Figure F.1

tab_party_het_rb3 = bind_rows(sumtab_rb3,sumtab1_rb3)%>%
  dplyr::mutate(Period= factor(c("Pre-election",
 ↪  "Pre-election","Pre-election", "Post-election",
 ↪  "Post-election","Post-election"), levels = c("Pre-election",
 ↪  "Post-election"), ordered = TRUE),point=c(0.9,1.9,2.9,1.1,2.1,3.1))

ggplot(tab_party_het_rb3,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1,2,3),labels = c("NPP (6-7)", "NDC (0-1)",
   ↪  "Moderate (2-5)"),limits = c(0.5,3.5))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="black")+
  geom_vline(xintercept = c(1.5,2.5),linetype=2, color="grey",size=1.3)+
  labs(x ="Partisanship (closeness to NPP)", y="Average marginal effect of
   ↪  chiefly endorsement")+
  theme_tufte()+
```

```
  plottheme
```

```{r}
#| label: mainparty-tab2
#| results: asis


## Table F.3
stargazer::stargazer(h2part_rb2,h2part_c_rb2, h2actual_rb2,h2actual_c_rb2,
  #font.size="footnotesize",
  type = "latex",
  title = "ITT effect of chiefly endorsement on vote choice by partisanship
   ↪  (voting history)",
  #column.labels = c("Model A", "Model B", "Model C", "Model D"),
  dep.var.caption  = "Voted for endorsed",
  dep.var.labels = c("Pre-election","Post-election"),
  covariate.labels = c("Treatment", "NDC partisan", "Swing voter",
   ↪  "Treatment x NDC partisan", "Treatment x Swing voter"),
  add.lines = list(c("EA fixed effects", rep(c("No","Yes"),2)),c("Controls",
   ↪  rep(c("No","Yes"),2))),
  multicolumn = T,
  omit = c("age", "education","total_assets", "electoral_area"),
  keep.stat = c("n","rsq"),
  notes.align = "l",
  style = "apsr",
  label="het_party_rb2",
  header=F
  )
```

```{r}
#| label: mainparty-rb2
#| results: asis
#| fig.align: center
#| fig.height: 6
#| fig.width: 10
#| fig.cap: 'Robust 1 Average Marginal Effect of Chiefly Endorsement on Vote
 ↪  Choice by Partisanship'

tab_party_het_rb2 = bind_rows(sumtab_rb2,sumtab1_rb2)%>%
```

```
  dplyr::mutate(Period= factor(c("Pre-election",
 ↪  "Pre-election","Pre-election", "Post-election",
 ↪  "Post-election","Post-election"), levels = c("Pre-election",
 ↪  "Post-election"), ordered = TRUE),point=c(0.9,1.9,2.9,1.1,2.1,3.1))

ggplot(tab_party_het_rb2,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1,2,3),labels = c("NPP", "NDC",
   ↪  "Swing/minor"),limits = c(0.5,3.5))+
  scale_y_continuous(limits = c(-0.15,0.45))+
  geom_hline(yintercept = 0,linetype=2, color="black")+
  geom_vline(xintercept = c(1.5,2.5),linetype=2, color="grey",size=1.3)+
  labs(x ="Party candidate in 2012 and 2016 presidential elections",
   ↪  y="Average marginal effect of chiefly endorsement")+
  theme_tufte()+
  plottheme
```

D.3 Effect of cheifly endorsement by evaluation of chief's past performance

```
```{r}
#| label: main-chief
#| results: asis
#| fig.align: center
#| fig.height: 6
#| fig.width: 10
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by approval of chief'

tab_chief_het = bind_rows(sumtab_chap,sumtab1_chap1)%>%
  dplyr::mutate(Period= c("Pre-election", "Pre-election", "Post-election",
 ↪  "Post-election"),point=c(0.9,1.9,1.1,2.1))

ggplot(tab_chief_het,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1, 2),labels = c("Do not approve",
   ↪  "Approve"),limits = c(0.5,2.5))+
```
```

```
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  geom_vline(xintercept = 1.5,linetype=2, color="grey",size=1.3)+
  labs(x ="Approval of chief's performance", y="Average marginal effect of
   ↪  chiefly endorsement")+
  theme_tufte()+
  plottheme
```

D.4 Age

```
```{r}
#| label: main-age


h2part_age <- lm(vote_int_2020_endorsed_voters ~ treatment_binary*age_cat,
 ↪  data=trydat_pr)

h2part_age_c <- lm(vote_int_2020_endorsed_voters ~ treatment_binary*age_cat
 ↪  + education + total_assets + npp_scale + electoral_area, data=trydat_pr)


h2actual_age <- lm(vote_2020_endorsed ~ treatment_binary*age_cat,
 ↪  data=trydat_post)

h2actual_age_c <- lm(vote_2020_endorsed ~ treatment_binary*age_cat  +
 ↪  education + total_assets + npp_scale + as.factor(electoral_area),
 ↪  data=trydat_post)


##marginal effects

h2age_c_m <- margins::margins(h2part_age_c,data=data.frame(trydat_pr), at =
 ↪  list("age_cat" =factor(c(1:3))))

sumtab_age <-
 ↪  summary(h2age_c_m)[summary(h2age_c_m)$factor=="treatment_binary",
 ↪  c("age_cat","AME","SE")]
```
```

```
h2age_actual_c_m <-
 ↪  margins::margins(h2actual_age_c,data=data.frame(trydat_post), at =
 ↪  list("age_cat" =factor(c(1:3))))


sumtab1_age1 <-
 ↪  summary(h2age_actual_c_m)[summary(h2age_actual_c_m)$factor=="treatment_binary",
 ↪  c("age_cat","AME","SE")]
```

```{r}
#| label: main-age-tab
#| results: asis


## Table F.5

stargazer::stargazer(h2part_age,h2part_age_c,h2actual_age,h2actual_age_c,
  #font.size="tiny",
  type = "latex",
  title = "ITT effect of chiefly endorsement on vote choice by age",
  #column.labels = c("Model A", "Model B", "Model C", "Model D"),
  dep.var.labels = c("Pre-election", "Post-election"),
  covariate.labels = c("Treatment (any)", "Age:36-55","Age: 56 and above",
   ↪  "Treatment (any) x Age:36-55", "Treatment (any) x Age: 56 and above"),
  add.lines = list(c("EA fixed effects", rep(c("No","Yes"),2)),c("Controls",
   ↪  rep(c("No","Yes"),2))),
  multicolumn = T,
  omit = c( "education","total_assets", "npp_scale", "electoral_area"),
  keep.stat = c("n","rsq"),
  notes.align = "l",
  style = "apsr",
  label = "het_age",
  header=F
  )
```

```{r}
#| label: main-age-plot
#| results: asis
#| fig.align:center
```

```
#| fig.height: 6
#| fig.width: 10
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by age'

## Figure F.4

tab_age_het = bind_rows(sumtab_age,sumtab1_age1)%>%
  dplyr::mutate(Period= c(rep("Pre-election",3),
 ↪  rep("Post-election",3)),point=c(0.4,0.9,1.4,1.6,1.1,0.6))

ggplot(tab_age_het,mapping = aes(x=point, y=AME, shape=Period,
 ↪  linetype=Period))+
  geom_point(size=4)+
  geom_line(size=1.2)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(0.5, 1,1.5),labels = c("18-35", "36-55", "56
   ↪  and above"),limits = c(0,2))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  labs(x ="Respondents' age", y="Average marginal effect of chiefly
   ↪  endorsement")+
  theme_tufte()+
  plottheme
```

D.5 Distance

```
```{r}
#| label: main-distance
#| results: asis


h2dist_c <- lm(vote_int_2020_endorsed_voters ~ treatment_binary*dist_cat +
 ↪  age + education + total_assets + npp_scale + electoral_area,
 ↪  data=trydat_pr)


h2dist_actual_c <- lm(vote_2020_endorsed ~ treatment_binary*dist_cat + age +
 ↪  education + total_assets + npp_scale + electoral_area, data=trydat_post)
```
```

```r
h2dist_c_m <- margins::margins(h2dist_c,data=data.frame(trydat_pr), at =
 ↪  list("dist_cat" =factor(c(0,1,2))))

sumtab_dist <-
 ↪  summary(h2dist_c_m)[summary(h2dist_c_m)$factor=="treatment_binary",
 ↪  c("dist_cat","AME","SE")]



h2dist_actual_c_m <-
 ↪  margins::margins(h2dist_actual_c,data=data.frame(trydat_post), at =
 ↪  list("dist_cat" =factor(c(0,1,2))))


sumtab1_dist1 <-
 ↪  summary(h2dist_actual_c_m)[summary(h2dist_actual_c_m)$factor=="treatment_binary",
 ↪  c("dist_cat","AME","SE")]
```

```r
#| label: main-dist-plot
#| results: asis
#| fig.align:center
#| fig.height: 8
#| fig.width: 16
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by distance'

## Figure F.4


tab_dist_het = dplyr::bind_rows(sumtab_dist,sumtab1_dist1)%>%
  dplyr::mutate(Period= c(rep("Pre-election",3),
 ↪  rep("Post-election",3)),point=c(1.4,0.9,0.4,1.6,1.1,0.6))

ggplot(tab_dist_het,mapping = aes(x=point, y=AME, shape=Period,
 ↪  linetype=Period))+
  geom_point(size=4)+
  geom_line(size=1.2)+
```

```
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(0.5, 1,1.5),labels = c("Near (within 5 Km)",
   ↪  "Midrange (5 - 10 Km)", "Far (more than 10 Km)"),limits = c(0,2))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  labs(x ="Distance to chief's palace", y="Average marginal effect of
   ↪  chiefly endorsement")+
  theme_tufte()+
  plottheme
```

D.6 Does a particular traditional area drive the results?

```
```{r}
#| label: trad-robust
#| results: asis

trydat_pr <- master%>%

 ↪  dplyr::select(turnout_int_2020,vote_int_2020_endorsed_voters,treatment_binary,treatment,
 ↪  education, total_assets, npp_scale, electoral_area,
 ↪  party_cluster_collapse3,vote_nana_lk,dis_to_palace_KM_impt,constituency,female,
 ↪  trad_area.x, agric_worker,correct_chiefname,tribe,partyid_close_cat)%>%
  dplyr::mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3,
 ↪  "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
          ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
          ↪  0))),gender_cat= factor(ifelse(female==0, "Male",
          ↪  ifelse(female==1, "Female", NA)), levels = c("Male",
          ↪  "Female")), farmer= factor(ifelse(agric_worker==0, "Other
          ↪  profession", ifelse(agric_worker==1, "Farmer", NA)), levels =
          ↪  c("Other profession", "Farmer")),
        correctly_name_chief= factor(ifelse(correct_chiefname==0, "No",
         ↪  ifelse(correct_chiefname==1, "Yes", NA)), levels = c("No",
         ↪  "Yes")), majority_ethnic_bono = factor(ifelse(tribe==3, "Bono",
         ↪  ifelse(tribe!=3, "Minority group", NA)), levels = c("Bono",
         ↪  "Minority group")),
```
```

```
          majority_ethnic_bono_asante = factor(ifelse(tribe==3|tribe==1,
           ↪  "Bono/Asante", ifelse(!(tribe==3|tribe==1), "Minority group",
           ↪  NA)), levels = c("Bono/Asante", "Minority group")) )


trydat_post <- master%>%
  dplyr::select(turnout_actual_binary,
 ↪  vote_2020_endorsed,treatment_binary,treatment,age, education,
 ↪  total_assets, npp_scale, electoral_area,
 ↪  party_cluster_collapse3,dis_to_palace_KM_impt,constituency,female,
 ↪  trad_area.x, agric_worker,correct_chiefname,tribe,partyid_close_cat)%>%
  mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         dist_cat= factor(ifelse(dis_to_palace_KM_impt <=5,2,
          ↪  ifelse(dis_to_palace_KM_impt >5 &dis_to_palace_KM_impt <=10, 1,
          ↪  0 ))),
         gender_cat= factor(ifelse(female==0, "Male", ifelse(female==1,
          ↪  "Female", NA)), levels = c("Male", "Female")), farmer=
          ↪  factor(ifelse(agric_worker==0, "Other profession",
          ↪  ifelse(agric_worker==1, "Farmer", NA)), levels = c("Other
          ↪  profession", "Farmer")),
        correctly_name_chief= factor(ifelse(correct_chiefname==0, "No",
         ↪  ifelse(correct_chiefname==1, "Yes", NA)), levels = c("No",
         ↪  "Yes")), majority_ethnic_bono = factor(ifelse(tribe==3, "Bono",
         ↪  ifelse(tribe!=3, "Minority group", NA)), levels = c("Bono",
         ↪  "Minority group")),
          majority_ethnic_bono_asante = factor(ifelse(tribe==3|tribe==1,
           ↪  "Bono/Asante", ifelse(!(tribe==3|tribe==1), "Minority group",
           ↪  NA)), levels = c("Bono/Asante", "Minority group"))
         )


#dim(trydat_pr)
trydat_pr <- na.omit(trydat_pr)
#dim(trydat_pr)

#dim(trydat_post)
trydat_post <- na.omit(trydat_post)
#dim(trydat_post)
```

```
trydat_pr <- dplyr::mutate(trydat_pr,
 ↪  nisp=ifelse(party_cluster_collapse3=="NPP",0,1), trad_area=
 ↪  ifelse(constituency=="JAMAN_SOUTH", "Drobo",
 ↪  ifelse(constituency=="TECHIMAN_SOUTH", "Techiman", "Duayaw Nkwanta")))

trydat_post <- dplyr::mutate(trydat_post,trad_area=
 ↪  ifelse(constituency=="JAMAN_SOUTH", "Drobo",
 ↪  ifelse(constituency=="TECHIMAN_SOUTH", "Techiman", "Duayaw Nkwanta")))

h2tradarea_c <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*trad_area.x + age + education + total_assets +
 ↪  npp_scale, data=trydat_pr)


h2tradarea_actual_c <- lm(vote_2020_endorsed ~ treatment_binary*trad_area.x
 ↪  + age + education + total_assets + npp_scale, data=trydat_post)


h2tradarea_c_m <- margins::margins(h2tradarea_c,data=data.frame(trydat_pr),
 ↪  at = list("trad_area.x"
 ↪  =factor(c("Drobo","Duayaw_Nkwanta","Techiman"))))

sumtab_tradrea <-
 ↪  summary(h2tradarea_c_m)[summary(h2tradarea_c_m)$factor=="treatment_binary",
 ↪  c("trad_area.x","AME","SE")]



h2tradarea_actual_c_m <-
 ↪  margins::margins(h2tradarea_actual_c,data=data.frame(trydat_post), at =
 ↪  list("trad_area.x" =factor(c("Drobo","Duayaw_Nkwanta","Techiman"))))


sumtab1_tradrea1 <-
 ↪  summary(h2tradarea_actual_c_m)[summary(h2tradarea_actual_c_m)$factor=="treatment_binary"
 ↪  c("trad_area.x","AME","SE")]
```

```{r}
#| label: main-tradarea
#| results: asis
#| fig.align:center
```

```
#| fig.height: 8
#| fig.width: 16
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by traditional area'

## Figure F.7

tab_het_tradarea <- bind_rows(sumtab_tradrea,sumtab1_tradrea1)%>%
  dplyr::mutate(Period= c("Pre-election", "Pre-election","Pre-election",
 ↪  "Post-election", "Post-election","Post-election"),point=c(0.9,1.9,2.9,
 ↪  1.1,2.1,3.1))

ggplot(tab_het_tradarea,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1, 2,3),labels = c("Drobo", "Duayaw Nkwanta",
   ↪  "Techiman"),limits = c(0.5,3.5))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  geom_vline(xintercept = c(1.5,2.5),linetype=2, color="grey",size=1.3)+
  labs(x ="Traditional area", y="Average marginal effect of chiefly
   ↪  endorsement")+
  theme_tufte()+
  plottheme
```

```{r}
#| label: main-tradarea-het
#| results: asis

# estimates for the different traditional areas

## pre-election estimates by traditional area

prehetpart_trad <- vector(mode = "list")

trad_areas <- c("Drobo", "Techiman", "Duayaw Nkwanta")

for(trad in trad_areas ){

temp <- dplyr::filter(trydat_pr,grepl(trad,trad_area))
```

```
h2part_c_temp <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*partyid_close_cat + age + education + total_assets +
 ↪  electoral_area, data=temp)

h2part_c_m_temp <- margins::margins(h2part_c_temp,data=data.frame(temp), at
 ↪  = list("partyid_close_cat" =c("NPP","NDC", "Unaligned")))

sumtab <-
 ↪  summary(h2part_c_m_temp)[summary(h2part_c_m_temp)$factor=="treatment_binary",
 ↪  c("partyid_close_cat","AME","SE")]

prehetpart_trad[[trad]] <- sumtab
}


### post election estimates by traditional area

posthetpart_trad <- vector(mode = "list")

for(trad in trad_areas ){
temp <- dplyr::filter(trydat_post,grepl(trad,trad_area))

h2actual_c_temp <- lm(vote_2020_endorsed ~
 ↪  treatment_binary*partyid_close_cat + age + education + total_assets+
 ↪  electoral_area, data=temp)


h2actual_c_m_temp <- margins::margins(h2actual_c_temp,data=data.frame(temp),
 ↪  at = list("partyid_close_cat" =c("NPP","NDC", "Unaligned")))


sumtab1 <-
 ↪  summary(h2actual_c_m_temp)[summary(h2actual_c_m_temp)$factor=="treatment_binary",
 ↪  c("partyid_close_cat","AME","SE")]

posthetpart_trad[[trad]] <- sumtab1
}

#create dataset to combine estimates for plotting
```

```
hetpartisan_bytrad <-
 ↪  bind_rows(prehetpart_trad$Drobo,prehetpart_trad$Techiman,prehetpart_trad$`Duayaw
 ↪  Nkwanta`,posthetpart_trad$Drobo,posthetpart_trad$Techiman,posthetpart_trad$`Duayaw
 ↪  Nkwanta`)


hetpartisan_bytrad <- mutate(hetpartisan_bytrad, Period=
 ↪  factor(c(rep("Pre-election",9),rep("Post-election",9)), levels =
 ↪  c("Pre-election", "Post-election"), ordered = TRUE), `Traditional area`=
 ↪  rep(c("Drobo", "Drobo","Drobo","Techiman","Techiman","Techiman","Duayaw
 ↪  Nkwanta","Duayaw Nkwanta","Duayaw Nkwanta"), 2),label=factor(
 ↪  ifelse(partyid_close_cat=="Unaligned","Unaligned",ifelse(partyid_close_cat=="NPP","Incum
 ↪  "Opposition")), levels = c("Incumbent", "Opposition", "Unaligned"),
 ↪  ordered = TRUE),point= c(rep(c(0.9, 1.9,2.9),3),rep(c(1.1, 2.1,3.1),3)))
```

```{r}
#| label: main-tradarea-het-plot
#| results: asis
#| fig.align: center
#| fig.height: 8
#| fig.width: 15
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by partisanship and traditional area'

## Figure F.7



ggplot(hetpartisan_bytrad,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1, 2,3),labels = c("Copartisans",
   ↪  "Non-copartisans","Unaligned"),limits = c(0.5,3.5))+
  scale_y_continuous(limits = c(-0.35,0.35))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  geom_hline(yintercept = 0,linetype=2, color="black",size=1.3)+
  geom_vline(xintercept = 1.5,linetype=2, color="grey",size=1.3)+
  labs(x ="Partisanship", y="Average marginal effect of chiefly
   ↪  endorsement")+
  theme_tufte()+
```

```
  plottheme+
  facet_wrap(~`Traditional area`)
```

D.7 Gender

```{r}
#| label: main-gender-het
#| results: asis



h2gender_c <- lm(vote_int_2020_endorsed_voters ~ treatment_binary*gender_cat
 ↪  + age + education + total_assets + npp_scale+electoral_area,
 ↪  data=trydat_pr)


h2gender_actual_c <- lm(vote_2020_endorsed ~ treatment_binary*gender_cat +
 ↪  age + education + total_assets + npp_scale+electoral_area,
 ↪  data=trydat_post)


h2gender_c_m <- margins::margins(h2gender_c,data=data.frame(trydat_pr), at =
 ↪  list("gender_cat" =factor(c("Male","Female"))))

sumtab_gender <-
 ↪  summary(h2gender_c_m)[summary(h2gender_c_m)$factor=="treatment_binary",
 ↪  c("gender_cat","AME","SE")]

h2gender_actual_c_m <-
 ↪  margins::margins(h2gender_actual_c,data=data.frame(trydat_post), at =
 ↪  list("gender_cat" =factor(c("Male","Female"))))

sumtab1_gender1 <-
 ↪  summary(h2gender_actual_c_m)[summary(h2gender_actual_c_m)$factor=="treatment_binary",
 ↪  c("gender_cat","AME","SE")]
```

```{r}
#| label: main-gender-het-plot
```

```r
#| results: asis
#| fig.align: center
#| fig.height: 8
#| fig.width: 10
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by gender'

## Figure F.8



tab_het_gender <- bind_rows(sumtab_gender,sumtab1_gender1)%>%
  dplyr::mutate(Period= c("Pre-election", "Pre-election",  "Post-election",
 ↪  "Post-election"),point=c(0.9,1.9,1.1,2.1))

ggplot(tab_het_gender,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1,2),labels = c("Female", "Male"),limits =
   ↪  c(0.5,2.5))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  geom_vline(xintercept = 1.5,linetype=2, color="grey",size=1.3)+
  labs(x ="Gender of respondent", y="Average marginal effect of chiefly
   ↪  endorsement")+
  theme_tufte()+
  plottheme
```

D.8 Occupation

```r
#| label: main-famer-het-plot
#| results: asis
#| fig.align:center
#| fig.height: 8
#| fig.width: 10
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by occupation'
```

```r
## Figure F.9



h2farmer_c <- lm(vote_int_2020_endorsed_voters ~ treatment_binary*farmer +
 ↪  age + education + total_assets + npp_scale+electoral_area,
 ↪  data=trydat_pr)


h2farmer_actual_c <- lm(vote_2020_endorsed ~ treatment_binary*farmer + age +
 ↪  education + total_assets + npp_scale+electoral_area, data=trydat_post)


h2farmer_c_m <- margins::margins(h2farmer_c,data=data.frame(trydat_pr), at =
 ↪  list("farmer" =factor(c("Other profession","Farmer"))))

sumtab_farmer <-
 ↪  summary(h2farmer_c_m)[summary(h2farmer_c_m)$factor=="treatment_binary",
 ↪  c("farmer","AME","SE")]



h2farmer_actual_c_m <-
 ↪  margins::margins(h2farmer_actual_c,data=data.frame(trydat_post), at =
 ↪  list("farmer" =factor(c("Other profession","Farmer"))))


sumtab1_farmer1 <-
 ↪  summary(h2farmer_actual_c_m)[summary(h2farmer_actual_c_m)$factor=="treatment_binary",
 ↪  c("farmer","AME","SE")]



tab_het_farmer <- bind_rows(sumtab_farmer,sumtab1_farmer1)%>%
  dplyr::mutate(Period= c("Pre-election", "Pre-election",  "Post-election",
 ↪  "Post-election"),point=c(0.9,1.9,1.1,2.1))


ggplot(tab_het_farmer,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
```

```
  scale_x_continuous(breaks=c(1,2),labels = c("No", "Yes"),limits =
   ↪  c(0.5,2.5))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  geom_vline(xintercept = 1.5,linetype=2, color="grey",size=1.3)+
  labs(x ="Respondent is a farmer", y="Average marginal effect of chiefly
   ↪  endorsement")+
  theme_tufte()+
  plottheme
```

D.9 By whether respondent was able to correctly name traditional leader

```
```{r}
#| label: main-correctchiefname-het-plot
#| results: asis
#| fig.align: center
#| fig.height: 8
#| fig.width: 10
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by occupation'

## Figure F.10


h2namechief_c <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*correctly_name_chief + age + education + total_assets +
 ↪  npp_scale+electoral_area, data=trydat_pr)


h2namechief_actual_c <- lm(vote_2020_endorsed ~
 ↪  treatment_binary*correctly_name_chief + age + education + total_assets +
 ↪  npp_scale+electoral_area, data=trydat_post)


h2namechief_c_m <-
 ↪  margins::margins(h2namechief_c,data=data.frame(trydat_pr), at =
 ↪  list("correctly_name_chief" =factor(c("No","Yes"))))
```
```

```
sumtab_namechief <-
 ↪  summary(h2namechief_c_m)[summary(h2namechief_c_m)$factor=="treatment_binary",
 ↪  c("correctly_name_chief","AME","SE")]



h2namechief_actual_c_m <-
 ↪  margins::margins(h2namechief_actual_c,data=data.frame(trydat_post), at =
 ↪  list("correctly_name_chief" =factor(c("No","Yes"))))


sumtab1_namechief1 <-
 ↪  summary(h2namechief_actual_c_m)[summary(h2namechief_actual_c_m)$factor=="treatment_binar
 ↪  c("correctly_name_chief","AME","SE")]


tab_het_namechief <- bind_rows(sumtab_namechief,sumtab1_namechief1)%>%
  dplyr::mutate(Period= c("Pre-election", "Pre-election",  "Post-election",
 ↪  "Post-election"),point=c(0.9,1.9,1.1,2.1))

ggplot(tab_het_namechief,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1,2),labels = c("No", "Yes"),limits =
   ↪  c(0.5,2.5))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  geom_vline(xintercept = 1.5,linetype=2, color="grey",size=1.3)+
  labs(x ="Respondent could correctly name chief", y="Average marginal
   ↪  effect of chiefly endorsement")+
  theme_tufte()+
  plottheme
```

D.10 By whether respondent belong to the majority ethnic group

```
```{r}
#| label: main-ethnicity-het-plot
#| results: asis
#| fig.align:center
```
```

```
#| fig.height: 8
#| fig.width: 13
#| fig.cap: 'Average marginal effect of chiefly endorsement on vote choice
 ↪  by occupation'

## Figure F.11




##estimates for only Bono

h2bono_c <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*majority_ethnic_bono + age + education + total_assets +
 ↪  npp_scale+electoral_area, data=trydat_pr)


h2bono_actual_c <- lm(vote_2020_endorsed ~
 ↪  treatment_binary*majority_ethnic_bono + age + education + total_assets +
 ↪  npp_scale+electoral_area, data=trydat_post)


h2bono_c_m <- margins::margins(h2bono_c,data=data.frame(trydat_pr), at =
 ↪  list("majority_ethnic_bono" =factor(c("Bono","Minority group"))))

sumtab_bono <-
 ↪  summary(h2bono_c_m)[summary(h2bono_c_m)$factor=="treatment_binary",
 ↪  c("majority_ethnic_bono","AME","SE")]



h2bono_actual_c_m <-
 ↪  margins::margins(h2bono_actual_c,data=data.frame(trydat_post), at =
 ↪  list("majority_ethnic_bono" =factor(c("Bono","Minority group"))))


sumtab1_bono1 <-
 ↪  summary(h2bono_actual_c_m)[summary(h2bono_actual_c_m)$factor=="treatment_binary",
 ↪  c("majority_ethnic_bono","AME","SE")]



##estimates for only Bono/Asante
```

```r
h2bonoasante_c <- lm(vote_int_2020_endorsed_voters ~
 ↪  treatment_binary*majority_ethnic_bono_asante + age + education +
 ↪  total_assets + npp_scale+electoral_area, data=trydat_pr)


h2bonoasante_actual_c <- lm(vote_2020_endorsed ~
 ↪  treatment_binary*majority_ethnic_bono_asante + age + education +
 ↪  total_assets + npp_scale+electoral_area, data=trydat_post)


h2bonoasante_c_m <-
 ↪  margins::margins(h2bonoasante_c,data=data.frame(trydat_pr), at =
 ↪  list("majority_ethnic_bono_asante" =factor(c("Bono/Asante","Minority
 ↪  group"))))

sumtab_bonoasante <-
 ↪  summary(h2bonoasante_c_m)[summary(h2bonoasante_c_m)$factor=="treatment_binary",
 ↪  c("majority_ethnic_bono_asante","AME","SE")]



h2bonoasante_actual_c_m <-
 ↪  margins::margins(h2bonoasante_actual_c,data=data.frame(trydat_post), at
 ↪  = list("majority_ethnic_bono_asante" =factor(c("Bono/Asante","Minority
 ↪  group"))))


sumtab1_bonoasante1 <-
 ↪  summary(h2bonoasante_actual_c_m)[summary(h2bonoasante_actual_c_m)$factor=="treatment_bin
 ↪  c("majority_ethnic_bono_asante","AME","SE")]




# Plot for only Bono ethnic group
tab_het_bono = bind_rows(sumtab_bono,sumtab1_bono1)%>%
  dplyr::mutate(Period= c("Pre-election", "Pre-election",  "Post-election",
 ↪  "Post-election"),point=c(0.9,1.9,1.1,2.1))

p_b <- ggplot(tab_het_bono,mapping = aes(x=point, y=AME, shape=Period))+
  geom_point(size=4)+
```

```
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1,2),labels = c("Yes", "No"),limits =
   ↪  c(0.5,2.5))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  geom_vline(xintercept = 1.5,linetype=2, color="grey",size=1.3)+
  labs(x ="Respondent belongs to majority Bono ethnic group", y="Average
   ↪  marginal effect of chiefly endorsement" , title="Panel A: Majority =
   ↪  Bono only")+
  theme_tufte()+
  plottheme


#Plot for Bono/Asante as the main ethnic groups

tab_het_bonoasante = bind_rows(sumtab_bonoasante,sumtab1_bonoasante1)%>%
  dplyr::mutate(Period= c("Pre-election", "Pre-election",  "Post-election",
 ↪  "Post-election"),point=c(0.9,1.9,1.1,2.1))

p_ba <- ggplot(tab_het_bonoasante,mapping = aes(x=point, y=AME,
 ↪  shape=Period))+
  geom_point(size=4)+
  geom_errorbar(mapping=aes(x=point, ymin=AME -1.96*SE,
   ↪  ymax=AME+1.96*SE),size=1,width=.01)+
  scale_x_continuous(breaks=c(1,2),labels = c("Yes", "No"),limits =
   ↪  c(0.5,2.5))+
  scale_y_continuous(limits = c(-0.15,0.25))+
  geom_hline(yintercept = 0,linetype=2, color="grey")+
  geom_vline(xintercept = 1.5,linetype=2, color="grey",size=1.3)+
  labs(x ="Respondent belongs to majority Bono/Asante ethnic group",
   ↪  y="Average marginal effect of chiefly endorsement", title="Panel B:
   ↪  Majority = Bono and Asante")+
  theme_tufte()+
  plottheme


ethplot <- arrangeGrob(p_b, p_ba, ncol = 2)
as_ggplot(ethplot)
```

E Causal mechanisms: effect of chiefly endorsements on intermediate variables

```r
```{r}
mechdat_pr <- master %>%

 ↪  dplyr::select(like_nana,trust_nana,agree_local_nana_rev,agree_national_nana_rev,ear_nana
 ↪  fear, treatment_binary,treatment,age, education, total_assets,
 ↪  npp_scale, electoral_area,
 ↪  party_cluster_collapse3,chief_performance_rate)%>%
  mutate(party_cluster_collapse3 = relevel(party_cluster_collapse3, "NPP"),
         age_cat = factor(ifelse(age >= 18 & age <=35, 1, ifelse(age >= 36 &
          ↪  age <= 55,2,3))),
         app_chief =ifelse(is.na(chief_performance_rate), NA,
          ↪  ifelse(chief_performance_rate>3,1,0)
         ))

mechdat_pr <- na.omit(mechdat_pr)


# rescale variables

mechdat_pr <- dplyr::mutate(mechdat_pr, like_nana_sd =
 ↪  scale(like_nana,center =
 ↪  TRUE),trust_nana_sd=scale(trust_nana),agree_local_nana_rev_sd=scale(agree_local_nana_rev
 ↪  fear_sd=scale(fear))



##pre-election: binary

md1 <- lm(like_nana~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area, data=filter(mechdat_pr,app_chief==1))

md2 <- lm(trust_nana~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area, data=filter(mechdat_pr,app_chief==1))

md3 <- lm(agree_local_nana_rev~ treatment_binary + age + education +
 ↪  total_assets + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,app_chief==1))
```
```

```
md4 <- lm(agree_national_nana_rev~ treatment_binary + age + education +
 ↪  total_assets + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,app_chief==1))

md5 <- lm(ear_nana_rev~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area, data=filter(mechdat_pr,app_chief==1))

md6 <- lm(devt_nana_rev~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area, data=filter(mechdat_pr,app_chief==1))

md7 <- lm(personal_nana_rev~ treatment_binary + age + education +
 ↪  total_assets + npp_scale + electoral_area,
 ↪  data=filter(mechdat_pr,app_chief==1))

md8 <- lm(fear~ treatment_binary + age + education + total_assets +
 ↪  npp_scale + electoral_area, data=filter(mechdat_pr, app_chief==1))

mechtab <- rbind(summary(md1)$coef[2, c(1,2,4)],summary(md2)$coef[2,
 ↪  c(1,2,4)],summary(md3)$coef[2, c(1,2,4)],summary(md4)$coef[2,
 ↪  c(1,2,4)],summary(md5)$coef[2, c(1,2,4)],summary(md6)$coef[2,
 ↪  c(1,2,4)],summary(md7)$coef[2, c(1,2,4)],summary(md8)$coef[2, c(1,2,4)])

## means

mn_like <- mean(mechdat_pr$like_nana[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$app_chief==1])

mn_trust <- mean(mechdat_pr$trust_nana[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$app_chief==1])



mn_locdev <-
 ↪  mean(mechdat_pr$agree_local_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$app_chief==1])

mn_natdev <-
 ↪  mean(mechdat_pr$agree_national_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$app_chief==1])
```

```r
mn_earnana <- mean(mechdat_pr$ear_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$app_chief==1])

mn_worknana <- mean(mechdat_pr$devt_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$app_chief==1])


mn_pers <- mean(mechdat_pr$personal_nana_rev[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$app_chief==1])


mn_fear <- mean(mechdat_pr$fear[mechdat_pr$treatment_binary==0&
 ↪  mechdat_pr$app_chief==1])

mn_community <- mean(master$disadv[ mechdat_pr$app_chief==1]==2, na.rm = T)

mn_personal <- mean(master$disadv[ mechdat_pr$app_chief==1]==1, na.rm = T)
```

```{r}
#| results: hide

stargazer::stargazer(md1_dt,md3_dt,md4_dt,md5_dt,md6_dt,md7_dt,md8_dt,
  #font.size="scriptsize",
  type = "latex",
  title = "Average ITT effect of chiefly endorsement on intermediate
   ↪  variables",
  dep.var.labels = c("Voted endorsed candidate"),
  covariate.labels = c("Endorsement only", "Endorsement  + rationale","Age"
   ↪  ,"Education", "Total assets", "Closeness to incumbent party (NPP)"),
  multicolumn = T,
  omit = "electoral_area",
  keep.stat = c("n","rsq"),
  notes.align = "l",
  style = "apsr",
  label = "inter_disag",
  header=F
  )
```

F Results of causal mediation analyses

```{r}
#| label: mech-mechplots
#| fig.align: center
#| fig.height: 14
#| fig.width: 12
#| fig.cap: 'Total, direct, and indirect effects of intermediate variables
 ↪  on vote choice'

## Figure H.1



par(mfrow=c(4,2),mar=c(1, 1, 1, 1))

plot(med_out_like,main="Like and trust the endorsed",cex=3,lwd=3,cex.axis=2,
 ↪  cex.main=1.5)
plot(med_out_loc,main="Endorsed will bring local
 ↪  development",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(med_out_natpol,main="Endorsed will deliver better national
 ↪  policy",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(med_out_ear,main="Endorsed will listen to
 ↪  chief",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(med_out_wdevtch,main="Work well with chief to bring
 ↪  development",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(med_out_per,main="Chief can provide Private
 ↪  benefits",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(med_out_fear,main="Fear of personal or community
 ↪  disadvantage",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
```

```{r}
#| label: mech-mechplots-sensitivity
#| results: asis
#| fig.align: center
#| fig.height: 14
#| fig.width: 12
#| fig.cap: 'Sensitivity analysis of causal mediation analysis'

## Figure H.1
```

```
set.seed(45755)

sens.outlike <- medsens(med_out_like, rho.by = 0.1, effect.type =
 ↪  "indirect")

sens.outloc <- medsens(med_out_loc, rho.by = 0.1, effect.type = "indirect")

sens.outnatpol <- medsens(med_out_natpol, rho.by = 0.1, effect.type =
 ↪  "indirect")

sens.outear <- medsens(med_out_ear, rho.by = 0.1, effect.type = "indirect")

sens.outwdevtch <- medsens(med_out_wdevtch, rho.by = 0.1, effect.type =
 ↪  "indirect")

sens.outper <- medsens(med_out_per, rho.by = 0.1, effect.type = "indirect")

sens.outfear <- medsens(med_out_fear, rho.by = 0.1, effect.type =
 ↪  "indirect")

par(mfrow=c(4,2),mar=c(1, 1, 1, 1))

plot(sens.outlike,main="Like and trust the endorsed",cex=3,lwd=3,cex.axis=2,
 ↪  cex.main=1.5)
#plot(sens.outtrust,main="Trust Endorsed")
plot(sens.outloc,main="Endorsed will bring local
 ↪  development",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(sens.outnatpol,main="Endorsed will deliver better national
 ↪  policy",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(sens.outear,main="Endorsed will listen to
 ↪  chief",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(sens.outwdevtch,main="Endorsed will work well with chief to bring local
 ↪  development",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(sens.outper,main="Chief can provide private
 ↪  benefits",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
plot(sens.outfear,main="Fear of personal or community
 ↪  disadvantage",cex=3,lwd=3,cex.axis=2, cex.main=1.5)
```

```{r}
#| label: mech-mechconfound
#| results: asis
#| fig.align:center
#| fig.height: 14
#| fig.width: 12
#| fig.cap: 'ACME of candidate will "bring local development" with a
 ↪  specified potential confounder. These models assume that the interaction
 ↪  effect between treatment and the primary mediator is constant across
 ↪  individual units (i.e., homogeneous interaction assumption).'

## Figure H.3

## takes
# set.seed(457546)
# Xnames <- c("age", "education",
 ↪  "total_assets","npp_scale","electoral_area")
#
#
#
# m.med0 <- multimed(outcome = "vote_int_2020_endorsed_voters", med.main =
 ↪  "agree_local_nana_rev", med.alt = "like_trust_nana", treat =
 ↪  "treatment_binary", covariates = Xnames, data = mechdat_pr_opp, sims =
 ↪  1000)
#
#
# m.med1 <- multimed(outcome = "vote_int_2020_endorsed_voters", med.main =
 ↪  "agree_local_nana_rev", med.alt = "agree_national_nana_rev", treat =
 ↪  "treatment_binary", covariates = Xnames, data = mechdat_pr_opp, sims =
 ↪  1000)
#
#
# m.med2 <- multimed(outcome = "vote_int_2020_endorsed_voters", med.main =
 ↪  "agree_local_nana_rev", med.alt = "ear_nana_rev", treat =
 ↪  "treatment_binary", covariates = Xnames, data = mechdat_pr_opp, sims =
 ↪  1000)
#
#
#
#
```

```
# m.med3 <- multimed(outcome = "vote_int_2020_endorsed_voters", med.main =
 ↪  "agree_local_nana_rev", med.alt = "devt_nana_rev", treat =
 ↪  "treatment_binary", covariates = Xnames, data = mechdat_pr_opp, sims =
 ↪  1000)
#
#
# m.med4 <- multimed(outcome = "vote_int_2020_endorsed_voters", med.main =
 ↪  "agree_local_nana_rev", med.alt = "personal_nana_rev", treat =
 ↪  "treatment_binary", covariates = Xnames, data = mechdat_pr_opp, sims =
 ↪  1000)
#
#
# m.med5 <- multimed(outcome = "vote_int_2020_endorsed_voters", med.main =
 ↪  "agree_local_nana_rev", med.alt = "fear", treat = "treatment_binary",
 ↪  covariates = Xnames, data = mechdat_pr_opp, sims = 1000)



tabconf <- tibble(
  estimates = c(0.06747,0.03393,0.04243,0.06471,0.064246,0.06507,0.06340),

   ↪  lb=c(0.01543,-0.00174,0.00141,0.00952,0.010313,0.01015,0.00807),ub=c(0.12,0.07,0.08,0.
  pt=1:7
)


ggplot(tabconf,mapping = aes(x=pt, y=estimates))+
   geom_point(size=4)+
   geom_errorbar(mapping=aes(x=pt, ymin=lb, ymax=ub),size=1.5,width=.01)+
  scale_x_continuous(breaks=c(1:7),labels = c("Unadjusted ACME", "Likable
   ↪  and trustworthy", "National \npolicy","Endorsed will listen to
   ↪  chief","Endorsed will \nwork well with chief \n for local
   ↪  development", "Chief can provide \n private benefits","Fear of
   ↪  personal \n or community disadvantage"),limits = c(0.5,7.5))+
  scale_y_continuous(limits = c(-0.05,0.15))+
  geom_hline(yintercept = 0,linetype=2, color="black",size=2)+
  geom_vline(xintercept = 1.5,linetype=2, color="black",size=2)+
  labs(x ="Specified potential confounder", y="ACME",title = "")+
  theme_tufte()+
  plottheme
```