

Replication of “Anti-Immigrant Rhetoric and ICE Reporting Interest: Evidence from a Large-Scale Study of Web Search Data” paper

[Code ▾](#)

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2024-06-24

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```
## — Attaching core tidyverse packages — tidyverse 2.0.0 —
## ✓ dplyr      1.1.4    ✓ readr      2.1.5
## ✓ forcats    1.0.0    ✓ stringr    1.5.1
## ✓ ggplot2     3.5.1    ✓ tibble     3.2.1
## ✓ lubridate  1.9.3    ✓ tidyr      1.3.1
## ✓ purrr      1.0.2
## — Conflicts — tidyverse_conflicts() —
## ✗ readr::col_factor() masks scales::col_factor()
## ✗ purrr::discard()    masks scales::discard()
## ✗ dplyr::filter()     masks stats::filter()
## ✗ dplyr::lag()        masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

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```
##      ymd immigr_report immigr_crime immigr_welfare
## 1 2004-01           0           0           0
## 2 2004-02          36           0           0
## 3 2004-03           0           0           0
## 4 2004-04          48           0          34
## 5 2004-05          66           0           0
## 6 2004-06          35           0           0
```

Figure 4 from paper

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```
## `geom_smooth()` using formula = 'y ~ x'
```

Immigration Report Search Trend on Google Trend Data



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```
## `geom_smooth()` using formula = 'y ~ x'
```

Immigration Crime Search Trend on Google Trend Data



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```
## `geom_smooth()` using formula = 'y ~ x'
```

Immigration Welfare Search Trend on Google Trend Data



Table 3 of the paper

Show

```
##
## Please cite as:
```

```
## Hlavac, Marek (2022). stargazer: Well-Formatted Regression and Summary Statistics Tables.
```

```
## R package version 5.2.3. https://CRAN.R-project.org/package=stargazer
```

Show

```
## Thank you for using fastDummies!
```

```
## To acknowledge our work, please cite the package:
```

```
## Kaplan, J. & Schlegel, B. (2023). fastDummies: Fast Creation of Dummy (Binary) Columns and Rows f
rom Categorical Variables. Version 1.7.1. URL: https://github.com/jacobkap/fastDummies, https://jaco
bkap.github.io/fastDummies/.
```

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```
##          ymd immigr_report immigr_crime immigr_welfare year month president
## 1 2004-01-01          0          0          0 2004    1      bush
## 2 2004-02-01         36          0          0 2004    2      bush
## 3 2004-03-01          0          0          0 2004    3      bush
## 4 2004-04-01         48          0         34 2004    4      bush
## 5 2004-05-01         66          0          0 2004    5      bush
## 6 2004-06-01         35          0          0 2004    6      bush
##  president_obama president_bush president_trump
## 1              0              1              0
## 2              0              1              0
## 3              0              1              0
## 4              0              1              0
## 5              0              1              0
## 6              0              1              0
```

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with dummies

[Show](#)

```
##
## Table 3 OLS
## =====
##                      Dependent variable:
##          -----
##              Crime      Welfare      Report
##              (1)        (2)        (3)
## -----
## Constant      -31.598**   -10.665   70.043***
##                (13.669)   (11.714)  (17.008)
##
## ymd           0.003***    0.001*    -0.002
##                (0.001)   (0.001)   (0.001)
##
## president_bush  3.179      1.682    -0.977
##                (2.465)   (2.112)   (3.067)
##
## president_trump 7.206***    4.744**  16.289***
##                (2.368)   (2.030)   (2.947)
##
## president_obama
##
## -----
## Observations    192        192        192
## R2              0.332      0.196      0.191
## =====
## Note:           *p<0.1; **p<0.05; ***p<0.01
##                Note: *p<0.1; **p<0.05; ***p<0.01
```

with factored variable

Show

```
##
## Table 3 OLS
## =====
##               Dependent variable:
##               -----
##               Crime      Welfare      Report
##               (1)        (2)        (3)
## -----
## Constant      -31.598**   -10.665    70.043***
##                (13.669)    (11.714)   (17.008)
##
## ymd           0.003***    0.001*    -0.002
##                (0.001)    (0.001)   (0.001)
##
## presidentbush   3.179      1.682     -0.977
##                (2.465)    (2.112)   (3.067)
##
## presidenttrump  7.206***    4.744**   16.289***
##                (2.368)    (2.030)   (2.947)
##
## -----
## Observations    192        192        192
## R2              0.332      0.196      0.191
## =====
## Note:           *p<0.1; **p<0.05; ***p<0.01
##                Note: *p<0.1; **p<0.05; ***p<0.01
```

Figure 2 from paper

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```
## stm v1.3.7 successfully loaded. See ?stm for help.
## Papers, resources, and other materials at structuraltopicmodel.com
```

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##	docnum	Topic1	Topic2	Topic3	Topic4	Topic5	Topic6
##	<int>	<num>	<num>	<num>	<num>	<num>	<num>
## 1:	1	0.004481022	0.009960933	0.004461316	0.01173189	0.055799780	0.11100898
## 2:	2	0.007721907	0.010274636	0.007847635	0.02223299	0.012992140	0.04594693
## 3:	3	0.001990162	0.036386592	0.001962287	0.03997450	0.015489060	0.02125399
## 4:	4	0.066536793	0.007539572	0.014041768	0.02412229	0.054856524	0.01472651
## 5:	5	0.007608635	0.006301671	0.008562301	0.03237121	0.005584864	0.26136304
## 6:	6	0.001472374	0.005644046	0.001495451	0.01790099	0.007050577	0.01825270
##	Topic7	Topic8	Topic9	Topic10	Topic11	Topic12	
##	<num>	<num>	<num>	<num>	<num>	<num>	
## 1:	0.006210360	0.03328737	0.03705146	0.009866943	0.004249936	0.03460265	
## 2:	0.009107538	0.02681331	0.04657247	0.016150845	0.015244264	0.15595228	
## 3:	0.005533472	0.01596025	0.04617686	0.013243828	0.030639023	0.07490007	
## 4:	0.007204676	0.02533136	0.06158577	0.019073330	0.008334470	0.06095308	
## 5:	0.008460921	0.07231750	0.09063208	0.012023576	0.006875597	0.03770051	
## 6:	0.005254774	0.01243526	0.06271923	0.010633550	0.015131752	0.06764035	
##	Topic13	Topic14	Topic15	Topic16	Topic17	Topic18	
##	<num>	<num>	<num>	<num>	<num>	<num>	
## 1:	0.007756699	0.005677329	0.42345443	0.02206642	0.016853160	0.006786136	
## 2:	0.011589109	0.018271514	0.01186500	0.01135392	0.062879412	0.030123669	
## 3:	0.007677318	0.006668851	0.02736504	0.02057301	0.026993109	0.011274009	
## 4:	0.012310378	0.012594266	0.09564177	0.08201477	0.024324826	0.157872080	
## 5:	0.007243552	0.005644923	0.01910204	0.01092138	0.009163456	0.007729616	
## 6:	0.005285978	0.006097695	0.01308397	0.01464026	0.047076425	0.011468041	
##	Topic19	Topic20	Topic21	Topic22	Topic23	Topic24	
##	<num>	<num>	<num>	<num>	<num>	<num>	
## 1:	0.02897509	0.01867581	0.005059061	0.01049189	0.008669347	0.005460053	
## 2:	0.02281589	0.01312346	0.019911887	0.09073124	0.012975511	0.011565569	
## 3:	0.22863645	0.01124365	0.004194223	0.01894001	0.008787693	0.005742626	
## 4:	0.01551407	0.04964885	0.023092261	0.01378088	0.014554965	0.007895687	
## 5:	0.03116605	0.15256457	0.008546183	0.01516036	0.042245790	0.015449937	
## 6:	0.22167403	0.01063780	0.002027293	0.02008519	0.007386427	0.005230003	
##	Topic25	Topic26	Topic27	Topic28	Topic29	Topic30	V1
##	<num>	<num>	<num>	<num>	<num>	<num>	<int>
## 1:	0.034683635	0.044329741	0.005325746	0.010424776	0.009609772	0.01298825	6
## 2:	0.066554979	0.010720404	0.027492274	0.111916527	0.065141232	0.02411147	8
## 3:	0.163761556	0.016720176	0.004825996	0.093231571	0.023199065	0.01665553	12
## 4:	0.018657120	0.023390607	0.043032434	0.009640144	0.012780301	0.01894844	16
## 5:	0.008031636	0.012350854	0.050353117	0.014265918	0.006190907	0.03406780	19
## 6:	0.043571211	0.009089149	0.003065541	0.328637555	0.011419627	0.01389274	20
##	start	stop	start_time	program			
##	<int>	<int>	<char>	<char>			
## 1:	444	458	2019-03-31 19:00:00	Headliners			
## 2:	1326	1336	2019-03-31 19:00:00	Headliners			
## 3:	2069	2088	2019-04-01 02:00:00	First Look			
## 4:	10366	10422	2019-04-01 03:00:00	Morning Joe			
## 5:	383	435	2019-04-01 06:00:00	MSNBC Live With Stephanie Ruhle			
## 6:	826	836	2019-04-01 06:00:00	MSNBC Live With Stephanie Ruhle			
##	title						
##	<char>						
## 1:	MSNBCW_20190401_020000_Headliners						
## 2:	MSNBCW_20190401_020000_Headliners						
## 3:	MSNBCW_20190401_090000_First_Look						
## 4:	MSNBCW_20190401_100000_Morning_Joe						

5: MSNBCW_20190401_130000_MSNBC_Live_With_Stephanie_Ruhle

6: MSNBCW_20190401_130000_MSNBC_Live_With_Stephanie_Ruhle

##

txt

##

<char>

1:

COUNTRY OF IMMIGRANTS IS A BETTER COUNTRY AND THAT THE IMMIGRANT EXPERIENCE IN THIS COUNTRY IS FUNDAMENTAL TO THE STORY OF AMERICA. >> A QUARTER OF THOSE WHO LIVE HERE WERE BORN IN ANOTHER COUNTRY. THEIR VERY PRESENCE MAKES US SAFER, MORE SUCCESSFUL, STRONGER, MORE SECURE. >> THAT'S HIS ISSUE. POSTURE OF PRIDE AND CELEBRATION OF WHAT WE HAVE HERE. >> BUT INCITING FEAR OF ILLEGAL IMMIGRANTS IS WHAT HELPED ELECT THE NATION'S 45th PRESIDENT. >> WE WILL BUILD A GREAT, GREAT WALL. AND WE WILL PUT AN END TO ILLEGAL IMMIGRATION.

2:

>> SPEAKING IN SPANISH, BETO TRIED TO SELL THE PROPOSAL TO A SKEPTICAL AUDIENCE. >> RESIDENTS OF THE COMMUNITY HAD SAID HOW CAN YOU BE SITTING AT THE SAME DINNER TABLE WITH THE SAME PERSON, YOUR >> THEY ALSO BUTTED HEADS OVER IMMIGRATION. >> SENATOR CRUZ HAS PROMISED TO DEPORT EACH AND EVERY SINGLE DREAMER. THAT CANNOT BE THE WAY THAT TEXAS LEADS ON THIS IMPORTANT ISSUE. >> HIS FOCUS SEEMS TO BE ON FIGHTING FOR ILLEGAL IMMIGRANTS

3:

OF IMMIGRATION AS AN IMPORTANT ISSUE FOR HIS CAMPAIGN. >> IF WE ARE REALLY SERIOUS ABOUT SECURITY, WE HAVE A GOLDEN OPPORTUNITY, REPUBLICANS, INDEPENDENTS, DEMOCRATS ALIKE TO WORK ON COMPREHENSIVE IMMIGRATION REFORM, TO REWRITE THIS COUNTRY'S IMMIGRATION LAWS

4:

AND FEAR BY IMMIGRANTS AND FAMILIES WITH IMMIGRANTS TO THE POINT THAT THE PEOPLE WHO WORK AT THE CENSUS BUREAU WERE SO ALARMED THAT THEY BROUGHT THIS TO THE ATTENTION OF THE IN A. >>> THEN THE ANNOUNCEMENT COMES THAT WE'RE GOING TO ASK EVERYBODY ARE YOU A CITIZEN, YES OR NO? WE NO EVERY SENTENCE HAS A CONSEQUENCE TO RESPONSE RATES. THE CHIEF SCIENTIST HIMSELF HAS TESTIFIED THAT THIS QUESTION IN PARTICULAR WILL SUPPRESS RESPONSE RATE BY LATINOS, ASIANS AND INDIVIDUALS WITH IMMIGRANTS

5: ACCORDING TO IMMIGRATION ADVOCATES, THE EXACT OPPOSITE STRATEGY OF WHAT SHOULD DO IF YOU WANT IT TO ACTUALLY HELP CONTROL OR ALLEVIATE THE HUMANITARIAN CRISIS THAT'S GOING ON RIGHT NOW ALONG THE SOUTHERN BORDER. ON THE CONTRARY, THE IDEA OF SHUTTING DOWN THE BORDER WILL ONLY MAKE MORE PEOPLE GO THROUGH THE ILLEGAL WAY TO GET INTO THE COUNTRY, WHICH IS IN BETWEEN PORTS OF ENTRY. THE ULTIMATE GOAL HERE, BY THE WAY, THE BOTTOM LINE IS THE SAME GOAL DURING ZERO-TOLERANCE, AND THIS IS WHAT AN ADMINISTRATION OFFICIAL TOLD ME. THE GOAL WAS TO CREATE IMAGES LIKE WE'RE SEEING UNDER THE DEL NORTE BRIDGE, AND THAT'S TO DETAIN FAMILIES, AND TO SEND BACK UNACCOMPANIED MY GRANT CHILDREN IMMEDIATELY FROM THEIR HOME COUNTRIES. AGAIN, THAT IS WHAT IMMIGRATION

6:

COMPREHENSIVE IMMIGRATION REFORM, THE WIND WE COULD HAVE VOTED ON. >> YOU CAN'T BLAME THE PRESIDENT TO SAY PASS COMPREHENSIVE IMMIGRATION REFORM.

trump channel date tst duration post_election post_trump

<int> <char> <Date> <int> <num> <num> <num>

1: 0 msnbc 2019-03-31 1 0.2333333 1 0

2: 0 msnbc 2019-03-31 1 0.1666667 1 0

3: 0 msnbc 2019-04-01 1 0.3166667 1 0

4: 0 msnbc 2019-04-01 1 0.9333333 1 0

5: 0 msnbc 2019-04-01 1 0.8666667 1 0

6: 0 msnbc 2019-04-01 1 0.1666667 1 0

time year_month

<fctr> <Date>

1: post-election 2019-03-01

2: post-election 2019-03-01

3: post-election 2019-04-01

4: post-election 2019-04-01


```
## 5: post-election 2019-04-01
```

```
## 6: post-election 2019-04-01
```

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```
## `summarise()` has grouped output by 'year_month', 'channel'. You can override
```

```
## using the `.groups` argument.
```

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```

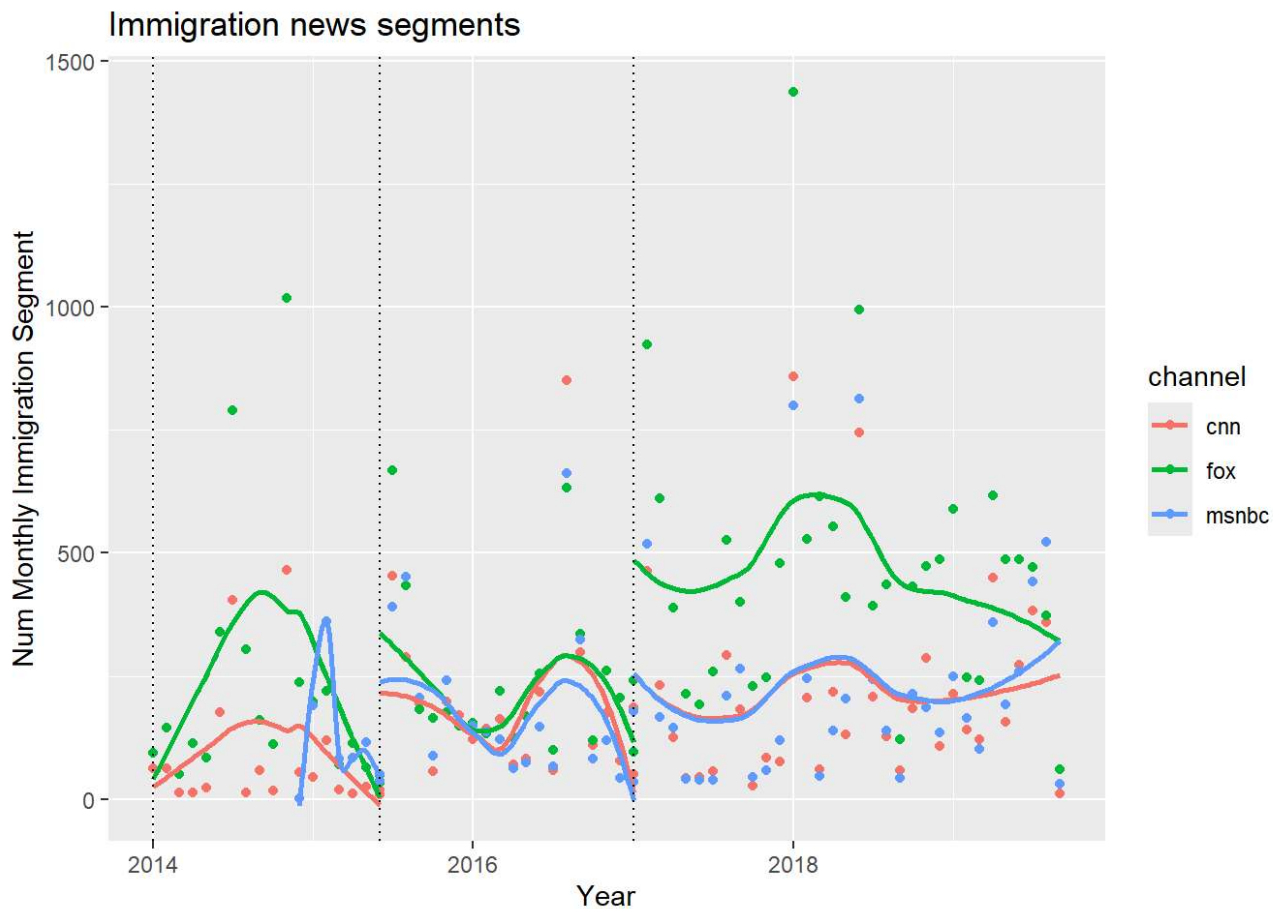


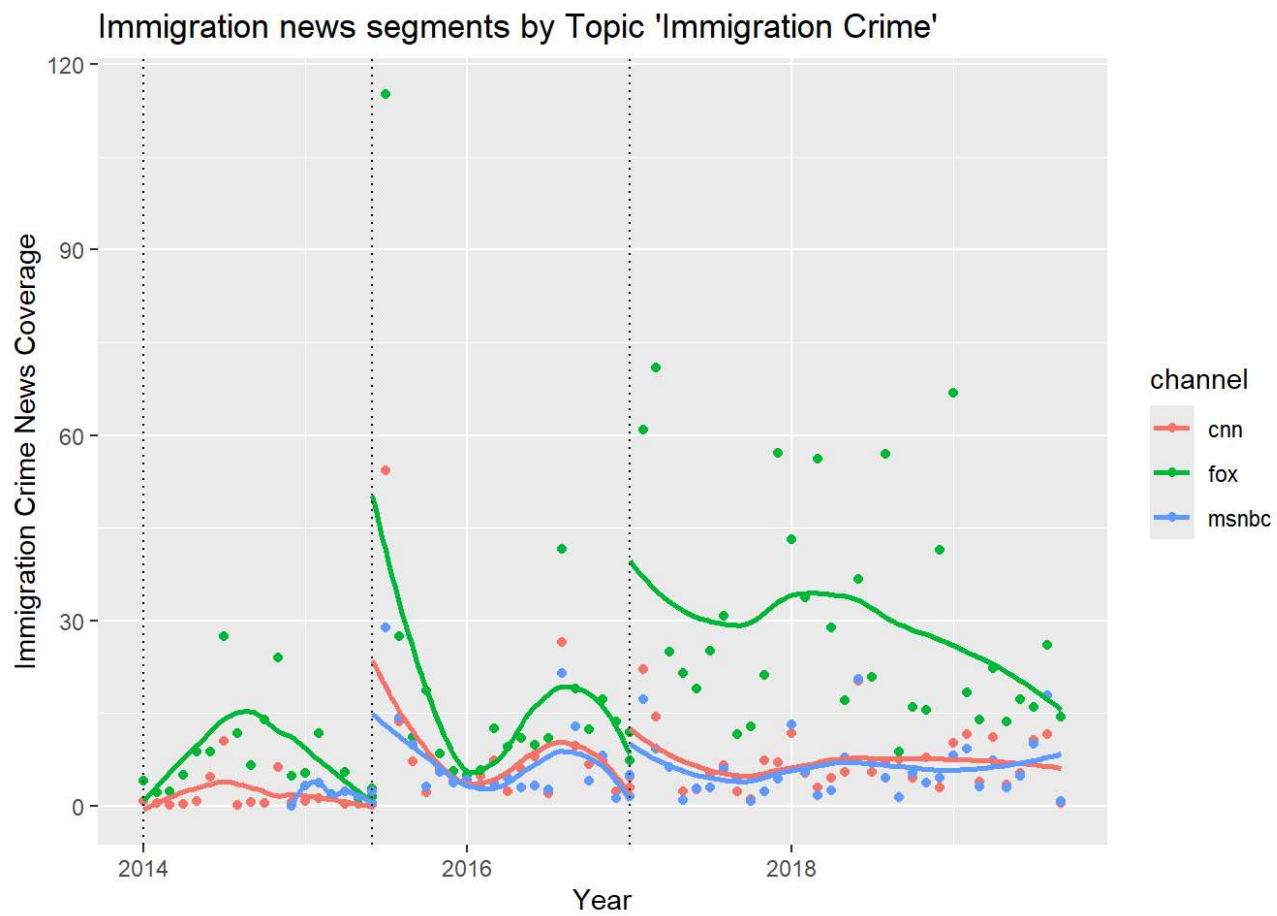
Figure 3

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```
## `summarise()` has grouped output by 'year_month', 'channel'. You can override
```

```
## using the `.groups` argument.
```

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```



Show

```
## `summarise()` has grouped output by 'year_month', 'channel'. You can override  
## using the `.groups` argument.  
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```

Immigration news segments by Topic 'Immigration Welfare'

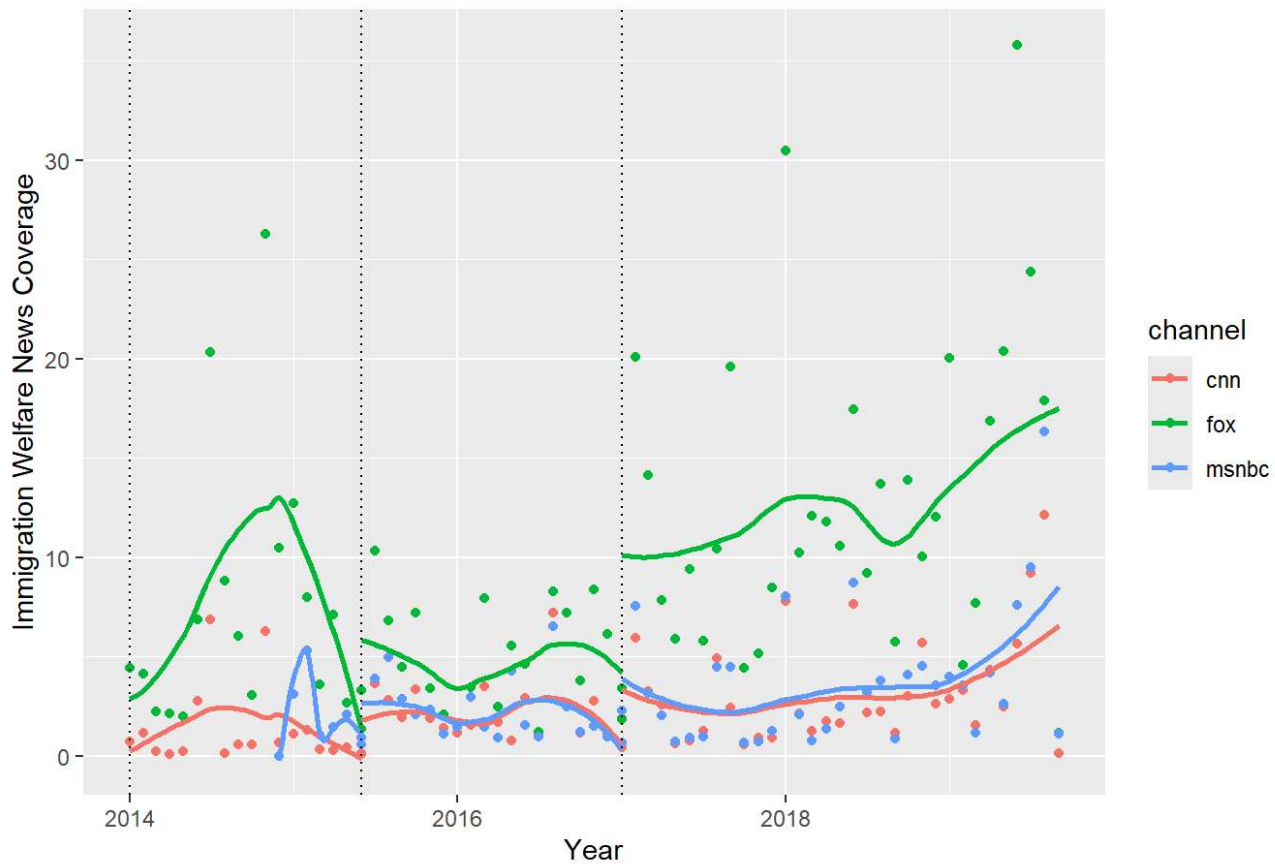


Table 4 from paper (by month):

Show

```
##          ymd immigr_report immigr_crime immigr_welfare year month president
## 1 2004-01-01          0          0          0 2004      1      bush
## 2 2004-02-01         36          0          0 2004      2      bush
## 3 2004-03-01          0          0          0 2004      3      bush
## 4 2004-04-01         48          0         34 2004      4      bush
## 5 2004-05-01         66          0          0 2004      5      bush
## 6 2004-06-01         35          0          0 2004      6      bush
##  president_obama president_bush president_trump
## 1              0              1              0
## 2              0              1              0
## 3              0              1              0
## 4              0              1              0
## 5              0              1              0
## 6              0              1              0
```

Show

```
##          ymd month immigr_report president_trump
## 1 2004-01-01      1           0           0
## 2 2004-02-01      2          36           0
## 3 2004-03-01      3           0           0
## 4 2004-04-01      4          48           0
## 5 2004-05-01      5          66           0
## 6 2004-06-01      6          35           0
```

Show

```
##          date      Topic1      Topic3      Topic13 year_month channel  duration
##          <Date>      <num>      <num>      <num>      <Date>  <char>    <num>
## 1: 2019-03-31 0.004481022 0.004461316 0.007756699 2019-03-01  msnbc  0.2333333
## 2: 2019-03-31 0.007721907 0.007847635 0.011589109 2019-03-01  msnbc  0.1666667
## 3: 2019-04-01 0.001990162 0.001962287 0.007677318 2019-04-01  msnbc  0.3166667
## 4: 2019-04-01 0.066536793 0.014041768 0.012310378 2019-04-01  msnbc  0.9333333
## 5: 2019-04-01 0.007608635 0.008562301 0.007243552 2019-04-01  msnbc  0.8666667
## 6: 2019-04-01 0.001472374 0.001495451 0.005285978 2019-04-01  msnbc  0.1666667
##          time
##          <fctr>
## 1: post-election
## 2: post-election
## 3: post-election
## 4: post-election
## 5: post-election
## 6: post-election
```

Show

```
## # A tibble: 6 × 4
##   ymd      segs crime_prop welfare_prop
##   <date>   <int>     <dbl>     <dbl>
## 1 2014-01-01   206     0.0272     0.0267
## 2 2014-02-01   249     0.0181     0.0275
## 3 2014-03-01   112     0.0428     0.0408
## 4 2014-04-01   153     0.0408     0.0206
## 5 2014-05-01   150     0.0857     0.0221
## 6 2014-06-01   613     0.0295     0.0193
```

Show

```
## # A tibble: 6 × 7
##   ymd      segs crime_prop welfare_prop month immigr_report president_trump
##   <date>   <int>     <dbl>     <dbl> <fct>      <int> <fct>
## 1 2014-01-01   206     0.0272     0.0267 1          44 0
## 2 2014-02-01   249     0.0181     0.0275 2          45 0
## 3 2014-03-01   112     0.0428     0.0408 3          47 0
## 4 2014-04-01   153     0.0408     0.0206 4          41 0
## 5 2014-05-01   150     0.0857     0.0221 5          37 0
## 6 2014-06-01   613     0.0295     0.0193 6          38 0
```

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```
##
## Call:
## lm(formula = immigr_report ~ (segs + crime_prop + welfare_prop +
##   president_trump + ymd + month), data = df_table4_month)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -17.3864  -3.5776  -0.7535   4.0256  22.5595
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   93.529389   54.024778   1.731 0.089340 .
## segs           0.009238    0.001929   4.789 1.44e-05 ***
## crime_prop     74.085052   45.179868   1.640 0.107087
## welfare_prop  249.775586  147.552816   1.693 0.096480 .
## president_trump1 16.527402    3.953173   4.181 0.000112 ***
## ymd           -0.003784    0.003284  -1.152 0.254435
## month2         4.031612    4.555194   0.885 0.380200
## month3        -4.143145    4.686286  -0.884 0.380712
## month4        -5.105065    4.663214  -1.095 0.278670
## month5        -7.575348    4.750406  -1.595 0.116846
## month6        -6.248801    4.567795  -1.368 0.177191
## month7        -8.197419    4.675910  -1.753 0.085475 .
## month8       -11.828156    4.596504  -2.573 0.012965 *
## month9        -9.222975    4.800508  -1.921 0.060190 .
## month10       -11.489039    5.078393  -2.262 0.027882 *
## month11       -7.215063    4.851096  -1.487 0.142973
## month12       -5.096368    4.987900  -1.022 0.311631
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 7.787 on 52 degrees of freedom
## Multiple R-squared:  0.7316, Adjusted R-squared:  0.6491
## F-statistic: 8.86 on 16 and 52 DF, p-value: 7.417e-10
```

Show

```

##
## Table 4 OLS
## =====
##                               Dependent variable:
##                               -----
##                               Report
## -----
## Constant                      93.529*
##                               (54.025)
##
## segs                          0.009***
##                               (0.002)
##
## crime_prop                    74.085
##                               (45.180)
##
## welfare_prop                  249.776*
##                               (147.553)
##
## president_trump1              16.527***
##                               (3.953)
##
## ymd                           -0.004
##                               (0.003)
##
## month2                         4.032
##                               (4.555)
##
## month3                        -4.143
##                               (4.686)
##
## month4                        -5.105
##                               (4.663)
##
## month5                        -7.575
##                               (4.750)
##
## month6                        -6.249
##                               (4.568)
##
## month7                        -8.197*
##                               (4.676)
##
## month8                        -11.828**
##                               (4.597)
##
## month9                        -9.223*
##                               (4.801)
##
## month10                       -11.489**
##                               (5.078)
##
## month11                       -7.215
##                               (4.851)

```

```
##
## month12                -5.096
##                        (4.988)
##
## -----
## Observations            69
## R2                      0.732
## =====
## Note:                   *p<0.1; **p<0.05; ***p<0.01
##                        Note: *p<0.1; **p<0.05; ***p<0.01
```

Table 4 from paper (by day):

[Show](#)

```
##   X      date search search_adj
## 1 1 2004-01-02      0      0.0000
## 2 2 2004-01-03      0      0.0000
## 3 3 2004-01-07     43    102.1889
## 4 4 2004-01-01      0      0.0000
## 5 5 2004-01-06      0      0.0000
## 6 6 2004-01-05      0      0.0000
```

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```
##      date search search_adj president_trump
## 1 2004-01-02      0      0.0000           0
## 2 2004-01-03      0      0.0000           0
## 3 2004-01-07     43    102.1889           0
## 4 2004-01-01      0      0.0000           0
## 5 2004-01-06      0      0.0000           0
## 6 2004-01-05      0      0.0000           0
```

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```
##      date      Topic1      Topic3      Topic13 year_month channel duration
##      <Date>      <num>      <num>      <num>      <Date>  <char>  <num>
## 1: 2019-03-31 0.004481022 0.004461316 0.007756699 2019-03-01  msnbc 0.2333333
## 2: 2019-03-31 0.007721907 0.007847635 0.011589109 2019-03-01  msnbc 0.1666667
## 3: 2019-04-01 0.001990162 0.001962287 0.007677318 2019-04-01  msnbc 0.3166667
## 4: 2019-04-01 0.066536793 0.014041768 0.012310378 2019-04-01  msnbc 0.9333333
## 5: 2019-04-01 0.007608635 0.008562301 0.007243552 2019-04-01  msnbc 0.8666667
## 6: 2019-04-01 0.001472374 0.001495451 0.005285978 2019-04-01  msnbc 0.1666667
##      time
##      <fctr>
## 1: post-election
## 2: post-election
## 3: post-election
## 4: post-election
## 5: post-election
## 6: post-election
```

[Show](#)

```
## # A tibble: 6 × 4
##   date       segs crime_prop welfare_prop
##   <date>     <int>     <dbl>     <dbl>
## 1 2014-01-01     8  0.00655  0.0131
## 2 2014-01-02     2  0.0338  0.0175
## 3 2014-01-03    10  0.0382  0.119
## 4 2014-01-04     7  0.00866  0.0402
## 5 2014-01-05     2  0.00511  0.00621
## 6 2014-01-07     4  0.00945  0.0141
```

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```
## # A tibble: 6 × 9
##   date       segs crime_prop welfare_prop search search_adj president_trump
##   <date>     <int>     <dbl>     <dbl> <int>     <dbl> <fct>
## 1 2014-01-01     8  0.00655  0.0131    36    41.2 0
## 2 2014-01-02     2  0.0338  0.0175    36    41.2 0
## 3 2014-01-03    10  0.0382  0.119    14    16.0 0
## 4 2014-01-04     7  0.00866  0.0402    49    56.1 0
## 5 2014-01-05     2  0.00511  0.00621   32    36.6 0
## 6 2014-01-07     4  0.00945  0.0141    27    30.9 0
## # i 2 more variables: month <fct>, day_of_week <fct>
```

[Show](#)


```
##
## Call:
## lm(formula = search ~ (segs + crime_prop + welfare_prop + president_trump +
##   date + day_of_week + month), data = df_table4_day)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -47.879 -13.474  -1.382  11.177  61.511
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    75.806988   23.640469   3.207 0.001364 **
## segs           0.069327    0.011492   6.033 1.92e-09 ***
## crime_prop     -7.910580    9.225068  -0.858 0.391266
## welfare_prop    2.722003   16.461448   0.165 0.868680
## president_trump1 6.390542    1.697190   3.765 0.000171 ***
## date          -0.002146    0.001431  -1.500 0.133857
## day_of_weekMonday 1.476294    1.544505   0.956 0.339270
## day_of_weekSaturday -3.075502    1.547489  -1.987 0.047012 *
## day_of_weekSunday -5.128327    1.543934  -3.322 0.000911 ***
## day_of_weekThursday 3.129898    1.540661   2.032 0.042333 *
## day_of_weekTuesday -0.420781    1.540145  -0.273 0.784721
## day_of_weekWednesday 3.990458    1.538551   2.594 0.009565 **
## month2         2.938851    1.990265   1.477 0.139936
## month3        -4.476345    1.988542  -2.251 0.024489 *
## month4         1.549878    1.989376   0.779 0.436026
## month5         1.490120    1.994469   0.747 0.455075
## month6         4.896084    1.986827   2.464 0.013812 *
## month7         4.077213    1.969381   2.070 0.038552 *
## month8         0.218729    1.974354   0.111 0.911798
## month9         0.954531    2.063616   0.463 0.643735
## month10        1.117143    2.103139   0.531 0.595354
## month11        3.736557    2.085526   1.792 0.073338 .
## month12        6.508333    2.110788   3.083 0.002075 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 18.56 on 2007 degrees of freedom
## (5 observations deleted due to missingness)
## Multiple R-squared:  0.08452,    Adjusted R-squared:  0.07448
## F-statistic: 8.422 on 22 and 2007 DF,  p-value: < 2.2e-16
```

Show

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##
## Table 4 OLS (per day)
## =====
##                               Dependent variable:
##                               -----
##                               Report
## -----
## Constant                      75.807***
##                               (23.640)
##
## segs                          0.069***
##                               (0.011)
##
## crime_prop                    -7.911
##                               (9.225)
##
## welfare_prop                  2.722
##                               (16.461)
##
## president_trump1              6.391***
##                               (1.697)
##
## date                          -0.002
##                               (0.001)
##
## day_of_weekMonday             1.476
##                               (1.545)
##
## day_of_weekSaturday           -3.076**
##                               (1.547)
##
## day_of_weekSunday             -5.128***
##                               (1.544)
##
## day_of_weekThursday           3.130**
##                               (1.541)
##
## day_of_weekTuesday            -0.421
##                               (1.540)
##
## day_of_weekWednesday          3.990***
##                               (1.539)
##
## month2                        2.939
##                               (1.990)
##
## month3                        -4.476**
##                               (1.989)
##
## month4                        1.550
##                               (1.989)
##
## month5                        1.490
##                               (1.994)

```

```

##
## month6                4.896**
##                      (1.987)
##
## month7                4.077**
##                      (1.969)
##
## month8                0.219
##                      (1.974)
##
## month9                0.955
##                      (2.064)
##
## month10               1.117
##                      (2.103)
##
## month11               3.737*
##                      (2.086)
##
## month12               6.508***
##                      (2.111)
##
## -----
## Observations          2,030
## R2                    0.085
## =====
## Note:                  *p<0.1; **p<0.05; ***p<0.01
##                        Note: *p<0.1; **p<0.05; ***p<0.01

```

Extension

The paper shows increase in search of how to report of immigration violation but doesn't show if there were actual increase in number of reports / arrest/ deportation for immigration violation. For our research question we decided to find out if there was any increase of actual number of reports / arrest/ deportation for immigration violation.

Data source : <https://www.dhs.gov/ohss/topics/immigration/enforcement-and-legal-processes-monthly-tables>
(<https://www.dhs.gov/ohss/topics/immigration/enforcement-and-legal-processes-monthly-tables>)

Data link : <https://onedrive.live.com/edit?id=6779012659AEA485%21120&resid=6779012659AEA485%21120&ithint=file%2Cxlsx&wdPreviousSession=2e2e85d3-ac39-43da-899d-f01ad6e066a7&wdo=2&cid=6779012659aea485>

(<https://onedrive.live.com/edit?id=6779012659AEA485%21120&resid=6779012659AEA485%21120&ithint=file%2Cxlsx&wdPreviousSession=2e2e85d3-ac39-43da-899d-f01ad6e066a7&wdo=2&cid=6779012659aea485>)

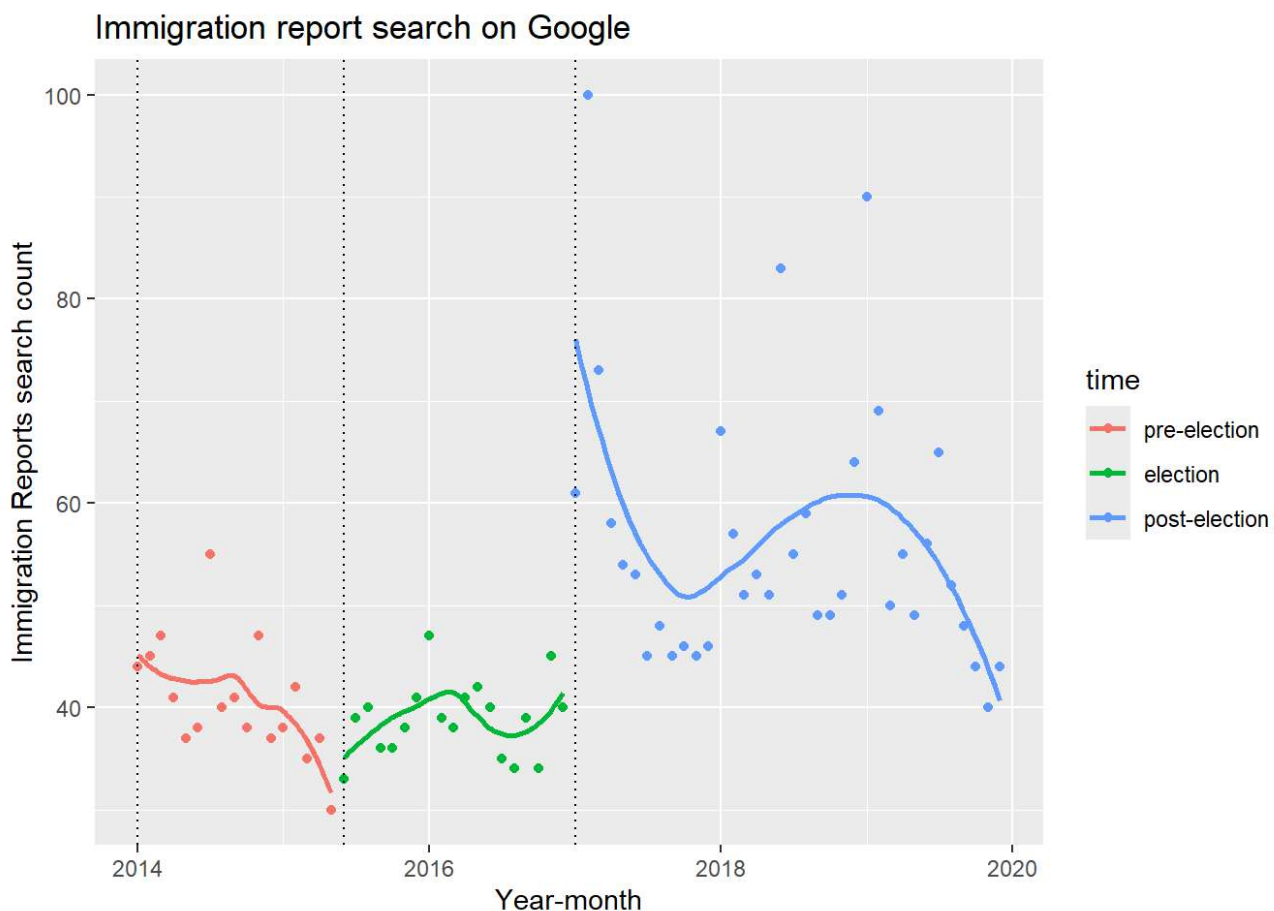
[Show](#)

```
##   year_month year month president immigr_report      time
## 1 2014-01-01 2014     1    obama             44 pre-election
## 2 2014-02-01 2014     2    obama             45 pre-election
## 3 2014-03-01 2014     3    obama             47 pre-election
## 4 2014-04-01 2014     4    obama             41 pre-election
## 5 2014-05-01 2014     5    obama             37 pre-election
## 6 2014-06-01 2014     6    obama             38 pre-election
```

We will first see what trend the search result of “how to report immigration crime” follows

[Show](#)

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```



Now we will see what was the actual number of reporting of “immigration crime” during the given period:

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```
## New names:
## Rows: 131 Columns: 10
## — Column specification
## _____ Delimiter: "," chr
## (2): year, month num (8): reports, reports_convicted, ...5, ...6, ...7,
## reports_non_criminal,...
## i Use `spec()` to retrieve the full column specification for this data. i
## Specify the column types or set `show_col_types = FALSE` to quiet this message.
## • `` -> `...5`
## • `` -> `...6`
## • `` -> `...7`
## • `` -> `...9`
## • `` -> `...10`
```

Show

```
## # A tibble: 6 × 6
##   year month reports reports_convicted reports_non_criminal date
##   <chr> <int>   <dbl>           <dbl>           <dbl> <date>
## 1 2014     10  19040           14060           4980 2014-10-01
## 2 2014     11  16190           11940           4250 2014-11-01
## 3 2014     12  15710           11630           4080 2014-12-01
## 4 2014      1  16220           12070           4150 2014-01-01
## 5 2014      2  15350           11470           3880 2014-02-01
## 6 2014      3  16310           11780           4530 2014-03-01
```

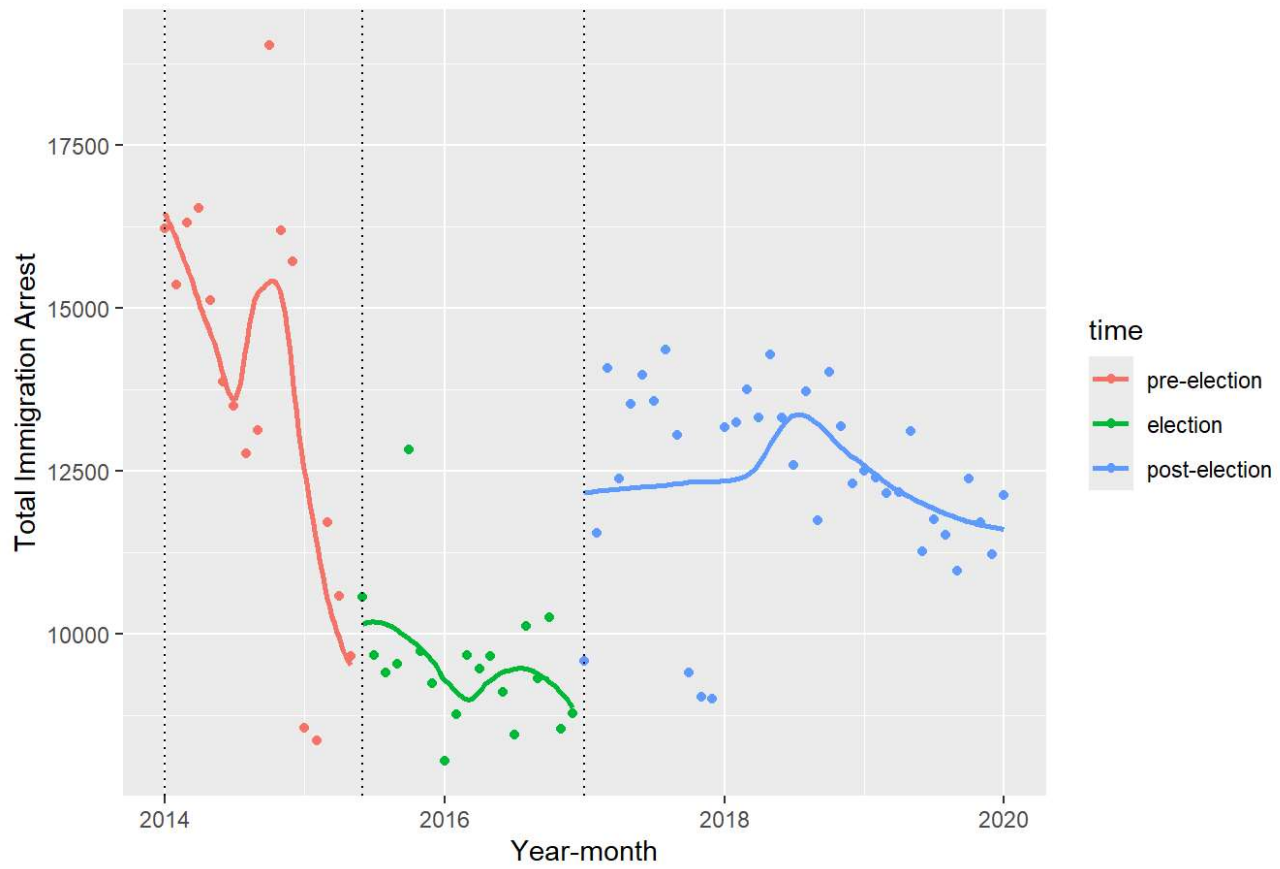
Show

```
## # A tibble: 6 × 7
##   year month reports reports_convicted reports_non_criminal year_month time
##   <chr> <int>   <dbl>           <dbl>           <dbl> <date>   <fct>
## 1 2014      1  16220           12070           4150 2014-01-01 pre-ele...
## 2 2014      2  15350           11470           3880 2014-02-01 pre-ele...
## 3 2014      3  16310           11780           4530 2014-03-01 pre-ele...
## 4 2014      4  16530           11880           4650 2014-04-01 pre-ele...
## 5 2014      5  15120           10960           4150 2014-05-01 pre-ele...
## 6 2014      6  13870           10100           3770 2014-06-01 pre-ele...
```

Show

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```

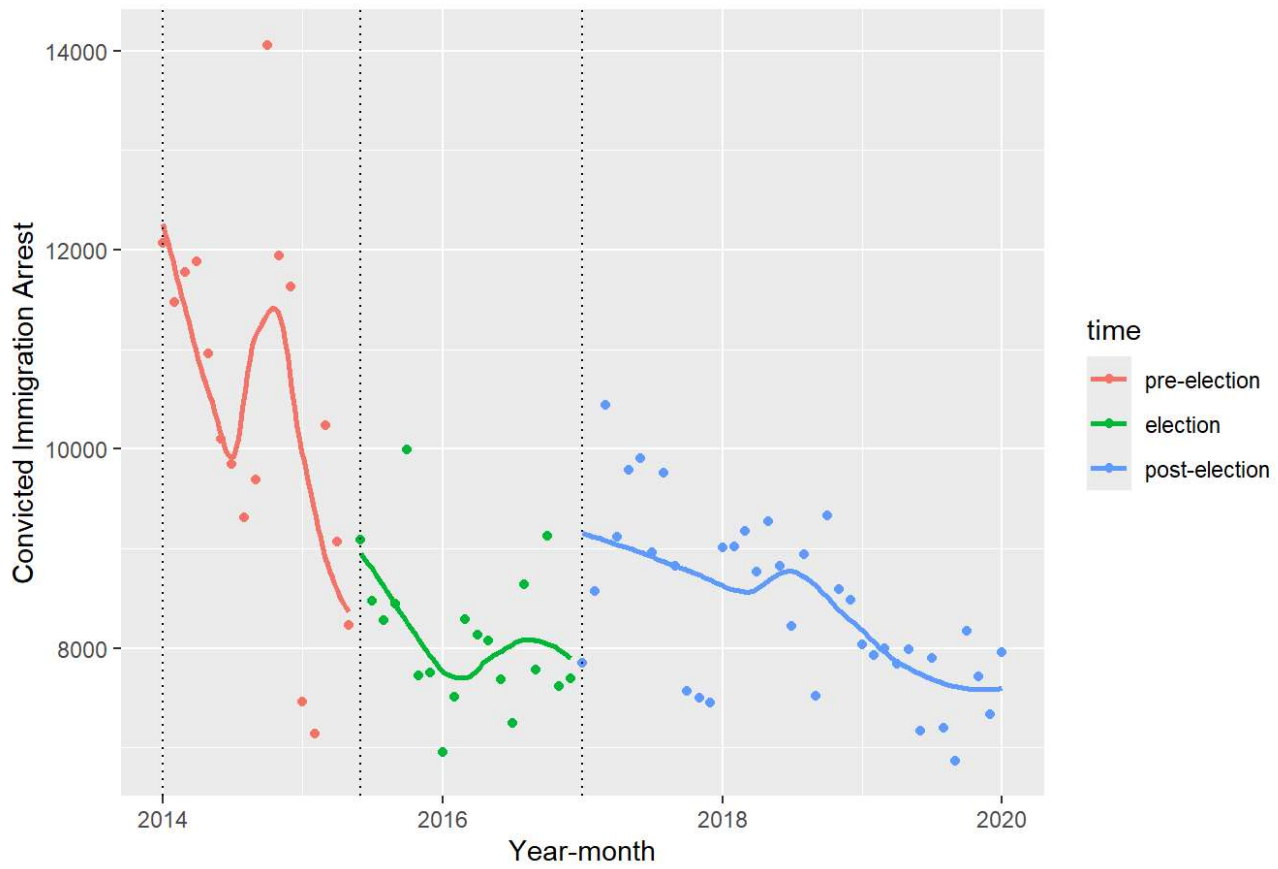
Total Immigration Arrest by Year



Show

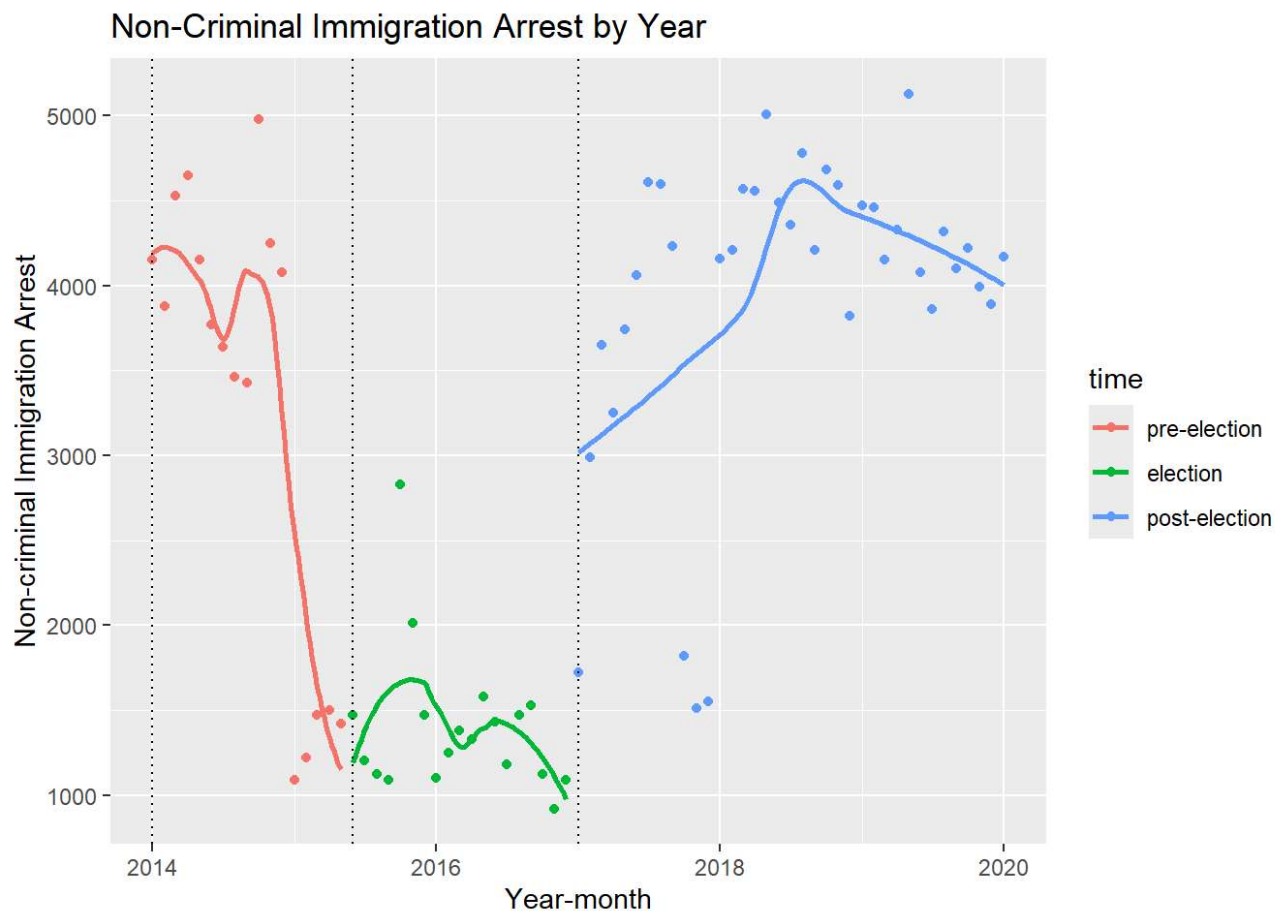
```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```

Convicted Immigration Arrest by Year



Show

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```



Paper Findings:

One of the Hypothesis for the paper was “People will have more interest in reporting immigrants when they believe the government supports deportation.” that means there is more interest in immigrant denunciation when people believe that reporting will lead to some action by the government. In finding the paper suggests that, “Reporting searches (search of how to report immigrant”) increased sharply after Trump took office and that media reporting on Trump’s immigration policies during his administration (but not during the Trump campaign) is associated with more reporting searches”

Our Finding:

So for research we decided to look at data from Law enforcement to see if there is a change in number of arrest of immigrants during Trumps period. We used immigrant arrest data from “Office of homeland Security” for our observation.

Our Process:

We looked into the immigrant arrest data from 3 point of view,

1. Total number of immigrant arrest from January 2014 to December 2019
2. Number of Immigrant arrested for committing crime
3. Number of Immigrant arrested even without committing a crime

Observation Result

1) For Total number of arrest & for immigrant arrest for criminal activity:

- There is higher amounts of arrests pre-campaign (highest),
- a lower number during the campaign (lowest),
- then a spike in numbers post-inauguration but not as high as Pre-campaign (2nd highest)

2) For number of arrest with out criminal activity: - Highest number of arrest occurred during “post-inauguration” of trump. This numbers are way higer than pre-campaign or during campaign.

This suggests that when president Trump openly gave anti-immigrant speech people’s tendency to report undocumented immigrants has increased significantly. That means people were reporting undocumented immigrants even when they are not doing any harm to anyone. This finding of ours validates the paper’s statement that because government is supporting anti-immigrant activity people are more likely to report undocumented immigrants (even with out a crime)