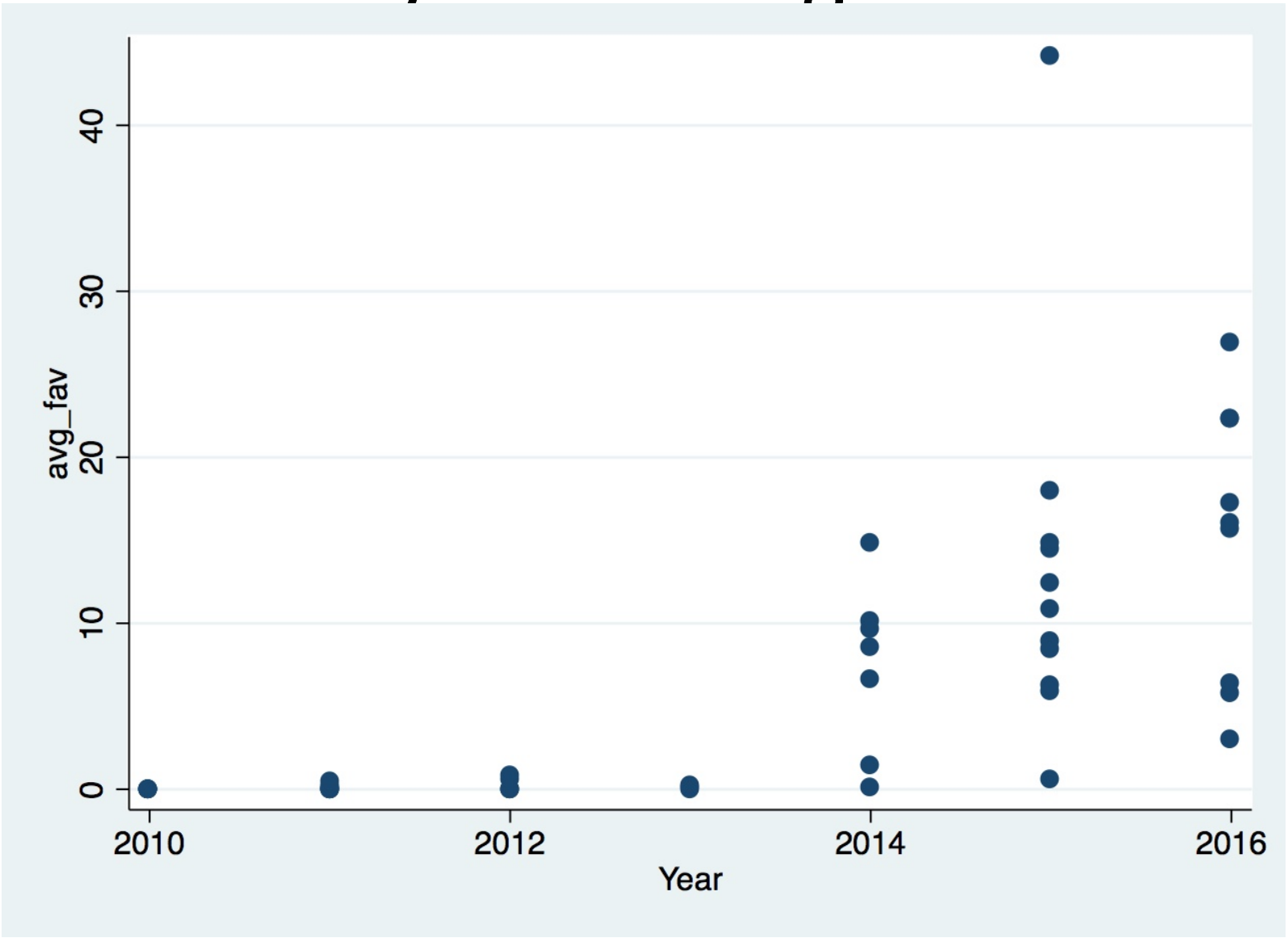
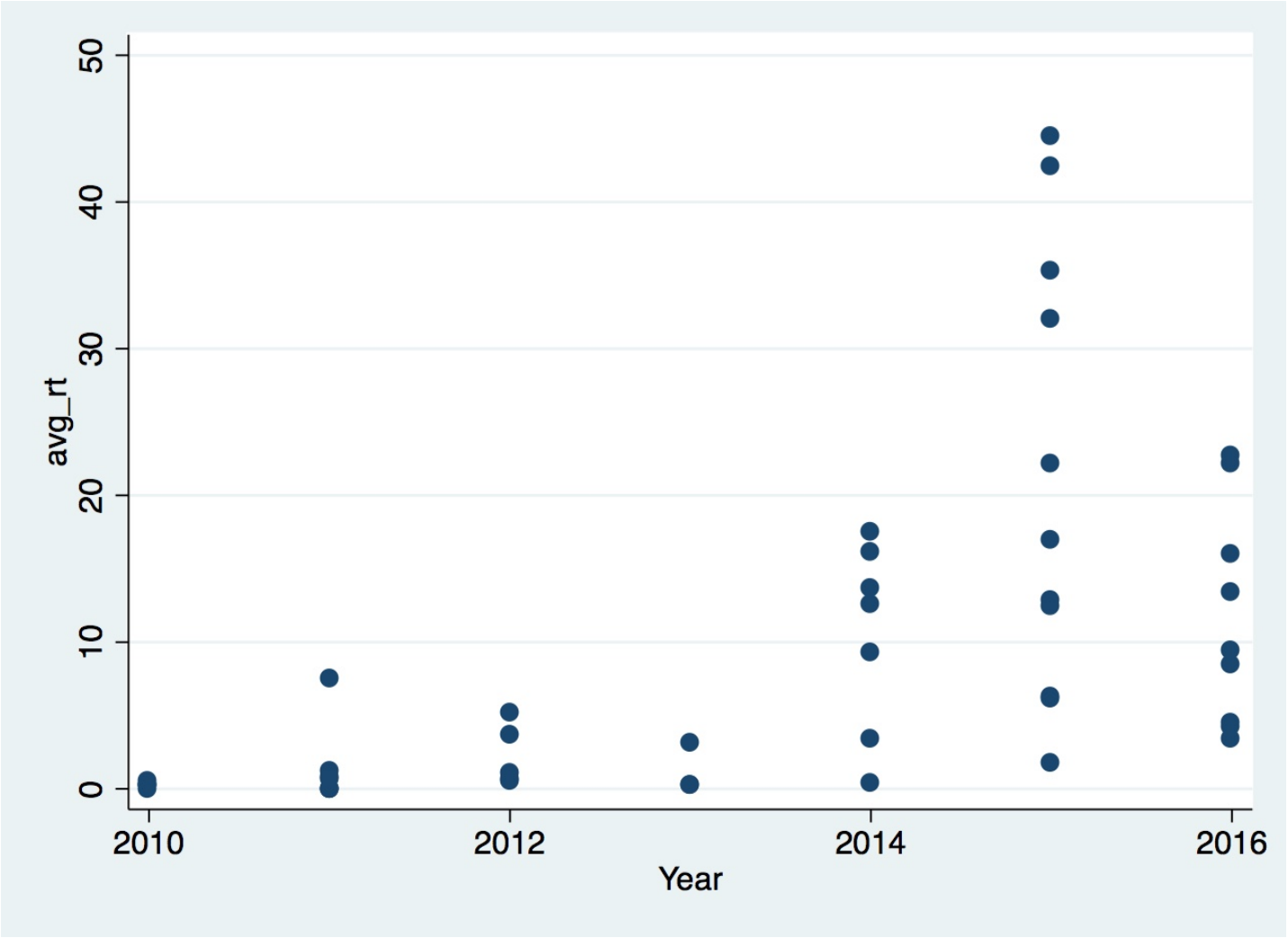
Preliminary Results
Analysis of twitter activity as a measure of interest

Date: 03.13.2017

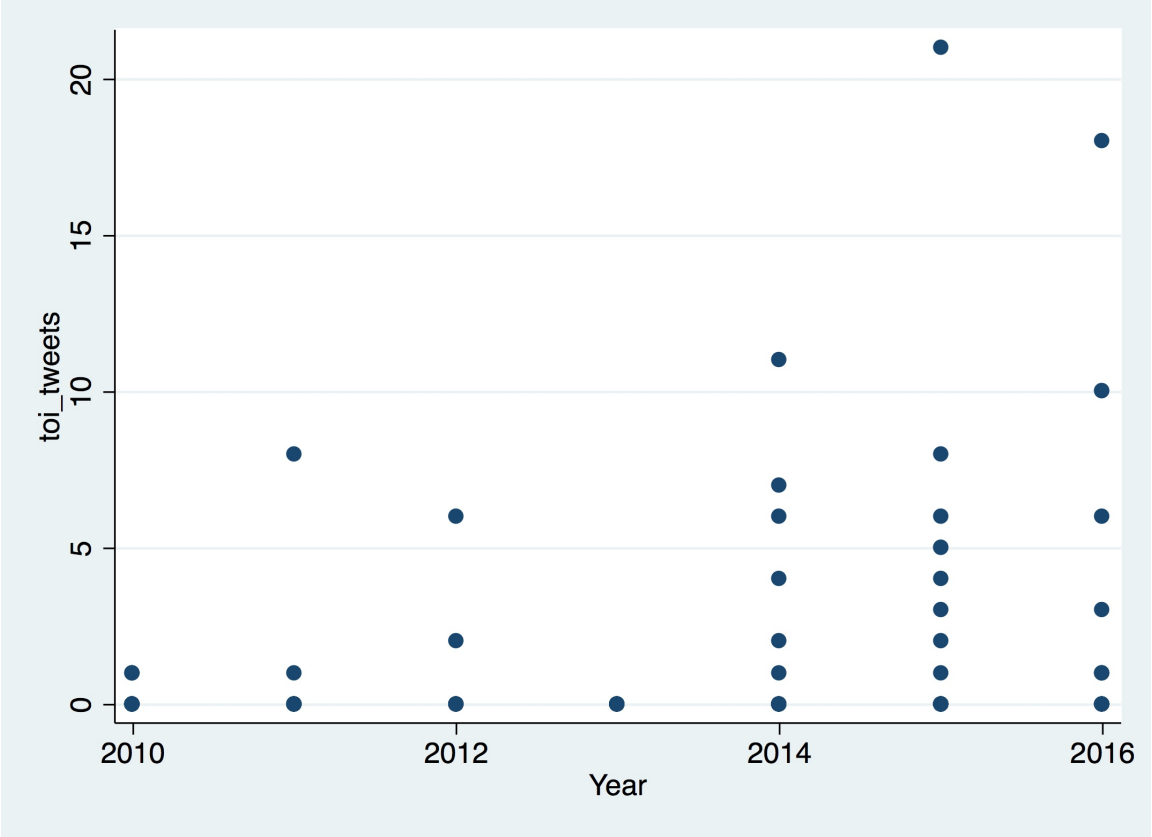
Fav activity increasing with time



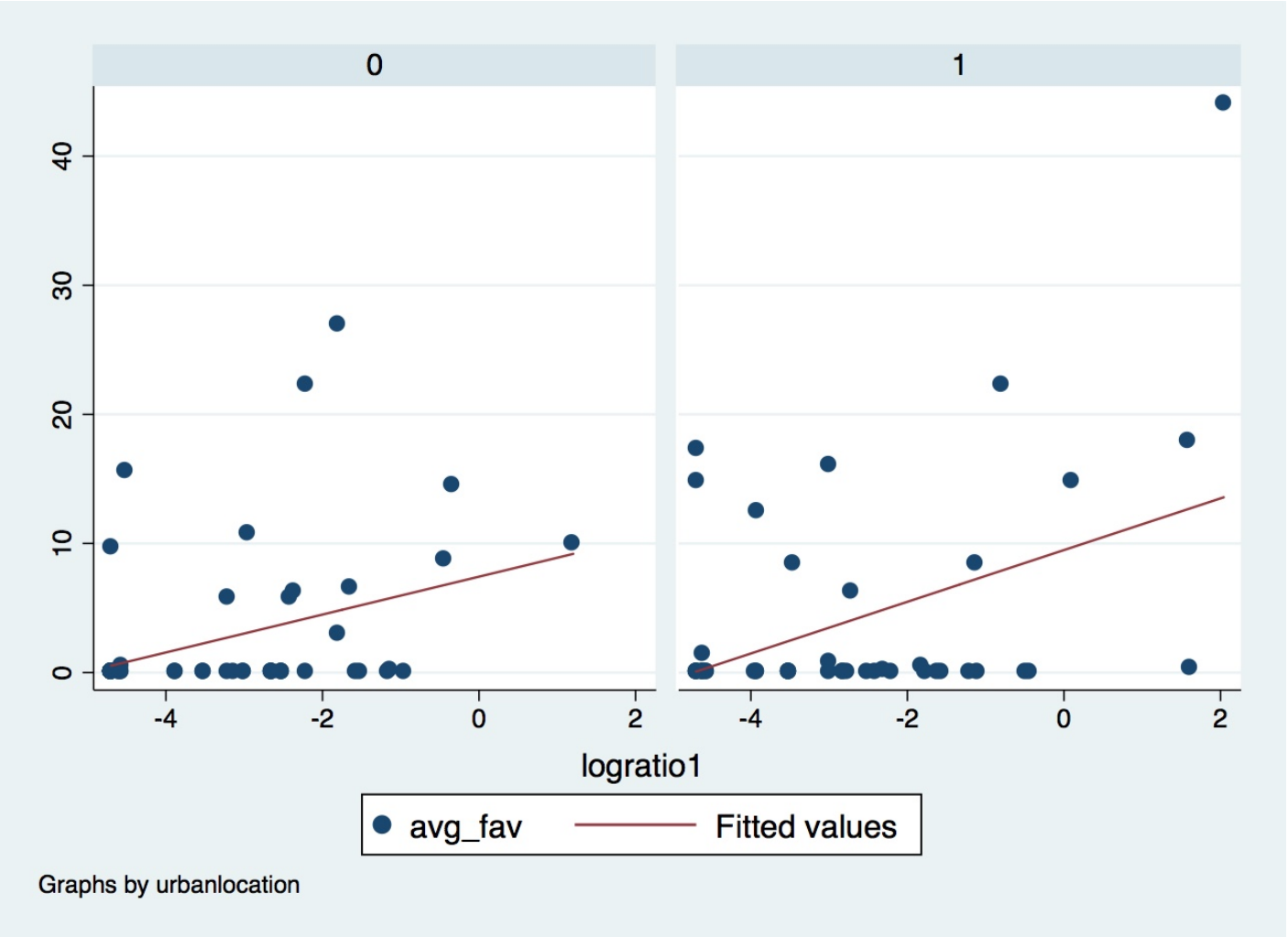
RT activity increasing with time



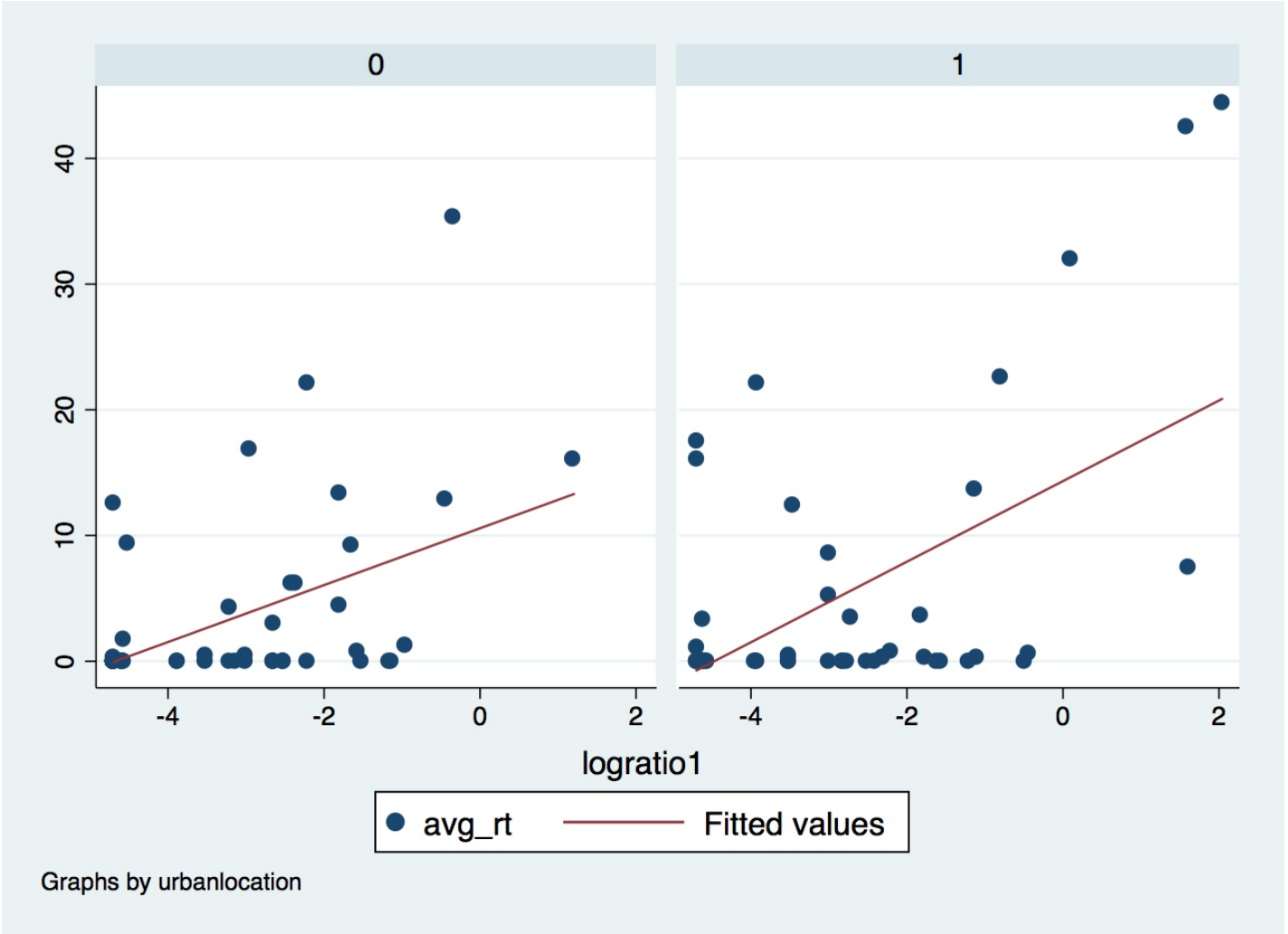
Tweets increasing with time



Interest measures show predicted relationship with each other (fav)



Interest measures show predicted relationship with each other (RT)



For tweeted disasters, higher RT activity seen for urban disasters

```
. bys urbanlocation: sum avg_rt if tweeted==1

-------------------------------------------------------------------------------
-> urbanlocation = 0

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
      avg_rt |         23    7.678985    8.842567         0      35.25

-------------------------------------------------------------------------------
-> urbanlocation = 1

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
      avg_rt |         24    10.76744     13.3626         0   44.41071
```

For tweeted disasters, higher fav activity seen for urban disasters

```
.
. bys urbanlocation: sum avg_fav if tweeted==1

-------------------------------------------------------------------------------
-> urbanlocation = 0

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
     avg_fav |         23    6.385839    7.647204         0   26.90625

-------------------------------------------------------------------------------
-> urbanlocation = 1

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
     avg_fav |         24    7.755237    10.72251         0   44.09018
```

Urbanlocation no longer significant in explaining avg_fav count as measure of interest

```
. reg avg_fav logdeaths i.distype i.year urbanlocation if tweeted==1
```

Source	SS	df	MS		
Model	2120.25564	12	176.68797	Number of obs	= 47
Residual	1832.68223	34	53.9024187	F(12, 34)	= 3.28
				Prob > F	= 0.0032
				R-squared	= 0.5364
				Adj R-squared	= 0.3727
Total	3952.93787	46	85.933432	Root MSE	= 7.3418

avg_fav	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
logdeaths	.5046856	.8027513	0.63	0.534	-1.126701	2.136073
distype						
Extreme Temperature	-.4580165	4.778219	-0.10	0.924	-10.16853	9.252494
Flood	1.585045	4.087165	0.39	0.701	-6.721073	9.891163
Mass movement (dry)	3.227875	9.311604	0.35	0.731	-15.69558	22.15133
Storm	-1.814857	4.811726	-0.38	0.708	-11.59346	7.963746
year						
2011	-.796516	4.799644	-0.17	0.869	-10.55057	8.957534
2012	-1.666104	5.422057	-0.31	0.761	-12.68505	9.352842
2013	-2.081565	5.653427	-0.37	0.715	-13.57071	9.40758
2014	6.720936	4.612729	1.46	0.154	-2.653258	16.09513
2015	12.01773	4.491183	2.68	0.011	2.890545	21.14491
2016	13.57317	4.578107	2.96	0.006	4.269338	22.87701
urbanlocation	3.139481	2.577723	1.22	0.232	-2.099083	8.378045
_cons	-2.961057	5.620564	-0.53	0.602	-14.38342	8.461304

As compared to interest measured through google trends

```
. reg logratio1 logdeaths i.distype i.year urbanlocation
```

Source	SS	df	MS		
Model	122.584196	13	9.42955357	Number of obs	= 103
Residual	154.638107	89	1.73750683	F(13, 89)	= 5.43
				Prob > F	= 0.0000
				R-squared	= 0.4422
				Adj R-squared	= 0.3607
Total	277.222304	102	2.71786572	Root MSE	= 1.3181

logratio1	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
logdeaths	.2814007	.0999045	2.82	0.006	.0828926	.4799088
distype						
Extreme Temperature	-4.36207	.723282	-6.03	0.000	-5.799216	-2.924924
Flood	-2.896685	.6008257	-4.82	0.000	-4.090513	-1.702857
Landslide	-2.483376	.8253432	-3.01	0.003	-4.123315	-.8434365
Mass movement (dry)	-2.872433	1.51975	-1.89	0.062	-5.892144	.1472788
Storm	-4.04006	.6127435	-6.59	0.000	-5.257568	-2.822551
year						
2011	.1837595	.5018559	0.37	0.715	-.8134174	1.180936
2012	-.4221598	.5553821	-0.76	0.449	-1.525692	.6813725
2013	-.8127649	.5082197	-1.60	0.113	-1.822587	.1970568
2014	.3564589	.4693818	0.76	0.450	-.5761927	1.28911
2015	-.1799507	.4412534	-0.41	0.684	-1.056712	.6968104
2016	-.4118767	.4865303	-0.85	0.400	-1.378602	.5548487
urbanlocation	.6379847	.2934805	2.17	0.032	.0548451	1.221124
_cons	-.992174	.7018526	-1.41	0.161	-2.38674	.4023921

Source: toi analysis

```
. bys urbanlocation: sum toi_tweets

-------------------------------------------------------------------------------
-> urbanlocation = 0

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  toi_tweets |         57    .8596491    2.271238         0         11

-------------------------------------------------------------------------------
-> urbanlocation = 1

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  toi_tweets |         46    2.326087    4.590107         0         21
```

```
. bys urbanlocation: sum toi_tweets if toi_tweets>0

-------------------------------------------------------------------------------
-> urbanlocation = 0

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  toi_tweets |         12    4.083333    3.449857         1         11

-------------------------------------------------------------------------------
-> urbanlocation = 1

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  toi_tweets |         18    5.944444    5.744278         1         21
```

Source: toi analysis

```
. bys urbanlocation: sum toi_max_rt toi_max_fav if toi_tweets>0

-------------------------------------------------------------------------------
-> urbanlocation = 0

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  toi_max_rt |         12    29.68611    24.82903         2        100
 toi_max_fav |         12    25.28889    18.33872         0       57.5

-------------------------------------------------------------------------------
-> urbanlocation = 1

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  toi_max_rt |         18    28.15483     30.0126         0    101.625
 toi_max_fav |         18    24.17652    27.16208         0    108.625


. bys urbanlocation: sum toi_max_rt toi_max_fav

-------------------------------------------------------------------------------
-> urbanlocation = 0

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  toi_max_rt |         57    6.249708    16.43717         0        100
 toi_max_fav |         57    5.323977    13.20043         0       57.5

-------------------------------------------------------------------------------
-> urbanlocation = 1

    Variable |        Obs        Mean    Std. Dev.       Min        Max
-------------+---------------------------------------------------------
  toi_max_rt |         46    11.01711    23.09306         0    101.625
 toi_max_fav |         46    9.460378    20.51902         0    108.625
```