

How mass shootings polarize gun control debate in the US

Texas Shooting effects on social media and financial markets

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3 of the deadliest mass shootings in the U.S. occurred in the last 18 months

Figure: Deadliest Mass Shootings in the US

LOCATION	YEAR	DEATH TOLL	■ Occurred in the last 18 mos.
Las Vegas, NV (Mandalay Bay Hotel)	Oct. 1, 2017	58	
Orlando, FL (Pulse nightclub)	June 12, 2016	49	
Blacksburg, VA (Virginia Tech)	April 16, 2007	32	
Sutherland Springs, TX	Nov. 6, 2017	26	
Newtown, CT (Sandy Hook Elementary)	Dec. 14, 2012	26	
Killeen, TX	Oct. 16, 1991	23	
San Ysidro, CA	July 18, 1984	21	
Austin, TX (University of Texas-Austin)	Aug. 1, 1966	15	
San Bernardino, CA	Dec. 2, 2015	14	
Edmond, OK	Aug. 20, 1986	14	

On November 5, 2017, a gunman opens fire on a church in Sutherland Springs (Texas), killing 25 people. The shooter was Devin Patrick Kelley (26). Sadly, episodes like this one are becoming more common.

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Why has Gun Control failed?

- The recent mass shootings in the U.S. revived the public and political debate among groups that support more strict regulation of gun sales and defenders of the Second Amendment, that protects the right of the american citizens to keep and bear arms.
- Guns control debates have had historically an effect in the gun market. After San Bernardino shooting (Dec, 2015), Pulse attack (August, 2016) and the Paris terror attacks (Nov, 2015) gun stocks spiked because people started to buy more guns either for defensive motives or for the fear of that stricter regulations will be established.

Data Analysis

The main idea of our research is to assess how an extreme event -a shooting- affects the discussion about the right to bear arms in U.S. Our work is divided in three sections:

- Analysis over Tweets on 2nd Amendment and Gun Control
- Sentiment Analysis in Twitter
- Correlation between number of tweets and gun stocks

Tweets Analysis

Twitter Sentiment Analysis

We will perform a Sentiment Analysis in Twitter about the 2nd Amendment and assess if some significant changes occur in the aftermath of the Texas shooting.

It is evident that a gun massacre of this dimension makes people to feel more insecure but their reactions can vary from wanting more gun controls (negative tweets increase more than positives) to be more likely to buy a gun to defend themselves (positive tweets increase more than negatives). That technique allows to determine whether that topic (2nd Amendment) is positive, negative or neutral. We will conduct this analysis by region (state) and then we will compare those results with the political party affiliation by state in an illustrative manner.

Correlation with Gun Stocks

Additionally, we will merge the Twitter database with a subset of guns stocks from Bloomberg to check for the financial market sensitivity to the shooting. The ideal would be to include gun sales, but unfortunately there is no available database containing that statistic (federally licensed gun dealers must declare their sales to the ATF but that information is not unified or completely digitalized¹). We just know that there are more than 300 million guns in the United States², and that each year the growth rate in sales is increasing.

¹ <https://www.thetrace.org/2016/08/atf-ridiculous-non-searchable-databases-explained/>

² <http://www.npr.org/2016/01/05/462017461/guns-in-america-by-the-numbers>