WHAT PEOPLE ARE SAYING ON TWITTER ABOUT BREXIT

Analysis of 55,000 Tweets by Expert System and the University of Aberdeen reveal the main topics and trends around “Brexit”

The EU Referendum and the decision to leave or remain in the European Union impacts not only the British economy but also that of Europe. On June 23, 2016, British, Irish and Commonwealth citizens will answer this important question: "Should the United Kingdom remain a member of the European Union or leave the European Union?"

The following report was developed using Expert System’s Cogito cognitive technology to analyze more than 55,000 tweets posted from June 7 to 15, 2016 in England, Northern Ireland, Scotland and Wales. Moreover, the project has involved a sample of 5,000 tweets collected from June 20 to June 21, with the aim to highlight any difference among trends and topics of the first period of the analysis and the days closer to the date of the EU referendum.

The project was a multinational effort between researchers in Expert System’s Modena (Italy), Madrid and Barcelona locations, and was developed in collaboration with the University of Aberdeen, Scotland, within the EU Marie Curie K-Drive project.
Expert System cognitive technology Cogito
To understand Twitter users’ voting intentions, Cogito uses natural language processing and semantic intelligence to quickly and accurately understand text as humans do by establishing precise connections between not just words, but more importantly, concepts.

*Leave or Stay?* 64.75% of tweets from Britain is inclined to leave the European Union

The majority of tweets from each of the countries want to leave the EU: Expert System and the University of Aberdeen find that 64.75% of tweets from Britain is inclined to leave the European Union.

The majority was higher in England and Scotland and slightly lower in Northern Ireland and Wales. But even though England and Scotland have the same percentages of opinions, there are actually some major differences in the details (“A closer look at the issues for each country”, page. 4.)

The difference between these results and current UK polls, which show a much closer race, could be explained by a more active presence of voters who prefer to leave the EU on Twitter, and may potentially post many tweets, over those who prefer to stay in the EU or who are still undecided.

![Pie chart](image1.png)  
**England, 7-15 June**  
- Leave: 31%  
- Stay: 69%

![Pie chart](image2.png)  
**England, 21 June**  
- Leave: 23%  
- Stay: 77%
Scotland, 7-15 June

- Leave: 33%
- Stay: 67%

Scotland, 21 June

- Leave: 42%
- Stay: 58%

Northern Ireland, 7-15 June

- Leave: 40%
- Stay: 60%

Northern Ireland, 21 June

- Leave: 35%
- Stay: 65%

Wales 7-15 June

- Leave: 40%
- Stay: 60%

Wales, 21 June

- Leave: 23%
- Stay: 77%
How did the sentiment change over the period?

The gap for Leave vs. Stay widened in England and Scotland toward the end of the first period of analysis. In Ireland, both sides showed a decrease in trends at the end of the first period and then an increase in trends; while trends in Wales were more stationary during the first period of analysis.
Main topics: jobs, immigration, then government

The analysis showed jobs (16.26%) as the most discussed issue in each of the countries, followed by immigration (14.87%) and Government issues (14.63%). Taxes (3.72%), pensions (2.46%) and security (1.99%) played a marginal role in Twitter discussions, while references to inflation (0.05%) were almost non-existent.

A closer look at the issues for each country

In the charts below, we take a deeper look at the issues most discussed around Brexit in each of the four countries: The first chart features the main issues, and the second shows a breakdown of the issues and how they changed over the June 7-15 analysis period and during the days closer to the date of the EU referendum.
England

Among English users, the topics of Immigration and Government were most frequently mentioned, followed by NHS (National Health Service) Government and Jobs. The analysis reveals that discussions about the NHS (15.61%) peaked on June 9 and June 12. International Recognition, Growth and Currency received roughly equal mention, while Security and Pensions where the least mentioned topics in Tweets.
Scotland

Users in Scotland focused mainly on Jobs, followed by Immigration and Government, which follows the general trend shared by each of the four countries. International Recognition, NHS and Borders were the next most discussed topics, followed by the Currency and Growth. Inflation, Security, Pensions and Taxes were the least discussed topics. The analysis shows that discussion about Jobs peaked significantly on June 15 and June 12.
Northern Ireland

Borders (23.33%) was the main topic of discussion by users from Northern Ireland, which peaked on June 13. Other topics mentioned—Immigration, International Recognition, Currency, Jobs—are shared by the other countries, but discussed with much less frequency in comparison. NHS, Taxes and Pensions were the least mentioned topics.
Wales

Wales is the only country where Currency (22.18%) played a prominent role in discussions, peaking on June 12. After Currency, the next most-discussed topics were Jobs (discussed primarily on June 9 and 10), followed by Government and Immigration, International Recognition and Growth. Borders and Taxes were rarely mentioned in Tweets.
About the K-Drive project

The K-Drive project has received funding from the European Union’s Seventh Framework Programme for research, technological development and demonstration under grant agreement no 286348.

About Aberdeen University

The University of Aberdeen’s Department of Computing Science has a long-standing reputation in Intelligent Systems, with world recognised expertise in areas such as knowledge technologies, multi-agent systems and natural language generation. In the most recent UK research quality assessment (REF 2014) the department was ranked 16th in the UK in terms of research intensity, with 70% of its research assessed to be world leading or internationally excellent in terms of originality, significance and rigour, and 100% being internationally recognised.

http://www.abdn.ac.uk/ - jeff.z.pan@abdn.ac.uk

About Expert System

Expert System is a leading provider of cognitive computing and text analytics software based on the proprietary, patented, multilingual semantic technology of Cogito. Using Expert System’s products, enterprise companies and government agencies can go beyond traditional keyword approaches for the rapid sense-making of their structured and unstructured data. Expert System technology serves some of the world’s largest industries including Banking and Insurance, Life Sciences and Pharmaceuticals, Oil and Gas, Media and Publishing, and Government.

www.expertsystem.com – info@expertsystem.com