

Terrorism and Reporting on Immigration in the Media: Evidence from France

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Introduction

- ▶ This paper, investigates how acts of terrorism could impact the coverage of immigrants in the news and therefore indirectly impact votes for anti-immigrant parties.
- ▶ Our results suggest that terrorism causes a greater media focus on immigration.
- ▶ Immigration is mainly evoked by linking it to Muslims or security issues, benefiting mostly the anti-immigration parties.

We answer to the following questions

▶ Intuition:

- ▶ Most people have no direct contact with immigrants, they form attitudes based on what they hear and read in the media.
- ▶ What the media says of immigrants could affect natives' preferences in favour of hosting more migrants.
- ▶ These preferences are expressed clearly in the voting behaviour.

Does terrorism affect the portrayal of immigrants in the news?

Does change in the portrayal of immigrants following a terrorist attack lead to more vote for the FN?

How do we proceed: The effect of terrorism on the portrayal of immigrants in the media.

- 1 We estimate the effect of terrorism on the salience of immigrants in the news.
- 2 We estimate the effect of terrorism on the tone of portrayal of immigrants in the news.
 - 1 We extract all French news articles on immigration (local and national) from 2014 to 2016 in Europress and Factiva.
 - 2 We set-up the dataset to include the weekly salience (share) and tone of news articles about immigration at media level.
 - 3 We use Natural Language Processing to show subjects to which migrants are associated after terrorism attacks.
 - 4 We estimate by how much the salience and the tone of articles are affected by terrorism.

How do we proceed: The effect of the portrayal on voting outcome.

- 3 Does change in the salience and tone of portrayal of immigrants following a terrorist attack lead to more vote for the FN?
 - 6 Link change in exposition in media coverage of immigration following Bataclan to change in vote share for the FN during during the regional election 2015.

Literature

Q3: The affect of a change in the portrayal of immigrants following a terrorist attack on votes for the FN?

- ▶ (Djourelouva 2020) individuals more exposed to newspapers that obeyed the ban of the term “illegal immigrant”, are less likely to support restrictive immigration policies
- ▶ (Couttenier et al. 2021) an increase in the differential of crime reporting between foreign and natives’ offenders, increased votes in favor of the Minaret Ban.
- ▶ (Keita et al. 2021) systematically mentioning the origin of criminals, especially when offenders are natives, significantly reduces natives’ worries about immigration.

Contribution: The role of terrorism in the success of the FN.

PLAN

- 1 Build a measure of **media salience** of immigrants.
- 2 Build a measure of **media Tone**.
- 3 Effect of **Terrorism** on both media salience and media tone.
- 4 Quantify **gain in vote share for the FN** due to change in media communication about immigration as a result of terrorism.

Database

Media database

Focus on French newspapers: Using the online archive Europress & Factiva, we extract every article published online between October 1, 2014 and October 31, 2016, including the terms: [Immigré\(s\)](#), [Immigration](#), [“migrant\(s\)”](#) (52,020 articles)

Irrelevant articles

Most of the articles were about human migration but not all. Some articles discussed non-human migration (animal migration, data migration), others were opinion pieces, letters, sports articles, and theater and movie reviews.

Database: Clean up

LDA (Blei, Ng, and Jordan 2003).

Two assumptions:

- ▶ Documents with similar topics use similar groups of words.
- ▶ latent topics can be found by searching for groups of words that frequently occur together in documents across the corpus.

Media salience

Q1: The effect of terrorism on the salience of Immigrants?

Dependent variable 1: Media Salience of immigration

$$Salience_w = \frac{N_w^M}{N_w^T} \times 100 \quad (1)$$

where

- ▶ $Salience_w$ is the salience of immigration news in the French media in week w .
- ▶ N_w^M is the number of news article published in France in week w about Immigration.
- ▶ N_w^T is the total count of news article published in France in week w .

Measure of Media salience: Immigration

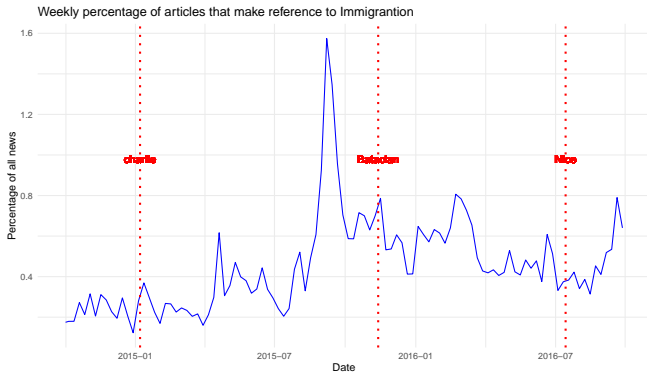
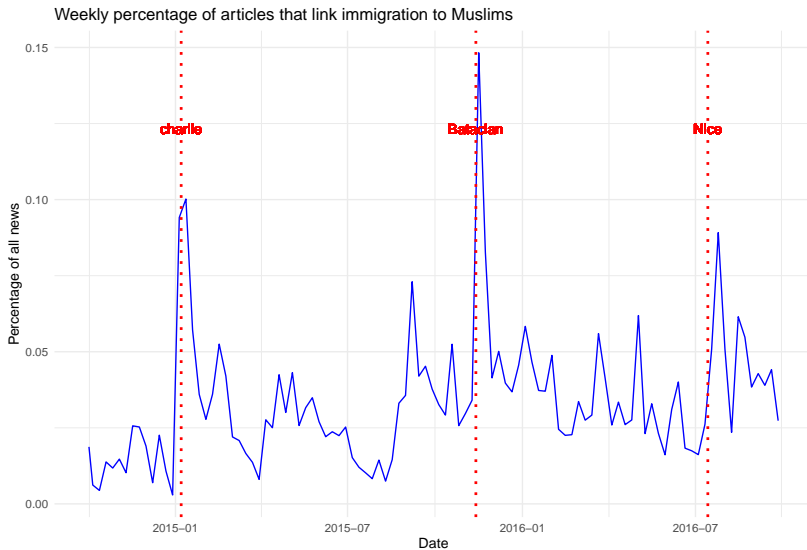


Figure: Salience of Immigration news as percentage of all news

Measure of Media salience: Immigration + Muslims



Media Tone

Q2: The effect of terrorism on media tone?

Dependent variable 2: Media tone of immigration

- ▶ Dictionary-based approach:

$$Tone_i = \frac{W_i^P - W_i^N}{W_i^T} \quad (2)$$

where

- ▶ $Tone_i$ is the tone of article i .
- ▶ W_i^P is the number of positive words within article i .
- ▶ W_i^N is the number of negative words within article i .
- ▶ W_i^T is the number of total words within article i .

Media Tone

Positive words

welcome (35600), association (25208), want (24006), young (20678), social (18772), right (18645), asylum (18126), family (16126), life (15450), organize (14038), work (13446), good (12143), project (11767), give (11144), live (10261), economic (10018), service (9993), help (9577), agree (8959). **Total: 517**

Negative words

police (17331), border (16508), war (12303), camp (10947), death (10575), nothing (10516), crisis (10434), never (9202), security (8492), problem (8280), too much (7674), Terror (7610), need (6987), emergency (6831), control (6691), extreme (6492), loin (6357), hit (6350), risk (6153), leave (5837). **Total: 987**

Media Tone: dictionary validation

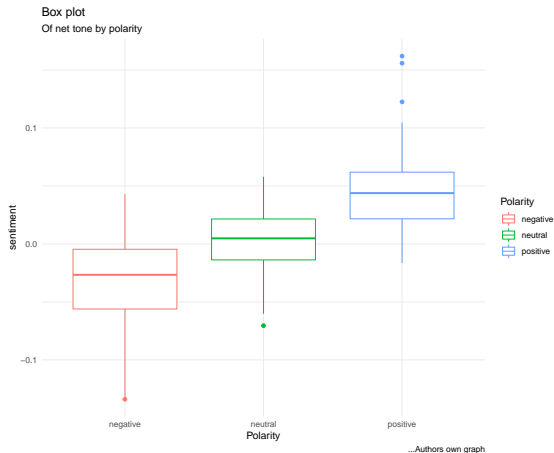


Figure: Dictionary validation

Media tone

Q2: The effect of terrorism on media tone?

Dependent variable 2: Weekly Media Tone of Immigration

$$Tone_w = \frac{1}{N_w^M} \sum Tone_i \quad (3)$$

where

- ▶ $Tone_w$ is the average tone score of immigration news published in week w .
- ▶ N_w^M is the total number of news article about Immigration published in week w .
- ▶ $Tone_i$ is tone score of article i computed using equation 2, where i can be any news article about immigration published in week w .

Measure of Media tone: Immigration

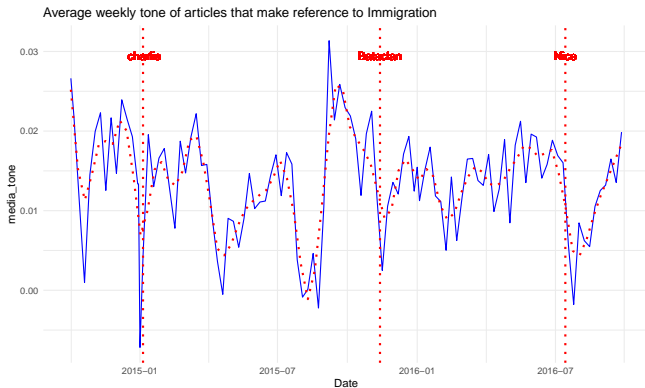


Figure: Mean Tone of Immigration news

Measure of Media tone: Immigration + Muslims

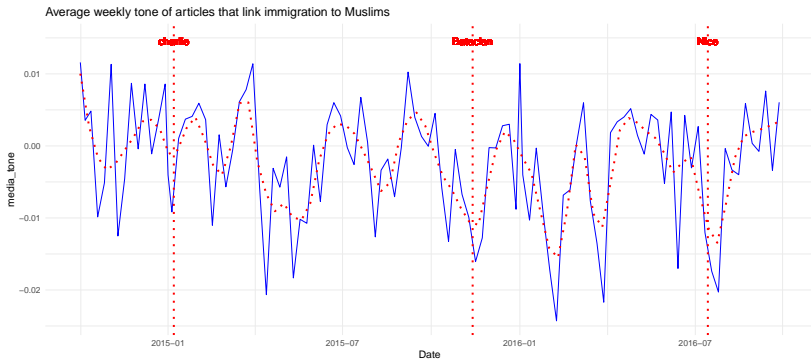


Figure: Mean Tone of Immigration + Muslims news

Preference for the FN

Q3: The effect of change in media communication on immigration caused by terrorism on preference for the FN?

- ▶ We measure the percentage change in vote shares for the FN in the regional election (2015 - 2010) for each commune in France.
- ▶ The 2015 regional election was held on 6 December 2015.
- ▶ The FN increased its vote share from 11.42% in 2010 to 27.73% in 2015.

Did the communication of the media about immigration following the November 2015 terrorist attack played a role?

Variable of Interest 2: Exposition to Salience and Tone

$$Expo_{S,D}^0 = \frac{1}{N_{D,J}^0} \sum_j S_j^0 \times P_{D,j} \quad (4)$$

$$Expo_{S,D}^1 = \frac{1}{N_{D,J}^1} \sum_j S_j^1 \times P_{D,j} \quad (5)$$

where

- ▶ $Expo_{S,D}^0$ is department (D)' exposition to media Salience (S) of immigration 3 weeks before (0) the Bataclan.
- ▶ $Expo_{S,D}^1$ is department (D)' exposition to media Salience (S) of immigration 3 weeks after (1) the Bataclan.
- ▶ $N_{D,J}^0$ is the total number of news Media (J) present in department (D) 3 weeks before (0) the Bataclan.
- ▶ $N_{D,J}^1$ is the total number of news Media (J) present in department (D) 3 weeks after (1) the Bataclan.
- ▶ S_j^0 is the salience of immigration news within media (j) three weeks before (0) the Bataclan.
- ▶ S_j^1 is the salience of immigration news within media (j) three weeks after (1) the Bataclan.
- ▶ $P_{D,j}$ is the weight of media (j) within department D where weight is measured as market share.

The second variable of interest is the percentage change from $Expo_{S,D}^0$ to $Expo_{S,D}^1$.

Sub-components of immigration

- ▶ Immigrants is hardly discussed as a stand-alone topic, it is often linked to other issues.
 - ▶ Immigration: The core category includes any news articles that discusses immigration therefore the entire database.
 - ▶ Immigration + Muslims: Refers to news articles that discusses immigration while linking it to Muslims.
 - **Keywords** = Muslims, Islam
 - ▶ Immigration + Humanitarian: Discusses the humanitarian side of immigration.
 - **Keywords** = humanitaire, réfugié, association...
 - ▶ Immigration + Economy: the fourth category links immigration with economic issues.
 - **Keywords** = économie, croissance, PIB ...
 - ▶ Immigration + (In)security : links immigration with security or insecurity issues.
 - **Keywords** = conflit, sécurité, insécurité ...

Model

Q1, 2: The effect of terrorism on media salience and tone?

Q3 : The effect of media salience and tone on vote?

$$Y_{jt} = \alpha_0 + \alpha_1 * Terror_Week_t + \zeta' X + \eta_j + \eta_q + u_{jt} \quad (6)$$

$$\% \Delta_Vote_j = \alpha_0 + \alpha_1 * \% \Delta_Media_Exposition_j + \zeta' Z_j + u_j \quad (7)$$

Where

- ▶ $Y_{j,t}$ is media salience (weekly share) or media tone (weekly avg);
- ▶ $Terror_Week_t$ is the variable of interest, a dummy that takes one when a terrorist attack occurred in that week. (t+1, t+2, ... t+8);
- ▶ X are *Controls* including Naufrage (Dummy), Month and journal FE.
- ▶ $\% \Delta_Vote_j$ is the percentage change of vote share for the FN from the 2010 to the 2015 regional election within commune J (36,000 communes);
- ▶ Z are *Controls* including preference for the FN (2012 election), change in the share of immigrants, change in the share of unemployment, change in GDP, share of old people and the level of poverty in each commune.

Media Salience - Weekly Impact

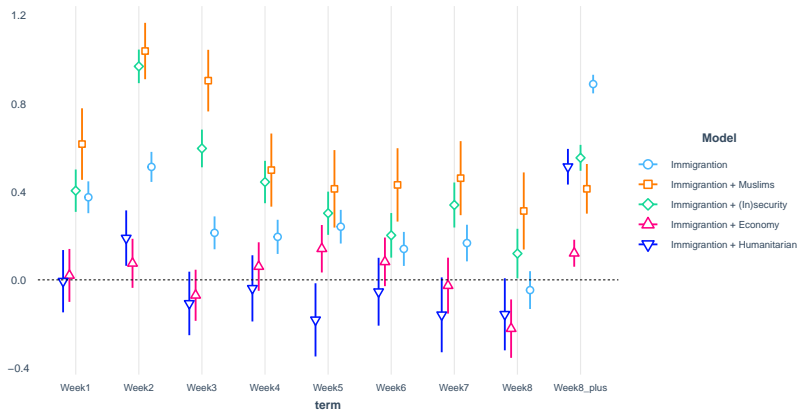


Figure: Weekly estimates - Salience

Media Tone - Weekly Impact



Figure: Weekly estimates - Tone

Impact on vote share of the FN - Immigration

Table: Immigration

	<i>Dependent variable:</i>		
	$\Delta_Vote_FN(\%)$		
	FN	FN	FN
	(1)	(2)	(3)
$\Delta_Expo_Immigration_News(\%)$	0.18*** (0.02)		
$\Delta_Expo_Immigration_Words(\%)$		0.56*** (0.03)	
$\Delta_Expo_Immigration_Tone(\%)$			-0.02*** (0.002)
$\Delta_Immigrant_Population(\%)$	3.87*** (0.08)	3.67*** (0.08)	3.56*** (0.08)
$\Delta_Unemployment(\%)$	0.16*** (0.02)	0.17*** (0.02)	0.18*** (0.02)
$\Delta_GDP(\%)$	3.82*** (0.23)	3.27*** (0.22)	3.64*** (0.22)
Presidential_Election_2012(%)	1.75*** (0.08)	1.29*** (0.08)	1.76*** (0.08)
Share_Old_People(%)	2.25*** (0.08)	2.13*** (0.08)	2.35*** (0.08)
Share_Poverty(%)	-1.26*** (0.08)	-1.43*** (0.08)	-1.35*** (0.08)
Constant	18.65*** (3.75)	57.80*** (4.45)	16.28*** (3.72)
Observations	36,360	36,360	36,360
R ²	0.14	0.15	0.14
Adjusted R ²	0.14	0.15	0.14

Note: *p<0.1; **p<0.05; ***p<0.01

Impact on vote share of the FN - Immigration + Muslims

Table: Immigration + Muslims

	<i>Dependent variable:</i>		
	$\Delta_Vote_FN(\%)$		
	FN (1)	FN (2)	FN (3)
$\Delta_Expo_Immigration_Muslims_News(\%)$	0.06*** (0.01)		
$\Delta_Expo_Immigration_Muslims_Words(\%)$		0.02*** (0.003)	
$\Delta_Expo_Immigration_Muslims_Tone(\%)$			-0.001*** (0.0002)
$\Delta_Immigrant_Population(\%)$	3.78*** (0.08)	3.67*** (0.08)	3.76*** (0.08)
$\Delta_Unemployment(\%)$	0.17*** (0.02)	0.17*** (0.02)	0.17*** (0.02)
$\Delta_GDP(\%)$	3.34*** (0.23)	3.43*** (0.22)	3.71*** (0.23)
Presidential.Election.2012(%)	1.73*** (0.08)	1.66*** (0.08)	1.72*** (0.08)
Share.Old.People(%)	2.33*** (0.08)	2.32*** (0.08)	2.28*** (0.08)
Share.Poverty(%)	-1.32*** (0.08)	-1.35*** (0.08)	-1.29*** (0.08)
Constant	15.81*** (3.72)	16.53*** (3.72)	13.60*** (3.74)
Observations	36,360	36,360	36,360
R ²	0.14	0.14	0.14
Adjusted R ²	0.14	0.14	0.14

Note:

*p<0.1; **p<0.05; ***p<0.01

Conclusion

- ▶ We applied techniques in NLP together with regression to test how immigrants are portrayed in French newspapers.
- ▶ We specifically tested whether an extreme events like terrorism cause a shift both in the intensity of reporting and content of news about immigrants.
- ▶ We also assessed the indirect role played by terrorism in the success of an anti-immigration party (the FN), through the media.

Conclusion

- ▶ Terrorism has a positive impact on the salience immigrants as whole **Up to 8 weeks after terrorism.**
- ▶ The general tone adopted by the media to discuss immigration following a terrorist attack is also more negative. **only up to 3 weeks after terrorism.**
- ▶ Increased media attention to immigration following the Bataclan **led to more votes in favor of the FN.**

Conclusion

Contribution

- ▶ **Media coverage literature:** First study to seriously investigate the idea that external events such as terrorism can influence the portrayal of immigrants by the media.
- ▶ **Electoral studies:** The first attempt to look at the impact of terrorism on voting preference.
- ▶ We present the elaboration and the evaluation of a new **freely available French lexicon** for the automated tone assessment of french news articles.

Thank you !

- Couttenier, M., Hatte, S., Thoenig, M. & Vlachos, S. (2021), 'Anti-muslim voting and media coverage of immigrant crimes', The Review of Economics and Statistics pp. 1–33.
- Djourelouva, M. (2020), 'Media persuasion through slanted language: Evidence from the coverage of immigration'.
- Keita, S., Renault, T. & Valette, J. (2021), 'The usual suspects: Offender origin, media reporting and natives' attitudes towards immigration', Documents de travail du Centre d'Économie de la Sorbonne .