

# Was Brexit a significant topic in Irish election manifestos of 2016 or 2020?

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## Introduction

This essay attempts to understand the key topics voters were asked to decide on in the general elections of both 2016 and 2020 by automated means, with a primary focus on topic modelling due to its simplicity and ability to surface salient keywords which ultimately produce a high-level overview of a dataset. It should be noted however that topic modelling algorithms often use a random seed, which is often the Unix time that the model was run. Thus, while the results of the topic models in question may vary from one run to the next, they should be

Previous research has shown that Brexit was not a significant topic of discussion or debate in either of the previous elections in either 2016 or 2020 (Gallagher and Marsh, 2016, White, 2022). Instead, the electorate was more focused on questions surrounding the economy, public services and the costs of living. That's not to say that no parties were interested in the matter however; parties such as Fine Gael attempted to increase voter attention on the matter in an effort to divert attention away from other matters such as the economy, while other parties such as Sinn Féin, among whose key aims is the reunification of both countries on the Island of Ireland, were known to seize on those same topics in order to win seats in the Dáil. Using a dataset of Irish election manifestos, it is possible to determine the key topics which candidates for the Dáil were expected to talk about when they are on the campaign trail, and thus determine which issues may have been significant in the lead up to both elections.

## Data and methods used

The data comprised a subset of the given Irish election manifestos dataset from the years 2016 and 2020. More specifically, the dataset was filtered to the aforementioned years, after which stopwords in both English and Irish were removed. Failing to remove Irish stopwords would often lead to the dataset which was fed to the topic modelling algorithm being poisoned as extraneous words such as “agus” would appear in the results of the analysis; while these stopwords provide plenty context to a researcher or a voter reading the election manifestos in depth, they are of limited utility in this research.

After this the manifestos were further pruned by removing any words which did not appear in a significant minority of election manifestos to focus on words which appeared across most manifestos as it was believed that this would further reduce the scope of topics to those which were frequently mentioned across all parties rather than one or two; this way that an issue which was heavily emphasised by a small number of parties would not dominate the dataset or poison the model, and it would be more likely that the terms which appeared in any given topic model would be salient and relevant to the political climate at the times of the election.

Following this, the corpus was divided into 10 topics, with the number of topics being chosen out of convenience, and an LDA topic modelling algorithm was run to determine the key words. Duplicated topics were kept rather than trying to adjust the number of topics as it was believed that they provided additional evidence that a topic might have been important in the election cycle. Unsupervised topics were additionally evaluated with topic coherence to gain a better understanding of the key topics present across all manifestos.

Finally, a semi-supervised topic model was used to both cross-check the importance of the topics which were surfaced by the unsupervised topic models and manually check if topics such as Brexit and the European project more generally were present in the corpus given they did not appear in the results output by the unsupervised topic model, and this was done by manually creating topic lists of relevant terms, as well through the use of keywords surfaced by the unsupervised topic model. It is worth noting that the semi-supervised topic model categories had to be padded with a significant number of keywords to ensure that selected topics would not be pruned entirely and break the model.

This analysis was run twice more on the election manifestos for the year 2016 alone, and the election manifestos for the year 2020 alone, in an effort to see which topics, if any, might have carried over across both elections cycles and whether there was any significant or concerted attempt to raise awareness of Brexit in either year given the significant political and economic impact it was expected to have across the island of Ireland, and the significant amount of time and effort which was expended on the topic across all levels of the government to ensure that neither Ireland nor Northern Ireland would be heavily impacted by the matter at any point. It is worth noting that the topic coherence for 2016 averaged approximately 5%, while the topic coherence for 2020 was closer to 10%, suggesting that the key topics produced from the election manifestos for 2020 may have been more distinct than the topics produced from the election manifestos for 2016, though quite frankly it could just as easily suggest that the analysis carried out required further refining.

## **Results analysis and interpretation**

It is worth noting that the resultant topic models were imperfect; terms used to populate the topics in the semi-supervised topic model which were relevant to the results are denoted with a check mark, while terms which the model determined to be relevant to the categories selected are in the same column and have no additional markings. It is these additional terms which may be imperfect; topics such as “breastfeeding” are less likely to be relevant to Brexit more generally, except perhaps in the context of any potential difficulties faced by the United Kingdom regarding their ability to import items such as baby formula following their leaving the EU, which is outside the scope of this essay.

With this in mind however, while it may have been a significant area of concern for some political parties canvassing from doorstep to doorstep (White, 2022) in 2020 it was not a significant topic in any party’s election manifestos to such an extent that the word “Brexit” did not appear within the dataset analysed. Thus it could be argued that Brexit itself was not a significant campaigning point for any political parties in 2016 or 2020, though adjacent topics such as Irish unity and the Eurozone did feature in the results of the topic models more generally. Rather the more common focus points across the years appeared to be those of social protection, housing, healthcare, and financial management, although exactly how they materialised differed across both elections.

In 2016 for instance, there was a significant focus on the development of local areas and public services, as evidenced by the presence of terms such as “SMEs,” “entrepreneurship,” and the IDA (Table 1), and while similar topics appeared in the outputs from election manifestos for the 2020 election cycle (Table 1), they were neighbours with other topics such as “childminders,” and “obligations.” It is worth noting that the 2020 election cycle had a strong focus on the economy and economic development more generally, with voters interested in more personal

matters such as the cost of living, with costs such as childcare being matters of significant attention in the lead up to the election itself (The Journal, 2020).

	1_ health	2_public_car_e	3_training_and_devel_opmen_t	4_brexite_pr oxie_s	5_irish_w ords	Ot her_1	Ot he r_2	Ot he r_3	Oth er_4	Ot he r_5	Ot her_6	Ot he r_7	Oth er_8	Ot her_9	Ot he r_10
1	slá intec ar e [✓]	up dat e	smes [✓]	unit y [✓]	gha eilg e [✓]	pb p	im m en se	op po se d	viol ent	au st eri ty	síoch án a	rel ati on shi p	irel and 's	rel ati on s	fir m s
2	co rru pti on	ena ct	sme [✓]	ga mbl ing	sin [✓]	cor por ati on s	bir th	bh eit h	arti cle	su pe r	rec ruit	bio div ers ity	dail	lgb t	lgb ti
3	se nt en cin g	sep te mber	female	univ ers ities	tea nga [✓]	fáil [5]	re pr es en ts	rial tai s	pea t	rol lin g	sec uri ng	ma riti me	roll out	dir ect ion	bi od ive rsi ty
4	do ct or s [✓]	pla stic	person nel	bro ade r	ata [✓]	ret rofi t	m et ho ds	m bei dh	pre gna ncy	fai lin g	bu yer s	bu dg eta ry	pap er	bor d [5]	ap pr ova l
5	pr e mi u ms	tra nsf or m	medici nes	stru gglin g	bhf uil [✓]	for est s	sp ati al	inp ati ent	suff ere d	tti p	iii	dia sp ora	sea foo d	se cto ral	ce rtif ica te
6	wh eel chair [✓]	se mi	entrepr eneurs hip [✓]	fres h	an n [✓]	cy cli sts	fig hti ng	eir ea nn	coll ege s	m arr iage	co nge sti on	do ubl ing	gar daf	vot er	inf lu ence
7	suf fer ing	ext ens ive	produc tivity [✓]	am bul anc e [1]	iste ach [✓]	ab orti on	pr op os in g	ha nd	effe cts	ag ha id h	pat hway	co ntr ibu tor y	den omi nati onal	nu me rac y	he lps
8	do cu m en t	tas kfo rce	career [✓]	stre ngth	nfo s [✓]	en act me nt	tre es	pa rlia me nts	bhf uil [5]	so ve rei gn ty	de par tm ent al	bu rea u	tax pay er	reg en era tio n	re ba la nce
9	hir ing	thri vin g	candid ate	10 m	fea rr	tes tin g	m ort ga ges	pu bli shi ng	gre enh ouse	hÃ©i re an n	reg ula te	ga el	inve ste d	atá	co nn ec te d

10	un cr pd	cha rgin g	ida [✓]	deř cit	cui rfi mi d [✓]	se ek s	hit	pr o mi se d	mu ltin atio nal s	rar e	ma yor	fin e	arre ars	be nef ici al	rev ie ws
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*Table 1*

Taking healthcare as another example, the major focus in 2020 was on funding and supporting medical services such as the Department of Health and the Health Service Executive, and while there was also a certain amount of focus on funding and supporting medical services in 2016, it appears to have been more commonly promoted in the context of broader social development, the improvement of public services, and training within the community more generally, as evidenced by the presence of the term “sláintecare,” (Table 2) which is the ongoing programme to move the provision of certain services such as care for the elderly away from the government and towards the private sector.

	1_h eal th	2_p ubli c_c are	3_traini ng_and _develo pment	4_br exit _pro xies	5_ir ish _w ord s	Ot he r_1	Ot he r_2	Ot he r_3	Ot he r_4	Ot he r_5	Oth er_ 6	Ot he r_ 7	Ot he r_ 8	Oth er_ 9	Ot he r_1 0
1	hiri ng	fall	sme[✓]	síoc hán a	gha eilg e [✓]	pa ck agi ng	ca nd id ate	pa ce	air po rts	der ry	pos sibi lity	an tis oc ial	rel ati on s	cor rup tio n	ha p
2	red ire ct	foo tbal l	midlan ds[✓]	isla nds	nío s [✓]	wh eel ch air [1]	se pt e m be r	co ntri but ory	bre ak	seo	cho ice s	50 m	flo od in g	lob byi ng	sh op
3	su per	ove rco rdi ng [✓]	securin g	may or	atá	bh eit h	te an ga [5]	wa ter for d	co st as	col lab ora tio n	wo odl and	te ch [3]	inf lu en ce	co m mis sio ns	fu nc tio nin g
4	un der fun de d	find ing s	strengt h	pre par ed	chu r [✓]	ext en siv e	ci nn	pat hw ay s	ag ha id h	bhf uil [5]	rep rod ucti ve	im m en se	gl ob e	scr ap	leg isl ati ng
5	ab se nc e	bet ting	obligati ons	villa ge	hÃ oir ean n	se an ad	ja nu ar y	su pp orti ve	ab oli sh in g	im pa cte d	con cen trat ion	bro ad	ec ol og ic al	foc uss ed	de fici t
6	exe rci se	pea k	entrepr eneurs hip[✓]	eur ozo ne [✓]	rar e	un cr pd	oi de ac ha s	opt	ret ire	un der sta nd	soil	ev en t	avi ati on	vet era ns [2]	se cu re d
7	op po se d	roa dm ap	childmi nders	aca dem ic	re mo te	m bei dh	lpt	dra ft	w ar	tip s	exp loit ativ e	in va lu able	sc he du le	ha bit ats	fin all y
8	ap ple	per mit ted	drawn	bre astf eedi ng	sin [✓]	pe rc en tag e	mi st ak es	atl ant ic	be art	lau nc he d	vict im	bo ok	se ai	gae lta cht aÃ	slo w

9	freedom	surrounding	cctv	amenities	ann[✓]	proposing	successor	technical	reflected	scoileanna	vastly	creators	store	holidays	qualifying
10	scotland	safeguarding	clár	pupils	blána[✓]	practical	ensured	rebuiding	contact	evolving	seas	derelict	co2	article	style

Table 2

Interestingly, 2016 also had a significant focus on rural development, local government and local development, and economic development more generally, with keywords such as “supports,” “rural,” and “business” making an appearance in the results of the unsupervised topic model (Table 2). There were also a significant number of Irish terms across all results and all years, as well as terms such as “teanga,” which is the Irish word for “language,” and “Gaeltacht,” which is the region where Irish is the primary spoken language and whose population has been increasing in recent years, turning this region into a significant voting bloc (Conradh na Gaeilge, 2023). This suggests that the development and maintenance of the Irish language were significant focuses for all parties across both the 2016 and 2020 elections.

	Topic.1	Topic.2	Topic.3	Topic.4	Topic.5	Topic.6	Topic.7	Topic.8	Topic.9	Topic.10
1	support	ensure	ireland	people	ireland	people	health	ireland	governmer	public
2	plan	irish	services	governmer	governmer	local	public	ensure	irish	people
3	continue	people	support	public	services	communit	irish	increase	reform	health
4	ensure	ireland	health	ensure	social	governmer	ensure	national	legislation	services
5	local	tax	public	support	policy	cost	services	public	rural	tax
6	public	increase	national	ireland	public	health	education	business	ireland	workers
7	service	governmer	people	national	supports	ensure	ireland	term	banks	social
8	irish	public	local	services	families	services	communit	reform	garda	irish
9	sector	support	ensure	school	national	social	people	families	politics	governmer
10	provide	funding	developme	provide	schools	housing	support	funding	bodies	ireland
11	4.235096	6.678491	4.534236	4.237019	4.093817	3.710217	5.835607	4.346437	2.424671	6.566688

Table 3

Topics such as housing and homes appeared frequently across both years, with the broad focus on construction and development in the 2020 cycle being preceded by the focus on redevelopment and retrofitting in the 2016 cycle, as well as keywords such as “overcrowding,” “HAP,” which most likely stands for the Housing Assistance Payment scheme, and “LPT,” which most likely stands for Local Property Tax. Considering the ongoing problems in Ireland relating to housing and rental costs, it makes a certain degree of sense that the major parties would direct a significant amount of focus towards these issues given the government’s implicit mandate to focus on and solve topical issues experienced by a large cross-section of the national population.

	1_health	2_public_c3_training	4_brexit_p	5_irish_wo	Other_1	Other_2	Other_3	Other_4	Other_5	Other_6	Other_7	Other_8	Other_9	Other_10
1 hiring	fall	sme [✓]	sióchána	ghaeilge [✓]	packaging	candidate	pace	airports	derry	possibility	antisocial	relations	corruption	hap
2 redirect	football	midlands [✓]	islands	nios [✓]	wheelchair	september	contributor	break	seo	choices	50m	flooding	lobbying	shop
3 super	overcrowd	securing	mayor	atá	bheith	teanga [5]	waterford	costas	collaborat	woodland	tech [3]	influence	commissi	functioning
4 underfund	findings	strength	prepared	chur [✓]	extensive	cinn	pathways	aghaidh	bhfuil [5]	reproducti	immense	globe	scrap	legislating
5 absence	betting	obligation	village	hÁ@ireann	seanad	january	supportive	abolishing	impacted	concentra	broad	ecological	focussed	deficit
6 exercise	peak	entrepreneur	eurozone	[rare	uncrpd	oideachas	opt	retire	understan	soil	event	aviation	veterans [✓]	secured
7 opposed	roadmap	childminder	academic	remote	mbeidh	lpt	draft	war	tips	exploitativ	invaluable	schedule	habitats	finally
8 apple	permitted	drawn	breastfeed	sin [✓]	percentag	mistakes	atlantic	beart	launched	victim	book	seai	gaeltacht	slow
9 freedom	surround	cctv	amenities	ann [✓]	proposing	successor	technical	reflected	scoileann	vastly	creators	store	holidays	qualifying
10 scotland	safeguard	clár	pupil	bliana [✓]	practical	ensured	rebuilding	contact	evolving	seas	derelict	co2	article	style

Table 3

There was additionally a certain amount of emphasis placed on topics such as the environment given the presence of terms such as “biodiversity,” “CO2,” and “woodland” across both election cycles, which may suggest a broad focus on systemic social issues such as climate change, and more general public issues such as diversity, equality, and inclusion (Table 2). The large amount of Irish words and the presence of terms such as “gaeltacht” and “teanga” in the topic models suggest that the development and maintenance of the Irish language were significant priorities for all parties across the 2016 and 2020 election cycles.

## Conclusion

Given the results of the topic models produced, it seems clear that Brexit was not a significant topic in the Irish elections of either 2016 or 2020, in spite of the significant efforts made by the government to ensure there was minimal impact on Ireland as a whole. This may be because of, as previously mentioned, the more local belief that Brexit was predominantly the result of a form of English nationalism, and the focus on topics such as the local economy, local communities, and the provision of local services. Instead, the more common topics which may have been relevant to Brexit which were surfaced by the model were topics related to Irish culture, Irish unity, and the Eurozone more generally. Beyond Brexit, the most relevant additional topics were related to housing, healthcare, and community development, which makes a certain degree of sense given the widespread national interest which these topics have received in the 2016 and 2020 election cycles.

It should be noted that the models produced are far from perfect however, and further analysis would probably be carried out along with more advanced tools such as the Natural Language Toolkit (Bird, 2006) or NeuroNER (Dernoncourt et al., 2017) to further refine the dataset and produce more accurate or descriptive results.



## Use of AI Tools

Tool name	Purpose of use	Prompt
GitHub Copilot chat in VSCode	Assistance writing R code	"/fix" command run against the following: <code>"atm &lt;- keyATM(docs = filtered_data_atm,  model = "base",  no_keyword_topics = 10,  keywords = mykeys)</code>  <code>top_words(atm)"</code> Suggested fix/resultant output was to import the "quanteda.textmodels" library, which was added to the "import packages" section.
GitHub Copilot chat in VSCode	Assistance writing R code	@workspace /fix how do I remove stopwords from 2 languages
GitHub Copilot chat in VSCode	Assistance writing R code	How to write a for loop in R
GitHub Copilot chat in VSCode	Assistance writing R code	/fix Error in topic_coherence(lda_model1, dtm_data = filtered_data_dfm_subset, : The topic model object and document-term matrix contain an unequal number of documents.
GitHub Copilot chat in VSCode	Assistance writing R code	how to interpret coherence
GitHub Copilot chat in VSCode	Assistance writing R code	How to append to dataframe in R?
GitHub Copilot chat in VSCode	Assistance writing R code	how to transpose a dataframe in r
GitHub Copilot chat in VSCode	Assistance writing R code	convert dataframe to CSV in R
GitHub Copilot chat in VSCode	Assistance writing R code	How to get the number of rows of a dataframe in R
GitHub Copilot chat in VSCode	Assistance writing R code	/fix Error in check_keywords() all keywords are pruned

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[%E2%80%98mixed-bag%E2%80%99-showing-positive-and-negative-trends.html](#)

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