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Additional Information

Exploring the Language Heterogeneity Strategies of European Think Tanks

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Abstract

This article aims to carry out an exploratory study of the main European think tanks' communication strategies specialised in international economic policy through a study of their linguistic heterogeneity. For this purpose, a fuzzy-set Qualitative Comparative Analysis (fsQCA) of 19 European think tanks included in the 2018 Global Go To Think Tank Index Report, an annual ranking produced by the University of Pennsylvania since 2008, is carried out. The outcome under study is the number of languages in which the think tanks analysed has been published in the press worldwide during 2009-2018. The information was obtained from the Factiva® database, owned by Dow Jones & Company©, which provides access to more than 33,000 news sources from over 200 countries in 27 languages. The results suggest no necessary conditions for a think tank to articulate its communication strategy, be it high language heterogeneity or low language heterogeneity. However, the sufficiency analysis shows different causal configurations employed by think tanks in designing their strategies. The evidence shows a wide dispersion of the number of news items, the years of experience of the think tanks and the number of languages employed in their communication strategies during 2009-2018.

1. Introduction

Think tanks are considered organisations that have the fundamental objective of generating ideas, conducting analysis and research that are subsequently disseminated (Montobbio, 2013), advising the political elite on the formulation of public policies (Misztal, 2012; Stone, 2004) and promoting debates on the public agenda (Urrutia, 2013).

A more recent definition that summarises the nature of think tanks is provided by McGann (2021, p. 13): "Think tanks are public policy research analysis and engagement organisations that generate policy-oriented research, analysis and advice on domestic and international issues, thereby enabling policymakers and the public to make informed decisions about public policy".

Considered as instruments of soft power due to their role in the policy-making process in the political and international system (Montobbio, 2013), their operation responds to a double market: that of ideas, where think tanks compete so that political decision-makers consider their proposals; that of financing, where they seek that their activity is supported by potential public or private funders. From these parameters, McGann (2011) establishes a classification of think tanks that allows specifying their operation: (1) "universities without students": they are the think tanks whose main activity is to develop research and promote it to use it in the formation of policies. (2) "contract" think tanks: they carry out their activities at the request of the government or entities that participate in the elaboration of policies. (3) "advocacy think tanks": specialised in a specific subject, they produce research and advise political actors in making decisions about the field they dominate. Finally, (4) "party think tanks": these are the think tanks linked to a political party that generate the proposals that will make up the political programs of the party to which they belong. Precisely in this process of argumentation of public policies of think tanks, the perceived image of a party leader can influence young people's electoral choices (Chatratichart, 2011).

In this way, think tanks have consolidated themselves as new political actors for effective advice, domination and control in political decision-making, with a

growing communicative presence (Castillo-Esparcia, Castillero-Ostio and Castillo-Díaz, 2020). In this context, language becomes an essential instrument of influence for an agency's positioning in the international community, given the scope of cultural, economic, commercial, political and security expansion involved (Pajović and Pajović, 2015).

In this sense, the analysis of the strategies used by think tanks to disseminate issues in public opinion has been little studied. Specifically, it is of great interest to deepen the understanding of the use of linguistic strategies aimed at small local audiences to improve the capillarity of communication, especially on emerging issues such as the socio-technical transitions of the 2030 Agenda (Sapinski, 2019; Kickbusch and Hanefeld, 2017), speciesism and climate change contrarianism or financial austerity (Almiron, 2021; Almiron, 2017).

This research analyses the main European think tanks' communication strategies specialised in international economic policy by studying their language heterogeneity. This study's novelty focuses on using a qualitative type methodology that allows the advancement of theory from a deep understanding of the cases (Rihoux, 2017).

A fuzzy set Qualitative Comparative Analysis (fsQCA) of 19 European think tanks included in the 2018 Global Go To Think Tank Index Report (McGann, 2019), an annual ranking produced by the University of Pennsylvania since 2008, is performed. The sample has been constructed with those think tanks with more than 100 mentions in the media during the period under study (2009-2018).

This research is structured through the sections: theoretical framework, data and methodology, conclusions and references, to deepen the knowledge of the linguistic heterogeneity strategies of the main European think tanks specialised in international economic policy.

2. Theoretical framework

The media are relevant tools for directing attention to different issues and determining the aspects on which public opinion should focus, while at the same time becoming an essential element of politics (Bennett and Entman, 2001).

Think tanks appear in the media sphere from the production of research since one of these entities' main functions is to disseminate their findings and ideas in the media to influence public debates (Roger-Monzó and Castelló-Sirvent, 2020). Therefore, they need to promote visibility in the media (Lalueza and Girona, 2016; Rich and Weaver, 2000) to disseminate their proposals (Abelson, 2012; Rich and Weaver, 2000) and obtain a prestigious image among political actors (Urrutia, 2013). In other words, a think tank will be perceived as influential if it appears regularly in mass media (Kelstrup, 2017; Wouters, 2015).

Thus, a common strategy to increase the media impact of these entities is to specialise in a particular topic and become a reference source on that topic (Lalueza and Girona, 2016; Rich and Weaver, 2000). Think tanks often produce a variety of research products tailored to a range of audiences. Their scholars seek to submit op-eds to major newspapers, provide commentary on TV and radio programmes, maintain specialised blogs, and even testify before policy committees and subcommittees (Abelson, 2014).

The heterogeneity of these entities has led to the systematisation of national "traditions". Baier and Bakvis (2011) distinguish based on the links between think tanks and political parties. In this sense, they determine that the European pattern shows a strong dependence and cooperation between think tanks and political parties. Thus, European think tanks act as intermediaries between experts and governments to disseminate policy solutions that influence decision-making (Sherrington, 2000; Stone, 2007). Kelstrup (2017) points in the same direction and notes European think tanks' subordination to political actors to influence public debate. For his part, Medvetz (2012) extends dependence on economic actors to achieve funding and the media to obtain a media agenda presence.

In this line, recent studies find that think tanks took advantage of the economic crisis to increase their presence in the media, generating debates around the

design of public policies and strengthening their reputation, credibility and visibility (Coman, 2019).

Thus, think tanks are seen as powerful organisations that occupy key policy design and implementation positions. Over time, think tanks have focused more on policy advocacy than policy research (Abelson, 2014). Think tanks have evolved to become agile and flexible organisations (Datta, 2021). Their ability to adapt to change has allowed them to develop new forms of research based on big data, spatial analysis and data visualisations (Ramos, 2021). Currently, among other issues promoted by think tanks, the transformation of global industries suggested by the 2030 Agenda is presented. (Almiron et al., 2021; Zhang et al., 2018; Zhang et al., 2016a). Other examples may be the generation of new taxes or the establishment of subsidy systems to promote new technologies aimed at developing green strategies (Adua and Clark, 2021; Byravan et al., 2017; Walker and Hipel, 2017; Walker et al., 2009).

The number and impact of think tanks worldwide have increased in recent years. In fact, "think tanks are a global phenomenon because they play a critical role for governments and civil societies around the world by acting as bridges between knowledge (academia) and power (politicians and policymakers)" (McGann, 2021, p. 17). The research areas that make up these entities include economic, energy, science, health, technology, social, defence, environment, and international relations policy, among others (McGann, 2021). In fact, emerging issues derived from the Sustainable Development Goals (SDGs) and climate change are at the core of the think tanks' debate (Busch and Judick, 2021; Zhang *et al.*, 2016b; Melgarejo and Lakes, 2014; Jacques *et al.*, 2008; McCright, and Dunlap, 2003), especially in a post-pandemic perspective (Santos-Carrillo *et al.*, 2021; Pennycook *et al.*, 2021)

The rise of transnational networks of think tanks contributing to research and public policy-making, both within and across borders (Kelstrup, 2016), supports the importance of analysing the number of languages in which think tanks disseminate their messages in the media. In this sense, the specific conditions of

language diversity that characterise the European Union (Gómez, 2002) act as contingent factors in European think tanks' communication strategies.

Recent research on the linguistic heterogeneity of think tanks in disseminating their messages in the media shows that these entities tend to disseminate their messages in few languages when they specialise in specific issues. On the contrary, those think tanks that broaden their action contexts choose to transmit their proposals in many languages (Castelló-Sirvent et al., 2020).

3. Data and Methodology

3.1. Data

This research was conducted based on the information collected in the international economic policy category of the 2018 Global Go To Think Tank Index Report ranking (McGann, 2019), which encompasses 87 think tanks. This study is focused on the 2019-2018 period and on European think tanks that achieved more than 100 media mentions, as proposed by Kelstrup (2017), constituting a study sample of 19 European think tanks.

Once the think tanks to be analysed have been selected, the Factiva® database is used to search for information in the media related to these think tanks. This tool is owned by Dow Jones & Company© and provides access to more than 35,000 news sources. Factiva® has been tested in numerous studies that have proven the validity of its results (Griffin et al., 2011; Tetlock, 2007).

3.2. Methodology

The full name of the think tank was taken into consideration to search for information omitting the corresponding acronym in order to avoid confusion, the summary and the news item itself disseminated in all the media included in the Factiva® database, in all the available languages and the period of years indicated 2019-2018. In any case, acronyms have been considered in those think tanks where it has been possible to verify that they did not generate confusing or erroneous situations. This check consisted of seeing if the first selection of 100 news items shown by the search tool and made with each think tank's acronym

coincided precisely with the one provided by the same tool using the full name. Only in these cases, the acronym of the think tank was taken into consideration.

Initially, the database analysis was carried out by studying the correlations between the languages in which the analysed think tanks published their news. The study of correlations between languages has been evaluated between official languages of the European Union. Besides, the correlation between official languages and other non-official languages of countries outside the European Union has been analysed.

Subsequently, the configuration framework study was conducted using the Qualitative Comparative Analysis (QCA) methodology developed by Charles Ragin (1987, 2008). This methodology is based on both quantitative and qualitative analysis and takes Boolean algebra as its basis. QCA works with two groups of factors: those representing the explanatory or causal conditions and those representing the "outcome", the result explained by the former.

The QCA methodology performs a set-theoretic analysis to observe all potential relationships between the "outcome" and the possible binary combinations of predictive conditions. This analysis yields both necessary and sufficient attributes to explain the outcome by giving causally asymmetric elements. Thus, sometimes, the combinations of conditions that explain the outcome are different from those that indicate the outcome's lack of outcome.

According to (Rihoux, 2017: chap.book CIS), a dialogue with the different cases is achieved during the QCA analysis after defining the scope and object of the research, the definition of the cases to be studied and establishing the inclusion criteria. QCA is suitable for small and medium samples (Cezar, 2020), overcoming the limitations of other techniques, such as inferential statistics (Woodside, 2013) and allows the advancement of knowledge from the analysis of particular cases (Ragin, 2008).

After performing the analysis, the QCA methodology establishes which pathways explain that the main international economic policy think tanks of the European

Union increase or decrease the number of languages on which they base their media presence in the study period (2009-2018).

According to Redding and Viterna (1999), one of the advantages of using the QCA methodology is that it favours the use of smaller data sets in order to design the theory scheme better, studying systematically the cross-cases resulting from all possible combinations of relationships between the different types of explanatory and explained conditions.

It is necessary to follow 4 phases in a sequential way to proceed successfully with the QCA methodology (Fiss, 2011): Definition of the property space, creation of joint membership measures, evaluation of the coherence between the global relationships and finally, the realisation of a logical reduction of the different results.

More specifically, in our study, the fuzzy set comparative qualitative approach (fsQCA) has been used for the analysis. According to Lacey and Fiss (2009), fsQCA is a very suitable approach for the study of multilevel theory. With the fsQCA approach, based on fuzzy sets, it has been analysed which conditions are necessary and sufficient in the design of strategies based on the number of languages used in the different media by the main international economic policy think tanks of the European Union. This technique studies whether or not the membership of cases in causal conditions is related to the outcome.

To measure the data's membership, these have been defined in values between 0 and 1, with the value 0.5 indicating the qualitative separation of being or not being within a set. According to Ragin and Pennings (2005), all fuzzy sets retain all the crisp sets' properties, thus guaranteeing the results of the analysis of the particularities of the different cases and their relations between theoretical sets.

On the other hand, according to Fiss (2011), the fsQCA technique makes it possible to model the concept of cyclic causality since it allows us to understand the influence of causal conditions on the success of the strategies of the different

think tanks, even accepting that several combinations of casual conditions may occur about the same outcome, introducing the concept of equifinality.

Finally, this method allows for asymmetry (Fiss, 2011) between the attributes that explain the success and failure of the think tanks' strategies. fsQCA allows for a refined and reflexive analysis more than other quantitative techniques aimed at explaining success and failure from a symmetrical perspective.

Thanks to this, it has been possible to find whether various combinations of global media representation, number of years of experience of a think tank, or openness to trade and membership or non-membership of the Eurozone help explain the number of languages in which different think tanks choose to disseminate their messages. In this respect, the study of necessary and sufficient conditions helps to understand which are central to the different solutions.

Initially, the study begins by shaping the research question, focusing interest on the number of languages in which each think tank disseminates its content through the media during 2009-2018. This study attempts to establish a hypothesis that explains how think tanks in the European Union, depending on economic circumstances or attributes associated with the country to which the think tanks belong and other circumstances or attributes associated with the activity of each think tank such as its media representation and a number of years of experience, choose to disseminate their content in a certain number of languages.

The fsQCA research was designed following a case-oriented approach (Rihoux, 2013; Rihoux and Lobe, 2009). On the other hand, it was necessary to build the population to be analysed in this exploratory study, the final selection of the 19 case studies, the relevant attributes that help explain the result as well as the proposed model, through a previous process of acquisition of knowledge about think tanks by the researchers.

The attributes (Table 1) consist of the outcome to be explained (LAN), the conditions associated with think tank activity such as worldwide media

representation (WMR) and years of think tank experience (EXP) and the economic conditions related to the country to which the think tanks belong such as openness to trade (TB) and membership of the Eurozone (EUR).

Table 1
Conditions and sources.

Type	Condition	Indicator	Source
Outcome	LAN	Languages. Number of languages in which each think tank published its contents throughout the 2009-2018 period.	*Factiva*®
Think tank conditions	EXP	Think tank experience. Number of years of experience of each think tank, taking as reference the year of its foundation.	Think tanks website
	WMR	World Media Representation. Total news published in the press during the 2009-2018 period.	*Factiva*®
Country economic conditions	TB	Average Trade Balance expressed in US dollars for the 2009-2018 period.	World Bank
	EUR	Country with the single currency (with the Euro as currency). It takes values 0, 1 and registers the countries that have the euro as legal tender, from the countries in which each of the think tanks develops their main activity.	European Central Bank (ECB)

About the case selection process (Table 2), the MSDO (Most Similar cases with Different Outcomes) strategy was used, following the work of Berg-Schlosser and De Meur (2009) based on the MSSD (Most Similar Systems Design) logic initially developed by Przeworski and Teune (1970). With the use of the MSDO strategy, similar cases with different occurrence of the phenomenon to be studied can be identified and are often used in the analysis of hypotheses, propositions or conjectures (Rihoux, 2017). Table 2 shows the cases under study (N=19) and the raw values analysed for the outcome and conditions.

Table 2.

Think tanks and conditions.

Think tank	Acronym	Country	LAN	EXP	WMR	TB[1]	EUR
Bruegel	BRU	Belgium	14	14	1.085	$ 5.788,97	1
Vienna Institute for International Economic Studies	WIIW	Austria	15	45	484	$ 13.036,27	1
Adam Smith Institute	ASI	United Kingdom	21	41	6.492	$ -50.418,67	0
Chatham House	CH	United Kingdom	27	98	40.797	$ -50.418,67	0
Centre for European Policy Studies	CEPS	Belgium	23	35	5.097	$ 5.788,97	1
Kiel Institute for the World Economy	IfW	Germany	25	104	4.941	$ 230.048,98	1
European Centre for International Political Economy	ECIPE	Belgium	15	12	329	$ 5.788,97	1
Institute for International Economic Studies	IIES	Sweden	4	56	110	$ 25.035,01	0
Centre d'Etudes Prospectives et d'Informations Internationales	CEPII	France	14	40	789	$ -30.268,81	1
French Institute of International Relations	IFRI	France	17	39	2.167	$ -30.268,81	1
Austrian Institute of Economic Research	WIFO	Austria	20	91	7.629	$ 13.036,27	1
Institute for International Political Studies	ISPI	Italy	4	84	689	$ 25.865,52	1
Macroeconomic Policy Institute	IMK	Germany	8	13	714	$ 230.048,98	1
National Institute of Economic and Social Research	NIESR	United Kingdom	20	80	2.978	$ -50.418,67	0
TARKI Social Research Institute	TARKI	Hungary	13	11	913	$ 9.548,07	0
World Institute of Development Economics Research	WIDER	Finland	6	34	263	$ -438,97	1
Organisation for Economic Co-operation and Development (OECD)	OECD	France	19	57	13.068	$ -30.268,81	1
Institut Montaigne	IMONT	France	12	18	2.464	$ -30.268,81	1
Mercator Research Institute on Global Commons and Climate Change	MCC	Germany	6	6	384	$ 230.048,98	1

[1] Millions of U.S. dollars

The heterogeneity of the outcome in the different think tanks (Figure 3) led to a return to the study of each of them and academic theory to make progress within the funnel of complexity (Rihoux and Lobe, 2009). The use of the MSDO strategy to compare cases with different outcomes helps to design counterfactual thinking logics (Tarrow, 2010). The causal conditions that shape the recipes on which think tanks base their decisions on the number of languages to use in the dissemination of their content (LAN) are articulated from two dimensions of attributes: media-related attributes associated with the activity of each think tank (EXP, WMR) and economic attributes associated with the country to which they belong (TB, EUR).

With this approach, the theoretical framework indicates that the country's economic conditions of each of the think tanks and where they conduct their activity influence the number of languages in which the contents are disseminated "outcome". As indicated above, in this paper, the model's causal conditions have been defined using the MSDO/MDSO method (Berg-Schlosser and De Meur, 2009). That implies that an open theoretical model has been constructed from which causal conditions can be reduced until the attributes are adjusted and the proposed analytical models are constructed.

In connection with the calibration process, special attention has been paid to the cutoff points from which the different attributes will be assigned (Rihoux, 2017). In assigning the different degrees of membership, the three-value fuzzy set (three-value fuzzy set) has been followed, from a direct method based on the researchers' knowledge and experience of the researchers (Verkuilen, 2005). These three values will establish a first set that will be called fully inside, a second set called maximum ambiguity, and finally, the set called fully outside.

Concerning the data that make up a matrix of numerical values and that are not fuzzy values, a calibration process must be carried out, which will finally provide binary and metric values (Kent, 2009) with which to analyse the existing intervallic variations in terms of sets (Ragin, 2009). Table 3 shows the different anchor points defined and the descriptive statistics for the different attributes.

Table 3.
Calibration and descriptive statistics.

Condition	Calibration			Statistics			
Concept	Fully inside	Maximum ambiguity	Fully outside	Max	Min	Average (standard deviation)	Median
LAN	15	10	5	27	4	14.89 (6.99)	15
EXP	40	20	10	104	6	46.21 (31.77)	40
WMR	14.149,79	4.810,16	1.085,00	40.797	110	4.810,16 (9.339,64)	1.085
TB	121.001,72	27.434,99	0,00	230.048,98	-50.418,67	27.434,99 (93.566,73)	5.788,97
EUR	1	-	0	-	-	-	-

In conclusion, a methodology has been followed based both on an important a priori knowledge of academic theory and the think tanks themselves under study to achieve an optimal combination of conditions and an expected directionality of the causal conditions. Similarly, strict control has been followed in the different phases of the applied methodology in line with good practices in QCA analysis (Rihoux, 2017), achieving acceptable results in line with the theoretical framework and empirically supported.

Consequently, the LAN = *f*(EXP, WMR, TB, EUR) model is proposed, tested with the fs/QCA 3.0 software (Ragin et al., 2006).

4. Results and discussion

4.1. Analysis of the variables

The variables studied are statistically correlated (Table 4). The outcome analysis (LAN) shows a positive (EXP, WMR) and negative (TB) relationship, respectively (Figure 1).

Table 4.

Correlation Matrix. Pearson correlation.

	LAN	EXP	WMR	TB
LAN	—			
EXP	0.468 *	—		
WMR	0.601 **	0.507 *	—	
TB	-0.256	-0.107	-0.257	—

Note. * p < .05, ** p < .01, *** p < .001

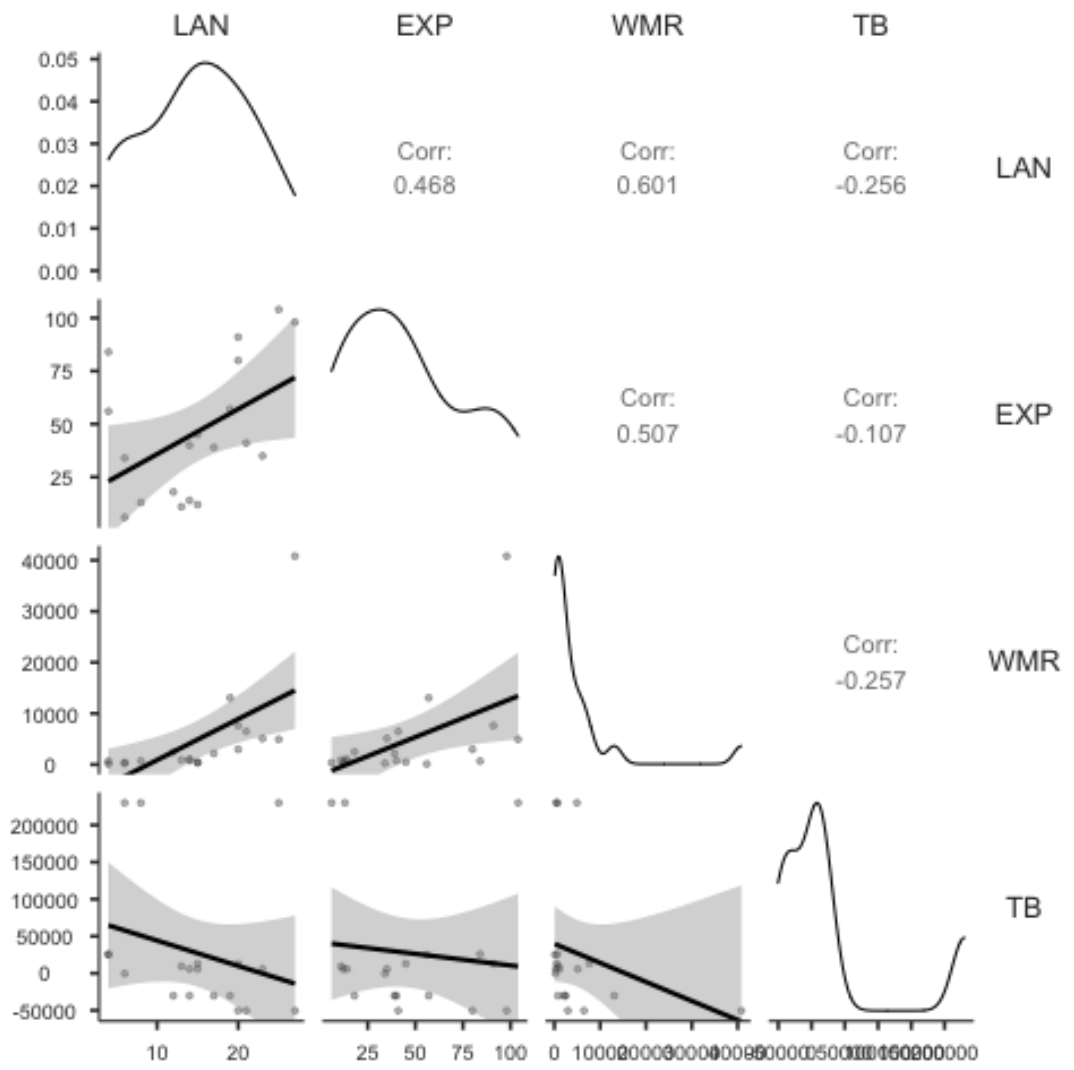


Fig. 1. Correlation matrix, densities for variables and statistics.

The main European think tanks used between 4 and 27 languages to communicate their studies and economic policy recommendations during 2009-2018. They only used 15 of the 24 official languages, not directing their communication in Croatian, Estonian, Greek, Irish, Latvian, Lithuanian, Maltese, Romanian or Slovenian. The orientation of think tanks to the European Union's official languages was uneven (Figure 2), ranging between 67.80% and 99.70% (Table 5).

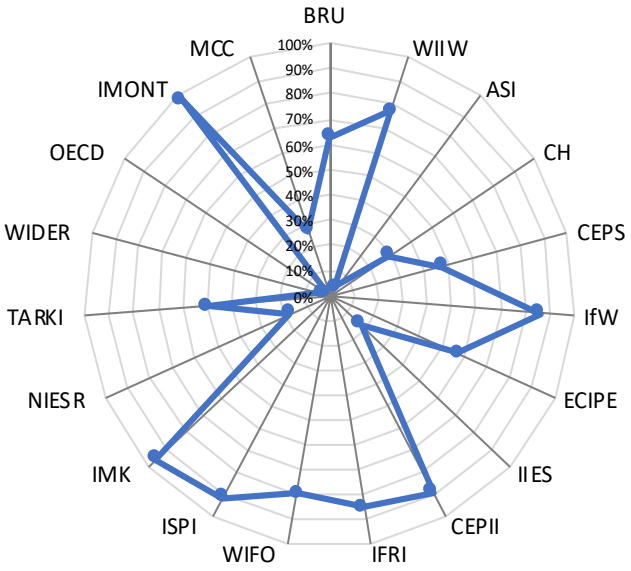


Fig. 2. Orientation of think tanks to official languages of the European Union. Radial Diagram.

Table 5.

Descriptive statistics and Shapiro-Wilk test. Official EU languages and non-official EU languages.

	EU official LAN	No EU official LAN
Mean	0.9560	0.0439
Median	0.9770	0.0235
Standard deviation	0.0728	0.0728
Minimum	0.6780	0.0028
Maximum	0.9970	0.3220
Shapiro-Wilk W	0.5620	0.5620
Shapiro-Wilk p	< .001	< .001

Analysis of languages correlations (Table 6) shows a negative relationship between English and French, and positive relationships between multiple languages characterised by representing small audiences within the international context (e.g. Bulgarian and Polish; Czech, Danish and Polish; Danish, Dutch, Finish and Polish; Finnish, Hungarian and Polish), and from communities whose countries have essential political or commercial ties (e.g. Ibero-American relations between Spanish and Portuguese).

Table 6. Correlation Matrix. Pearson correlation

	Bulgarian	Czech	Danish	Dutch	English	Finnish	French	German	Hungarian	Italian	Polish	Portuguese	Slovak	Spanish	Swedish
Bulgarian	—														
Czech	0.924 ***	—													
Danish	0.326	0.577 **	—												
Dutch	0.146	0.346	0.684 **	—											
English	-0.119	-0.081	0.002	0.004	—										
Finnish	0.188	0.431	0.566 *	0.335	0.078	—									
French	-0.100	-0.173	-0.110	-0.194	-0.509 *	-0.168	—								
German	0.234	0.197	0.061	0.250	-0.450	-0.126	-0.276	—							
Hungarian	0.028	0.079	-0.120	-0.191	-0.002	0.708 ***	-0.136	-0.082	—						
Italian	-0.099	-0.049	-0.068	-0.177	-0.266	-0.082	-0.115	-0.201	-0.101	—					
Polish	0.910 ***	0.967 ***	0.471 *	0.217	-0.048	0.473 *	-0.160	0.104	0.213	-0.063	—				
Portuguese	0.039	0.127	0.100	-0.117	0.033	-0.041	0.014	-0.178	-0.153	0.074	0.248	—			
Slovak	0.086	0.212	0.336	0.412	-0.164	0.157	-0.157	0.447	-0.086	-0.104	0.106	-0.091	—		
Spanish	0.309	0.453	0.398	0.233	-0.093	0.183	0.040	-0.119	-0.069	0.019	0.495 *	0.725 ***	0.028	—	
Swedish	-0.035	-0.052	0.176	0.100	0.245	0.077	-0.147	-0.161	-0.070	-0.101	0.001	0.339	-0.082	-0.083	—

Note. * p < .05, ** p < .01, *** p < .001

On the other hand, the main official languages of the European Union are related to other non-official languages (p <.001): Chinese, Japanese, Korean, Russian. This finding highlights the strong economic, geostrategic and commercial link (Table 7).

Table 7.

Pearson correlation between official EU languages and non-official languages

Language	EU official LAN
Chinese - Simplified	-0.955 ***
Chinese - Traditional	-0.973 ***
Japanese	-0.864 ***
Korean	-0.918 ***
Russian	-0.795 ***

Note. * p < .05, ** p < .01, *** p < .001

4.2. Necessary conditions

This research attempts to answer the research question: What combinations of necessary and sufficient conditions explain that the main international economic policy think tanks of the European Union use high language heterogeneity strategies in their international communication. Accordingly, this study's first phase has proceeded to analyse the necessary conditions for high and low language heterogeneity strategies, assessing both positive and negative cases (Ragin, 2000).

For a condition to be considered necessary, it must always be present for a given outcome to occur (Rihoux and Ragin, 2009; Ragin, 1987). Similarly, from the point of view of the fsQCA technique, a condition is necessary when the consistency index is greater than 0.9 (Ragin, 2008). However, some authors consider that a high consistency index does not necessarily imply that a condition is relevant (Schneider and Wagemann, 2012), so it is considered that this causal

condition will be considered "almost always necessary" if the consistency index is greater than 0.90 (Schneider et al., 2010).

In this line, works in the related literature indicate that even a consistency level of 0.95 would be necessary since up to 5% of counterexamples can be detected (Dul et al., 2010). Therefore, this work will be based on the latter criterion and analyse whether any of the four conditions and their non-compliance exceed the consistency level of 0.95 indicated by Dul et al. (2010).

Once the outcome consistency analysis (LAN) has been performed, the results show a high consistency for different attributes but do not exceed the threshold established to consider a condition as necessary. The evidence found (Table 8) suggests that the think tanks did not use any necessary condition to articulate their international communication language strategies during the period analysed.

Table 8.
Analysis of necessary conditions.

Conditions Tested	High Heterogeneity Strategies		Low Heterogeneity Strategies	
	Consistency	Coverage	Consistency	Coverage
EXP	0.766569	0.789666	0.680155	0.264688
~EXP	0.286194	0.703139	0.459515	0.426494
WMR	0.366574	0.998349	0.093216	0.095906
~WMR	0.668034	0.661031	0.998396	0.373215
TB	0.155452	0.459552	0.563427	0.629229
~TB	0.874580	0.841341	0.516070	0.187549
EUR	0.718580	0.707819	0.785183	0.292181
~EUR	0.281420	0.776175	0.214817	0.223825

4.3. Sufficient conditions

The analysis of the attributes that influence the design of think tanks' language heterogeneity strategies suggests different pathways. A sufficiency analysis was conducted for the outcome LAN to identify how the conditions contributed to achieving the outcome. The assessment of the sufficient conditions contributing to the construction of causal configurations on which the different EU think tanks have based their high or low language heterogeneity strategies can be seen in (Table 9) in the analysed period of years.

Table 9.
Analysis of sufficiency for the outcome LAN[2]

Antecedent conditions (intermediate solution and core conditions)[3]					
	High heterogeneity strategies				Low heterogeneity strategies
Condition	1a	1b	1c	1d	2
EXP	○			●	○
WMR		●		●	
TB	○	○	○		●
EUR			●	●	●
Raw coverage	0.2634	0.3253	0.5932	0.2292	0.3632
Unique coverage	0.0592	0.1301	0.2389	0.0403	0.3632
Consistency	0.9881	0.9981	0.8267	0.9974	0.8565
Intermediate solution					
Coverage	0.8292				0.3632
Consistency	0.8684				0.8565
Parsimonious solution					
Coverage	0.8301				0.3879
Consistency	0.8686				0.8644
Cutoff					
Frequency	1				1
Consistency	0.7538				0.8615
Directional expectations	(- , 1 , - , -)				(- , 1 , - , -)

[2] More detailed results are available at request to the authors.
[3] Black circles indicate the presence of a condition, and white circles indicate its absence. Large circles indicate core conditions; small ones, peripheral conditions. Blank spaces indicate "do not care."

In the exploratory analysis, Model 1 shows the causal configurations in the strategies of high language heterogeneity, and Model 2 corresponds to the strategies followed by think tanks with low language heterogeneity. These two models show the different "recipes" that explain the choice of one type of strategy or another by these think tanks.

The strategies of think tanks with high heterogeneity oriented the international media representation of their studies and reports across multiple languages. In this way (solutions 1a, 1b, 1c and 1d for the proposed model), they managed to impact European audiences of minority languages, such as Danish, Dutch, and Portuguese, among others. On the contrary, the strategies of the think tanks that oriented the communication of their studies and reports on the international public agenda through a few languages (solution 2 for the proposed model) did so by paying special attention to particular audiences and majority languages, as they did not take a personalised communication for local audiences.

The sufficiency analysis result, both in the intermediate and parsimonious solutions, reflects a high sufficiency level, higher than that established by Ragin (2008). The level of coverage of the results is also adequate.

This analysis shows how strategies 1a, 1b, and 1d show a level of consistency very close to 1, while pathways 1c and 2 are acceptable. In any case, it is important to keep in mind that it is considered a malpractice in fsQCA analysis to set a priori reference indexes (Schneider and Wagemann, 2012). In this sense, the analysis of the high language heterogeneity strategies of the selected European think tanks shows a cutoff consistency of 0.7538, and the one related to the model of the low heterogeneity strategies of 0.8615, well above 0.75.

Following studies concerning equifinality theories (Fiss, 2011), the idea that the occurrence of different configurations for the same outcome is possible is developed (Katz and Kahn, 1978). From here, differentiating between a causal condition considered "core" and another considered "peripheral" leads us to neutral permutations. That will mean that around a causal condition considered

central or "core", different combinations of conditions are considered peripheral permutations for the same outcome (Fiss, 2011).

Table 5 shows how the theory developed by Fiss (2011) regarding core and peripheral causal conditions impacts our analysis. In this sense, when a causal condition is part of a solution, it is represented with a black circle, and its absence is represented with a white circle. Likewise, when a causal condition is also considered "core", it is represented with a large circle and not with a small circle.

Specifically, in the design and execution of strategies of high language heterogeneity followed by think tanks (Model 1), the "core" conditions are the "World media representation" condition and whether or not they belong to the Eurozone. In strategies that address their audiences in a few languages (Model 2), "Commercial openness to the outside world" is a core condition, making it a central element for choosing to design strategies with low heterogeneity.

Table 10 shows the think tanks that followed high and low heterogeneity strategies, based on each pathway described by the proposed model's solutions.

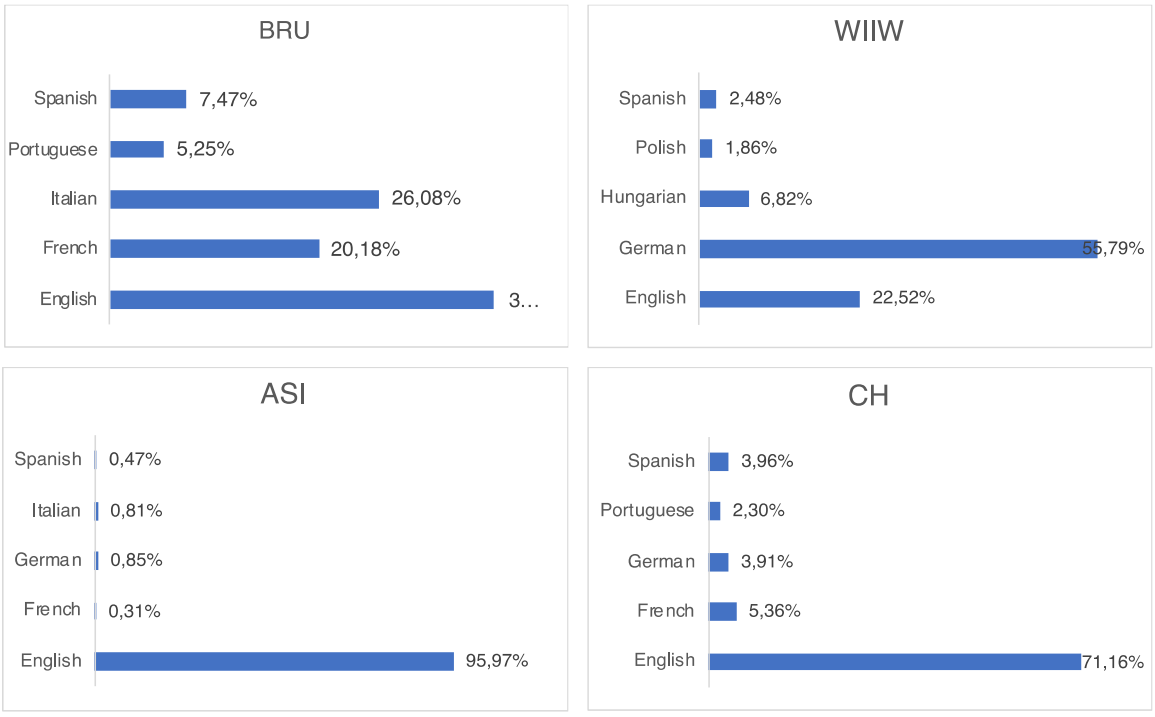
Table 10.
Heterogeneity strategies [4]

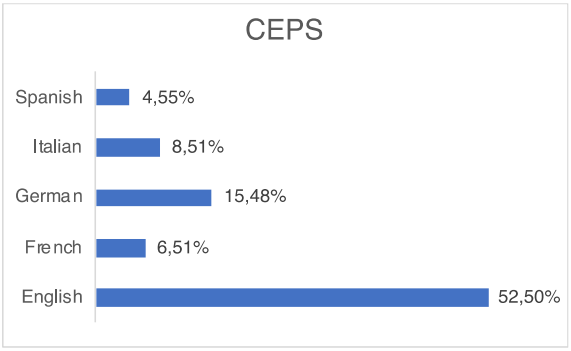
Pathway	Cases
1a[5]	European Centre for International Political Economy (0.914274,0.952574)
	TARKI Social Research Institute (0.876091,0.858149)
	Bruegel (0.858149,0.916827)
	Institut Montaigne (0.645656,0.768525)
1b[5]	Chatham House (0.999799,0.999963)
	Organisation for Economic Co-operation and Development - OECD (0.934166,0.995504)
	Austrian Institute of Economic Research (0.712067,0.997527)
	Adam Smith Institute (0.631865,0.998641)
	Centre for European Policy Studies (0.523018,0.99959)
1c[5]	Centre d'Etudes Prospectives et d'Informations Internationales (0.998185,0.916827)
	French Institute of International Relations (0.998185,0.985226)
	Organization for Economic Co-operation and Development - OECD (0.998185,0.995504)
	Institut Montaigne (0.998185,0.768525)
	World Institute of Development Economics Research (0.954696,0.0831727)
	Bruegel (0.914274,0.916827)
	Centre for European Policy Studies (0.914274,0.99959)
	European Centre for International Political Economy (0.914274,0.952574)
	Vienna Institute for International Economic Studies (0.828423,0.952574)
	Austrian Institute of Economic Research (0.828423,0.997527)
	Institute for International Political Studies (0.5428,0.026597)
1d[5]	Organisation for Economic Co-operation and Development - OECD (0.934166,0.995504)
	Austrian Institute of Economic Research (0.712067,0.997527)
	Centre for European Policy Studies (0.523018,0.99959)
	Kiel Institute for the World Economy (0.510505,0.999877)
2a[6]	Mercator Research Institute on Global Commons and Climate Change (0.985226,0.916827)
	Macroeconomic Policy Institute (0.890903,0.768525)

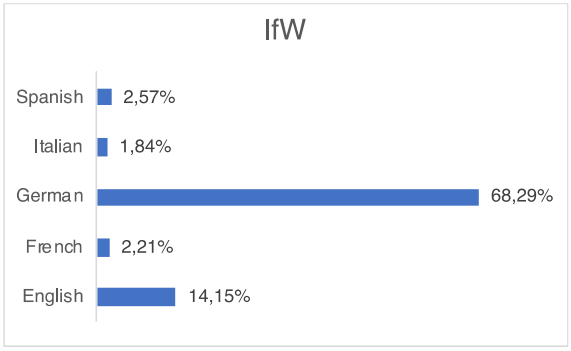
[4] More detailed results are available at request to the authors.
[5] Cases with greater than 0.5 membership in term.
[6] Cases with lower than 0.5 membership in term.

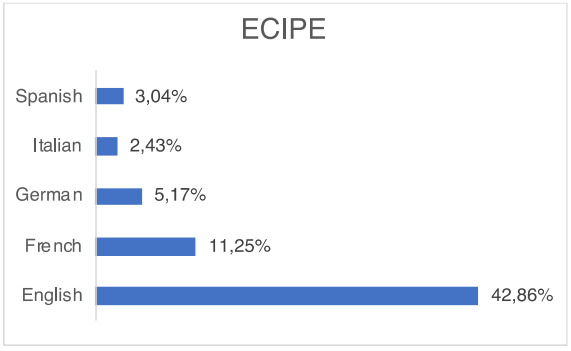
The analysis of the strategies followed by the different think tanks reveals that the strategy followed by the European Centre for International Political Economy, TARKI Social Research Institute, Bruegel and Institut Montaigne formations Internationales (1a) implements two core conditions: the absence of experience and belonging to a country with little trade openness to the outside world. The strategy (1c) followed by the Centre d'Etudes Prospectives et d'Informations Internationales, French Institute of International Relations, Organization for Economic Co-operation and Development - OECD, Institut Montaigne, World Institute of Development Economics Research, Bruegel, Centre for European Policy Studies, European Centre for International Political Economy, Vienna Institute for International Economic Studies, Austrian Institute of Economic Research, Institute for International Political Studies also has two "core" conditions, namely that the think tank does not belong to a country with a significant trade openness to the outside world, but is part of the Eurozone.

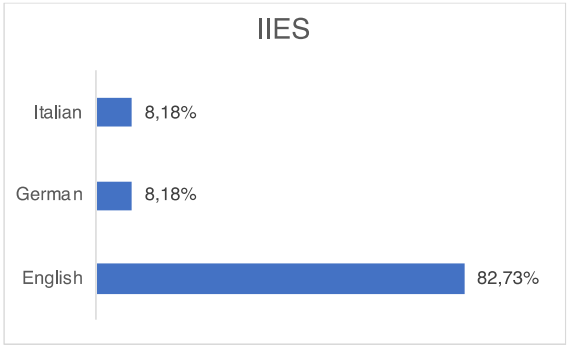
Figure 3 shows the Top 5 of the European Union's official languages with which the analysed think tanks communicated their studies, reports and economic policy recommendations. Similarly, Figure 4 shows the Top 5 non-official languages of the European Union in which think tanks reported.

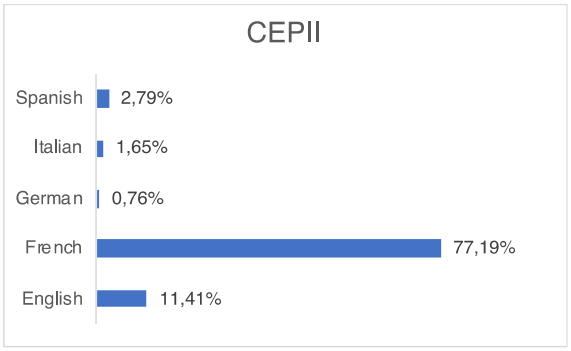


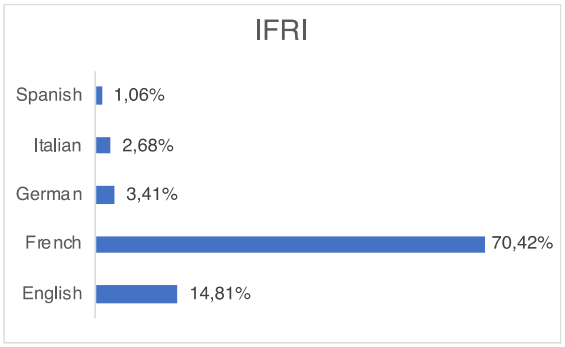

CEPS
Spanish 4,55%
Italian 8,51%
German 15,48%
French 6,51%
English 52,50%

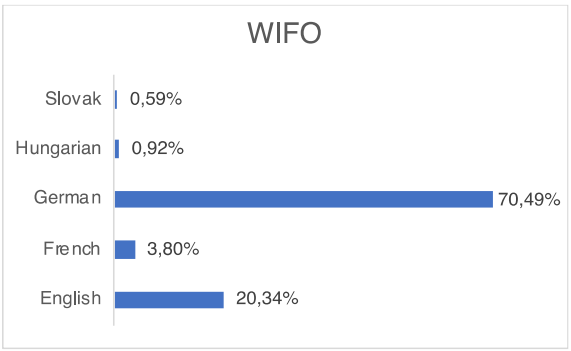

IfW
Spanish 2,57%
Italian 1,84%
German 68,29%
French 2,21%
English 14,15%

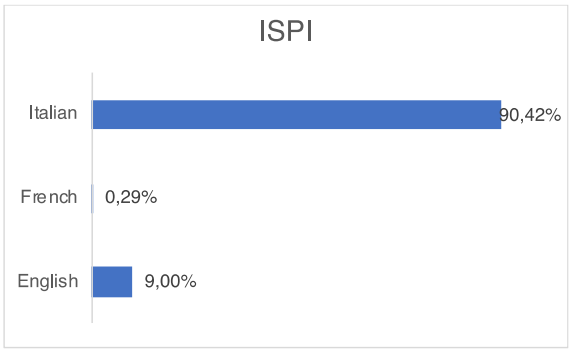

ECIPE
Spanish 3,04%
Italian 2,43%
German 5,17%
French 11,25%
English 42,86%

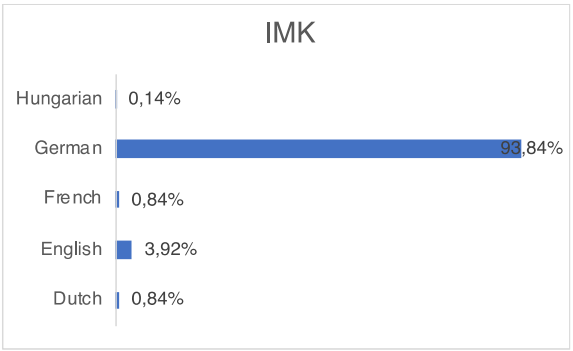

IIES
Italian 8,18%
German 8,18%
English 82,73%

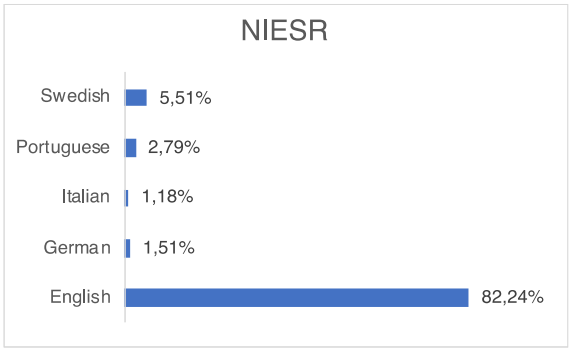

CEPII
Spanish 2,79%
Italian 1,65%
German 0,76%
French 77,19%
English 11,41%


IFRI
Spanish 1,06%
Italian 2,68%
German 3,41%
French 70,42%
English 14,81%


WIFO
Slovak 0,59%
Hungarian 0,92%
German 70,49%
French 3,80%
English 20,34%


ISPI
Italian 90,42%
French 0,29%
English 9,00%


IMK
Hungarian 0,14%
German 93,84%
French 0,84%
English 3,92%
Dutch 0,84%


NIESR
Swedish 5,51%
Portuguese 2,79%
Italian 1,18%
German 1,51%
English 82,24%

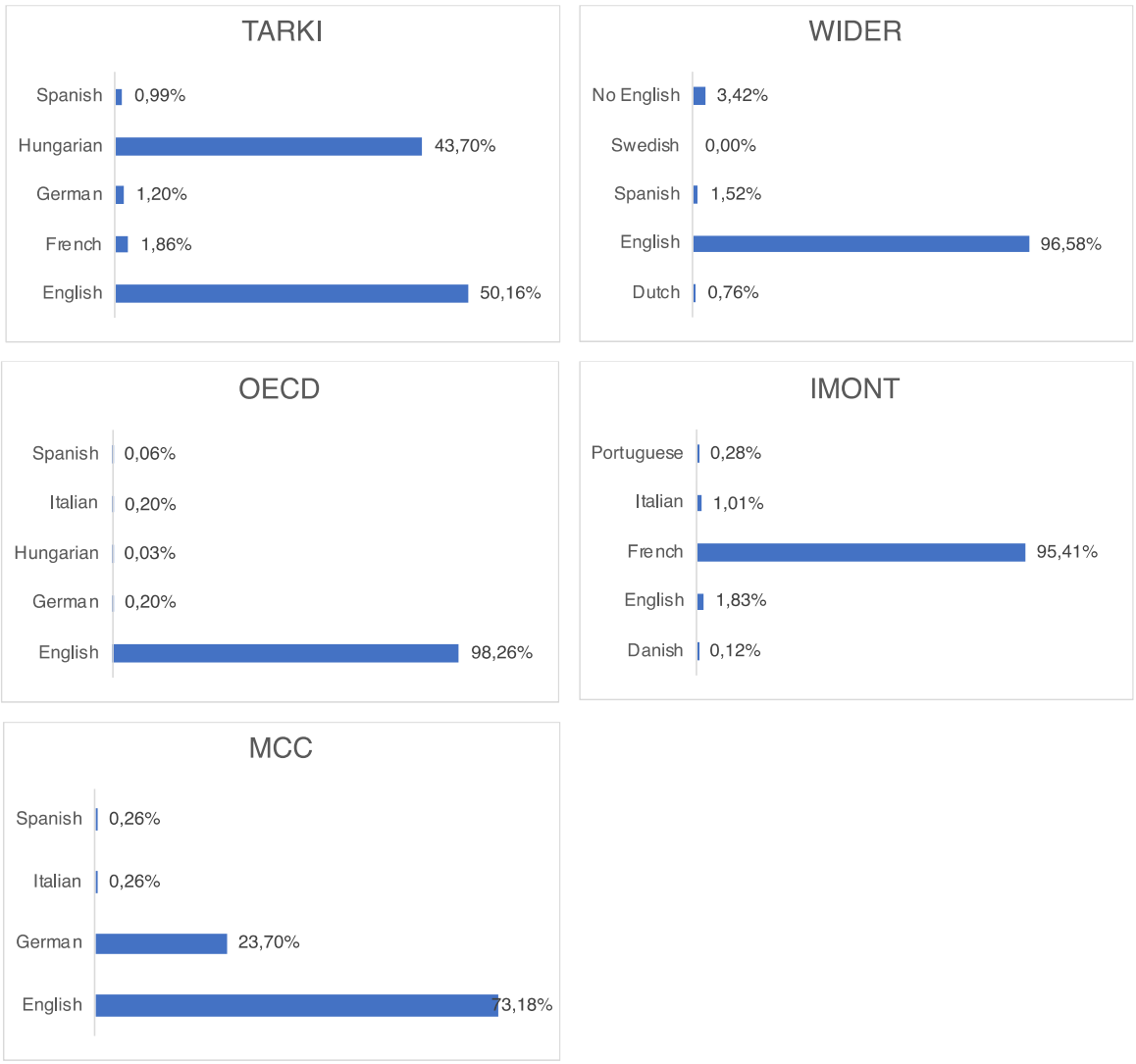


Fig. 3. Top 5 of the European Union's official languages

Similarly, Figure 4 shows the non-official languages of the European Union in which think tanks reported.

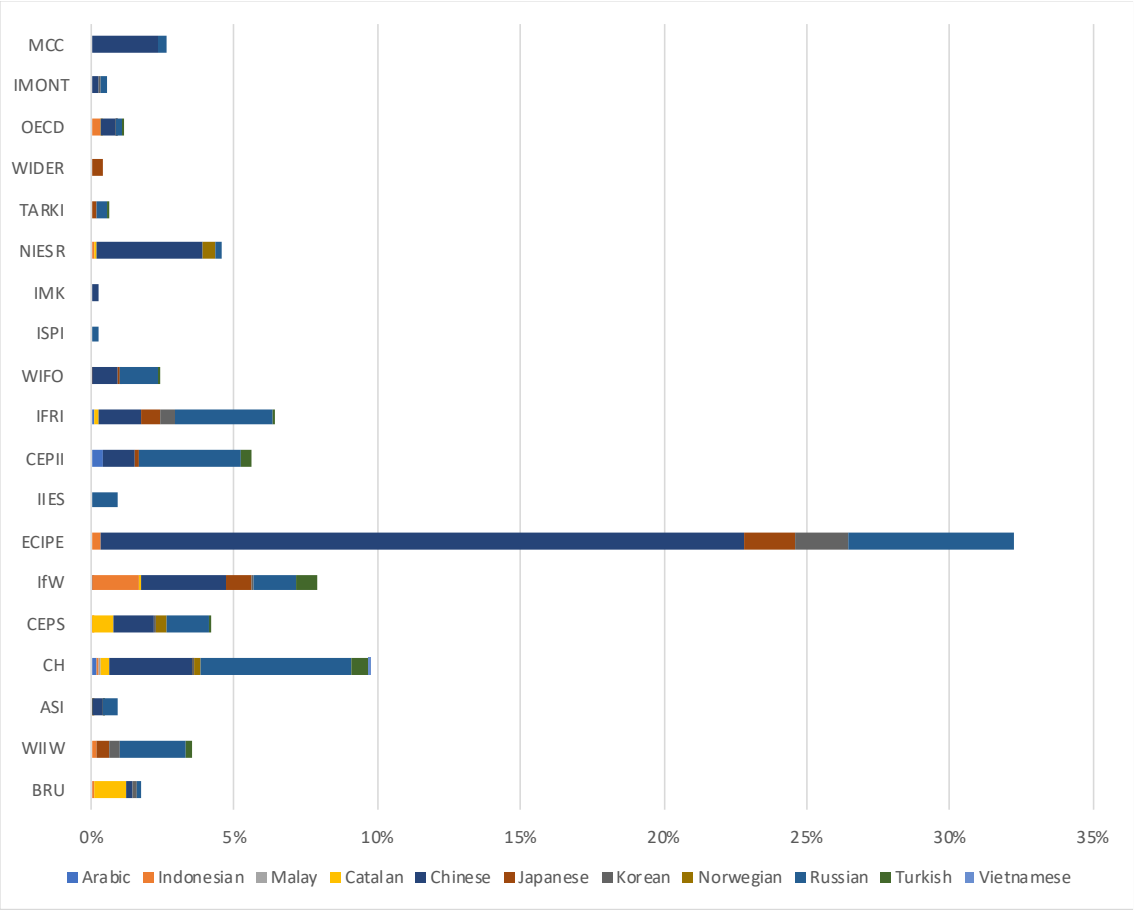


Fig. 4. Non-official languages of the European Union.

From the point of view of the conditions considered interchangeable (Fiss, 2011), the analysis does not show us strategies with the same "core" causal conditions and, therefore, could interchange or permute the rest of the peripheral conditions.

On the other hand, the strategies of low language heterogeneity only indicate a single strategy followed by the think tanks analysed (2), and it is the one that shows two types of "core" causal condition, the lack of need for expertise on the part of the think tanks and belonging to a country with a significant level of openness to foreign trade. This strategy is explicitly followed by the Mercator Research Institute on Global Commons and Climate Change and the Macroeconomic Policy Institute.

4.4. Robustness and extrapolation

Robustness analysis of the model was performed following the third sensitivity analysis proposed by Paykani et al. (2018) to improve the adherence of our model. This methodological approach modifies the threshold that defines the maximum ambiguity point. In our study, the crossover point varied ±15% for all conditions in both analyses, improving the requirement of best practices in fsQCA (Stevens, 2016; Fiss, 2011). According to Castelló-Sirvent (2021), robustness adjustment is measured according to the level of demand of both stress tests applied to the model (Strict Stress Test, SST: ±15%; Optimal Stress Test, OST: ±10%). Therefore, two SST were performed in the range ± 15% for the point of maximum ambiguity of the fsQCA. SST-1 increased the threshold initially set for maximum ambiguity by 15%, and SST-2 decreased the initial threshold of the point of maximum ambiguity by 15%. The average consistency gaps caused by both SSTs were obtained in the intermediate solutions of the model for high and low heterogeneity strategies. Finally, the Robustness Coefficient (RC-value) was calculated.

Robustness adjustment is measured according to the level of demand of both stress tests applied to the model (Strict Stress Test, SST: ±15%; Optimal Stress Test, OST: ±10%). Thresholds were adapted from Castelló-Sirvent (2021) for the interpretation of the RC-Value in models that use calibrated attributes without percentiles (for SST: 0.9900≤RC≤1, very strong robustness***; 0.9500≤RC≤ 0.9899, strong robustness**; for OST: 0.9900≤RC≤ 1, strong robustness**; 0.9500≤RC≤ 0.9899, moderate robustness*; 0.900≤RC≤ 0.9499, weak robustness). RC-value (0.9668**) guarantees the strong robustness of the model tested in this study. Results demonstrate the viability of the proposed model and facilitate its extrapolation to other think tanks, both specialised in international economic policy and other fields.

Conclusions

Think tanks have established themselves as new political actors for effective advice, domination and control in political decision making, with a growing communicative presence. The design of think tank strategy is a field of research that has been little studied. The positioning strategy of think tanks takes as a frame of reference their capacity for dissemination in the media sphere, beyond the academic forum, given that this is how think tanks manage to make their discourse penetrate international public opinion. The strategy of think tanks is affected by contingent variables such as their experience or the country's economic conditions from which they carry out their activity. Besides, to generate their strategies, think tanks have design variables based on the profusion of news and the variety of languages in which they disseminate their studies and recommendations for policy design.

This research has conducted an exploratory analysis of how these attributes are used to shape their long-term strategies by the main European economic policy think tanks. The design of public policy is influenced by the orientations and recommendations proposed by the experts in the think tanks. The evidence found suggests that highly heterogeneous strategies allow think tanks to reach European minority language audiences, allowing them to adapt their messages to these countries' specific characteristics. This finding is consistent with the generation of transnational networks of think tanks (Kelstrup, 2016), design of policy-planning in global politics (Sapinski, 2019), and promotion of strategies in many languages (Castelló-Sirvent et al., 2020). In this way, think tanks that articulate high heterogeneity strategies achieve a more significant impact on local audiences, allowing them to improve the proximity of the message concerning the approach taken to different regional problems in the context of language diversity of the European Union (Gómez, 2002).

These strategies are conditioned by each think tank's experience and the conditions of commercial openness of the country. The think tanks consider membership of the Euro area as a contingent variable to explain the variety of languages used to design and execute their strategies. The causal configurations

found contribute to understanding the strategies used by think tanks to introduce their discourses into the international public agenda.

Think tanks that target the dissemination of their studies and reports in a few languages do not personalise their recommendations for specific audiences. The managerial implications in terms of think tank governance are important. This article offers results that can advise and guide the design of think tanks' long-term strategies to achieve a more significant impact on public opinion and government action.

Languages with minority speaking communities are associated with each other when shaping European think tanks' dissemination strategies. The languages of the Ibero-American cultural axis are also associated. Chinese, Japanese, Korean and Russian are the main dissemination languages associated with the European Union's official languages used by international economic policy think tanks.

Therefore, influence strategies can be articulated through one-to-one messages to improve collective impact. In this sense, think tanks direct their customised messages to different linguistic communities. Thus, political options can improve their affinity with electoral segments in terms of opportunity and/or efficiency in the debate on disruptive fields. In these cases, the role of think tanks is persistent and supports specific public policies, helping to configure open processes of influence in public debate.

The sample of think tanks used in this study is based on the most prominent think tanks specialised in economic policy in the European Union, and the methodology employed in this exploratory study is appropriate for the sample size. A robustness analysis has been performed with two Strict Stress Test (SST) that guarantee the validity of the proposed model and facilitate extrapolability to other non-European economic policy think tanks, as well as other think tanks specialised in other fields of analysis.

Future research should deepen the causal relationships detected, extending its analysis to think tanks in the rest of the world. Other future research lines should

amplify this article's findings through a semantic analysis of think tanks' discourses as a determinant of their impact on states of opinion and their ability to influence public policy design. Likewise, think tanks influence policy design through a long-term "battle of ideas" (Leeson et al., 2012). For this reason, the analysis of emerging issues such as climate change and promotion of socio-technical transition policies is also established as future lines of research.

Acknowledgements

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