

Chapter 39: Voting Advice Applications

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Over the last two decades, a novel source of data on party positioning in comparative perspective has been made available to political scientists alongside party manifesto coding exercises and expert survey assessments. Voting Advice Applications (VAAs) are typically non-partisan, online platforms primarily designed to inform and assist citizens navigate the policy proposals of competing political parties, with the ultimate goal of finding the best fit between users' policy preferences and the proposals put forward by the parties running for election.¹ In order to do so, users are prompted to fill in a questionnaire marking their positions on an range of electorally salient policy 'statements' (e.g. 'abortion should be forbidden'). A matching algorithm then compares the user's answers with the position of each party on the various statements, and presents the result in the form of a rank-ordered list or graph displaying the degree to which each political party matches the policy preferences of the user.

While their origins can be traced back to the 1980s, the expansion of VAAs, both geographically and on usage numbers, went hand in hand with the spread of internet connections. As the internet turned into an increasingly relevant source of political information and communication, VAAs gained popularity among the electorate as information-reduction tools in the complex world of politics. For these reasons, VAAs have become integral features of contemporary election campaigns, and their relevance is acknowledged by both citizens and political parties alike. Popular VAAs have been able to attract millions of users over the few weeks of an election campaign, both in domestic and

transnational contexts such as European Parliament elections. Today, according to the global census conducted in 2016 by the ECPR Research Network on Voting Advice Applications, these tools have been fielded in as many as forty-three countries worldwide, some even having multiple VAAs simultaneously available (Garzia and Marschall, 2016).

But how can VAAs be used to study political parties and, in particular, their positions on the political space? VAA research can be divided into two main strands: the more classic study of VAA users, designs, methods, and concrete effects on electoral participation and patterns of party choice; and a more recent strand looking into party system change, cross-national party system comparisons and changes in political parties (Garzia and Marschall, 2019, p. 1). The latter set of studies has been using VAA-generated party positions to analyse, e.g. the dimensionality of the political space – similarly to expert surveys and manifesto analysis.

When programming VAAs, designers rely on a variety of sources to retrieve information about party stances, and on diverse methods to ascribe policy positions to political parties (which are subsequently used to match with users' responses to the questionnaire). As we shall see in the remainder of this chapter, these coding procedures follow strict methods, based on rigorous scientific standards. The ongoing search for a *gold standard* in party positioning has been a priority for political scientists for a long time (Marks, 2007), but this goal has concerned VAA designers especially, given the implications of (in)accurate party positionings in the context of VAA development. To be clear, if VAAs reach millions of users, aiming at informing on the political supply, and potentially influencing voting decisions and electoral outcomes, designers have an increased responsibility to ensure preciseness and accuracy in placing political parties. For these reasons, the scientific debate on methods to estimate party positions has been particularly lively among VAA scholars. We believe this vigorous interchange has put VAAs at the forefront of methods used to estimate party positions.

Against this background, the aim of this chapter is to provide an exhaustive assessment of the potential of VAAs as instruments to estimate and derive party positions, discussing their respective strengths and limitations in comparison with alternative methodologies. The chapter proceeds as follows: The next section discusses the multiple methodological approaches for party positioning among VAAs. It is followed by a section introducing the EU Profiler/euandi transnational VAA project as our case study, describing its contribution to provide party positions comparable across time and countries. Next, we discuss the merits and weaknesses of VAAs in relation to other methods, namely expert surveys and text analysis of party manifestos. In what follows, using data from three of the foremost representatives of these methods – EU Profiler/euandi project, the Chapel Hill Expert Survey, and the Comparative Manifesto Project –, we triangulate their estimates to assess their validity and compare their relative performances.

The Making of a VAA: Competing Methodologies for Party Positioning

Voting Advice Applications are not all alike. They widely differ in terms of questionnaire design, statement selection, inclusion criteria for political parties, matching algorithms used to calculate the results, and – most importantly for the purposes of this chapter – estimation methods from which party positions are derived (Marschall and Garzia, 2014, p. 5).

Therefore, when reflecting on the ability of VAAs to provide dependable data for party positioning, it is important to weigh in the varying methodologies currently employed in VAAs across the globe to place political parties.

The first VAAs relied entirely on parties' self-placement. *StemWijzer* was created as a precursor to current online VAAs in 1989, in the Netherlands, at the time in a paper-and-pencil version containing sixty statements taken from political party programs. As the Internet-based version released in 1998, and all others since then, it assigned parties' positions exclusively based on their self-placement accompanied by a short justification. The same

happens with other VAAs across Europe, such as *smartvote* (Switzerland), *VoteMatch* (United Kingdom), and *Wahl-O-Mat* (Germany). Such method tends to work better in contexts with a more established VAA tradition, where parties are aware of the high usage of these platforms, as well as of their ability to sway voters, motivating higher cooperation rates. According to Gemenis and van Ham (2014: 34), this method may prove problematic for two reasons. First, parties may be selective in the responses to the multiple statements, responding to their core issues and avoiding taking a clear stance on irrelevant or more sensitive issues. Second, in the absence of a verification procedure conducted by experts, parties may take more strategic positions (for example, closer to the centre), with the intent to manipulate the outcome of the advice and maximise potential electoral gains (van Praag, 2007).

Albeit intuitively able to counterbalance such weaknesses, expert surveys do not constitute an entirely adequate solution either (see also handbook chapter 40). We shall discuss more extensively the limitations of expert surveys further ahead in this chapter, but the main ineptitude of these data sources can be summarised into the high degree of uncertainty or disagreement in experts' estimates. This problem arises particularly with smaller parties and with concrete issue positions, characteristic of VAAs (Krouwel and van Elfrinkhof, 2014).

To overcome these limitations, an 'iterative' method merging expert judgements and parties' self-placements has been developed as an attempt to 'maximise the strengths of combining different methodologies while also trying to counterbalance their respective weaknesses' (Garzia and Marschall, 2019, p. 12). Originally designed for the Dutch VAA *Kieskompas*, this method comprises 'two stages: first both experts and party officials are asked to position the party on each of the issues and, second, these calibrations are compared. At this stage, the academic team enters into a process of deliberation with the parties or candidates to solve possible discrepancies between the self-placement and the expert codings' (Krouwel and van Elfrinkhof, 2014, p. 1468). Should a disagreement between experts and

parties subsist at the end of the calibration phase, the expert team reserves the right to make the final coding decision. All relevant documentation supporting the party placement is accessible to respondents when using the VAA. Notwithstanding any remaining shortcomingsⁱⁱ, the iterative method advanced by the *Kieskompas* gained notable popularity among designers, spreading into multiple VAAs across Europe. In the next section, we take a case study of one such VAAs: the EU Profiler/euandi project, which we shall use as a benchmark for the remainder of the chapter

The EU Profiler/euandi (euandi) dataset, 2009-2019

The EU Profiler/euandi project is the cumulation of three interdisciplinary, pan-European, multi-lingual VAAs fielded during the election campaign of the European Parliament Elections of 2009, 2014, and 2019. The first of these VAAs, named *EU Profiler*, coded over 270 political parties from the European Union and some neighbouring countries on a total of thirty political issues. Hosted at the European University Institute, in Florence, it was developed also in partnership with *smartvote* (Switzerland) and *Kieskompas* (Netherlands). This first ever transnational VAA was the recipient of the World e-Democracy Forum Award for its ‘commitments to carry out meaningful political change through the use of internet and new technologies’. Aimed at overcoming the shortcomings of standard methods employed in existent VAAs, the EU Profiler introduced two fundamental methodological innovations. Combining expert assessments with textual analysis of relevant information, country teams drawn from more than 100 highly qualified social scientists documented party positions on the several political issues, which were subsequently calibrated as a by-product of a direct interaction with the self-placement carried by political parties themselves. Furthermore, the documentation supporting parties’ positions on each issue (a total of 8.220 party positions) was made available to citizens upon their usage of the VAA (Trechsel and Mair, 2011).

This project was rebooted in 2014 – this time in collaboration with the Berkman Center for Internet and Society, at Harvard University, and LUISS University, in Rome –, rebranded into *euandi* (reads: ‘EU and I’). To explore the full potential of these repeated cross-sections, efforts were developed to provide longitudinal comparability, particularly in what concerns the policy statements used as sources of party placement: from the total of twenty-eight statements, seventeen were already present in the 2009 edition (Garzia, Trechsel and De Sio, 2017). In terms of personnel, *euandi* kept the backbone of the teams of experts from the *EU Profiler*. Party cooperation rates rose *vis-à-vis* 2009 to over fifty percent of parties included in the VAA, thus maximizing the methodological gains deriving from the iterative method.

The latest version of this project was fielded in the 2019 EP election, in collaboration with the University of Lucerne, in Switzerland (Michel et al., 2019). In terms of usage figures, the 2019 edition topped with over 1.3 million users across Europe. Maintaining the core of policy statements used in previous editions, *euandi2019* further expanded the longitudinal scope of the project, offering up to three data points in parties’ positions across one decade. Given the potential of these repeated cross-sections to offer large-scale longitudinal and comparative data on party positions in the European political space, the outputs of these three projects have been recently merged into a pooled dataset (Reiljan et al., 2020a). The ‘EU Profiler/*euandi* (*euandi*) trend file’ compiles the data on political issue-positions of a total of 411 parties across twenty-eight European countries between 2009 and 2019, resulting in a total of more than 20.000 unique party positions (Reiljan et al., 2020b). To date, it is the largest dataset of VAA-based party positions and the first to enable cross-national and longitudinal comparisons. Moreover, as fifteen of the forty-two different statements included were present across all waves, it allows for a decade-long direct comparison of parties’ stances on key issues. These longitudinal policy statements are able to represent the three main dimensions of competition in the European political space: socioeconomic left-right;

cultural liberal-conservative; pro-anti EU. In Table 1, below, we present the categorisation of the continuous policy statements into the three dimensions.

< Table 1 about here >

Based on these dimensions, we can then trace and compare the evolution of parties' positions in the main axes of political competition across this decade. This can be done for each individual party in isolation or, as we present next for simplification purposes, for sets of parties grouped into party families. Relying on the seven party family classification used in the Chapel Hill Expert Survey (CHES) data (Bakker et al., 2015), we can, for example, analyse the median party family positions for each year of data collection (white dots), the interquartile range, and the distribution of the parties using violin plots. This approach allows to observe not only the change in average placement but also get a sense of the internal variation and concentration within the party groups provided by the kernel density estimates (see figure 1).

< Figure 1 about here >

Strengths and weaknesses of VAAs as methods to estimate party positions.

In this section, we discuss the respective merits and weaknesses of VAAs *vis-à-vis* established approaches to derive estimates of parties' positions, i.e., expert surveys and text analysis of party manifestos (see also handbook chapters 38 and 40). Expert surveys rely on the judgements from a set of academics or other professionals, who use their specialised knowledge to position parties on issues or policy dimensions. A text analysis of party manifestos entails the examination of official party documents made public before an election,

and the subsequent coding of such documents by expert coders, usually according to a pre-defined codebook.

As any other method, the use of manifesto and expert survey data to estimate party positions comprises strengths and limitations (for reviews see: Krouwel and van Elfrinkhof, 2014; Marks, 2007). VAA-generated data on party positions is not necessarily any less problematic than these data sources. In fact, many VAAs rely, to a greater or lesser extent, on expert judgements and manifesto analysis as primary or secondary data sources to ascribe positions to political parties on policy statements. In that sense, they may reproduce the very same biases and shortcomings (along with the merits of these methods), with the aggravation that such estimates are meant to help potential voters navigating the policy proposals of competing political parties and, thus, with potential implications on voting behaviour.

To address these issues, the iterative method (Trechsel and Mair, 2011; Krouwel, Vitiello and Wall, 2012; Krouwel and van Elfrinkhof, 2014; Garzia, Trechsel and De Sio, 2017) used by several prominent VAAs combines elements of manifesto and expert data with other data collecting methods such as elite surveying, to overcome the limitations stemming from the use of a single method. For example, the *Kieskompas* combines an expert survey with a documented elite survey of party officials, followed by a calibration phase. The EU Profiler/euandi VAAs built upon the very same methodology and added a structured, hierarchical text analysis of party manifestos, official party documentation, interviews, and other documentation, on which experts base their judgements. To tackle the problem of inter-coder agreement, the *Preference Matcher* consortium proposes an iterative expert survey approach, in which ‘the presence of iteration and anonymity among panellists ensures higher inter-coder/expert agreement compared to both conventional expert surveys and content analysis approaches’ (Gemenis, 2015, p. 2302).

While these innovations put forward significant methodological contributions which, in our view, offer increased accuracy compared to the use of a single method in isolation, by

no means do they fully respond to the challenge of estimating parties' positions. For as much as we continue to strive to better accuracy in our measurements, the most fruitful procedure to neutralise the biases and limitations of the multiple methods to estimate party positions is, as Marks (2007, p. 3) suggests, 'to triangulate, to compare observations derived from *different* experimental designs'. We fully agree with that suggestion and thus take it on board in the empirical analysis that we present in the next section of this chapter.

Comparing party positions across time and space: CHES, CMP, and euandi

In this section, we triangulate party positions derived from the three data sources discussed so far: expert surveys, manifesto analysis, and VAAs. For those purposes, we rely on data from the Chapel Hill Expert Survey (CHES), the Comparative Manifesto Project (CMP), and the EU Profiler/euandi (euandi) longitudinal datasets. We picked the latter because among VAAs it is the data source covering the largest geographical breadth of countries, along the longest timeseries, allowing for a comparative longitudinal assessment.

The triangulation takes into account the three most significant dimensions of political competition in Western Europe, present in all three data sources under analysis: Left-Right, Pro-Anti EU integration and GAL-TAN dimensions. For the EU Profiler/euandi dataset, the dimensions were constructed as described in Table 1. The conception of the Left-Right, Pro-Anti EU integration and GAL-TAN dimensions in the CHES and CMP datasets considered variables measuring the same policy items as in EU Profiler/euandi statements, to maximise comparability across dimensions.ⁱⁱⁱ For example, in CHES, we used *lrecon* instead of *lrgen*, as the EU Profiler/euandi statements only capture Left-Right *economic* positioning. Therefore, for CHES, we relied on the original variables *lrecon*, *position*, and *galtan*, respectively.

For CMP, we constructed the three dimensions as follows:

$$CMPLR = \frac{((per505 - per504) + (per401 - per403) + (per402 - per409))}{3}$$

$$CMPEU = per108 - per110$$

$$CMPGALTAN = \frac{((per410 - per416) + (per601 - per602) + (per603 - per604) + (per605_1 - per605_2) + (per608 - per607))}{5}$$

The dimensions were constructed using a simple additive score, conferring equal weight to all variables used to build the dimensions across all datasets.^{iv} Further details on the dimensions, the original variables used to build the dimensions and their description are available in Appendix.

Figure 2 provides a general outlook of the positions of the main party families on the Left-Right, Pro-Anti EU integration and GAL-TAN dimensions across the three data sources. It displays the mean values with 95 percent confidence intervals for the different party families, by data source, across the three dimensions. Whenever the years of publication of CHES and CMP data do not fully coincide with the European Election years featured in the euandi dataset, we have taken the data from the closest year available (details on matching years are available in Appendix). Again, the party family categorisation corresponds to the one used in CHES (Bakker et al., 2015). The variables have been standardised to ensure comparability across datasets and only the parties for which there are observations across all three data sources have been kept for the analysis (N=146).

The data from Figure 2 provides a clear indication of a strong convergence across all dimensions between the EU Profiler/euandi estimates and those from the CMP and, even more so, the CHES. Unsurprisingly, the convergence is stronger in Social Democratic, Conservative, and Christian-Democratic party families (especially between the EU Profiler/euandi and CHES), while incongruences are more evident among smaller and more heterogenous party families, where measurement error is more substantial. In general, CMP

estimates appear to exhibit greater variance and converge more to the centre than the other two datasets, which may be explained by CMP's data collection method, tending to produce party position estimates conforming to a normal distribution. This is particularly visible in the case of Christian-Democratic, Ecologist/Green and Left Socialist party families, especially on the Left-Right dimension.

< Figure 2 about here >

But how do these estimates relate across time? Figure 1 provides a snapshot of the three datasets but does not provide any information about the estimates across the three timepoints. In Table 2 we go beyond mean comparisons and compute correlation coefficients between datasets across time, over the three dimensions. Since these are pairwise comparisons, we have tried to maximise the number of observations across pairs of datasets, so the analysis is no longer restricted to the 146 parties common to all three data sources. The results show a strong correlation between the euandi dataset and the CHES. This correlation has increased between 2009-2019 across all dimensions but the longitudinal correlation has grown even stronger between the EU Profiler/euandi dataset and the CMP.

< Table 2 about here >

The longitudinal increase in the correlations involving the CMP is greater for euandi dataset than for the CHES. Despite the marked increase in the correlations between CMP and the other two datasets on the Pro-Anti EU integration and the GALTAN dimension, the CMP Left-Right dimension stands out an exception, as the relationship with the euandi dataset and the CHES decreases slightly. Previous studies have identified reliability issues associated with CMP data on the Left-Right dimensions, which could help account for this pattern (Laver,

2003; Gemenis, 2013). Overall, the very high Pearson's correlation coefficients with the two most prominent data sources for party positioning corroborate the validity and reliability of the EU Profiler/euandi longitudinal dataset.

Conclusions and avenues for further research

In this chapter, we have argued for the relevance and usefulness of VAA-generated data to derive reliable estimates of party positions. We have compared the strengths and weaknesses of VAAs *via-a-vis* other methods of positioning political parties, namely expert surveys and text analysis of party manifestos. While VAAs overcome several limitations of the two other methods, our conclusions speak in favour of the complementarity of these distinct approaches. The longitudinal triangulation between the three case-studies representing each of the methods – EU Profiler/euandi project, CHES, and CMP – attests the validity of VAA-generated data on party positions. Not only do they largely converge with the expert survey and manifesto data, but such convergence has been increasing over time. While we can only speculate as to why this occurs, we believe it is an interesting research avenue not only for VAA researchers, but for academics generally interested in party positioning methods. Needless to say, the question of gold standards for identifying the party positions remains an obvious avenue for further research and discussion. The implications of different methodologies on usage, and accordingly on effects, have been addressed, but the implications of this research have not been fully taken into account by VAA providers who seem to value continuity more than empirical rigor.

Although we have focused primarily on the potential of VAAs for estimating party positions, it should be highlighted that the contributions of VAAs for research on political parties go beyond that. For example, VAAs have been used to analyse party accountability and responsiveness, by comparing parties' prospective policies with actual policy outputs (Ramonaite, 2010; Fivaz, Louwse, and Schwarz, 2014). Based on clusters of the estimated

party positions, VAAs have also been used in several studies to identify dimensions of political competition (Wheatley, 2012, 2015; Wheatley et al., 2014; Burean and Popp, 2015). Candidate-centred VAAs could also be a useful tool to measure intra-party consensus and cohesiveness, by examining the extent to which candidate positions diverge from the party as a whole (Schwarz, Schädel and Ladner, 2010; Hansen and Rasmussen, 2013).

VAA-generated data is also promising when it comes to the study of political representation. VAAs are able to attract millions of respondents during an election campaign and, even more importantly, they allow comparisons of the issue positions of voters and parties using the same data source. This results in a facilitated measurement of the extent to which parties and voters are mutually congruent. Furthermore, the rise of supranational VAAs like EU Profiler and euandi also allows researchers to test theories of supranational representation. For instance, Bright et al. (2016) have identified a ‘representative deficit’ at the national level and concluded that many European voters could achieve better representations by voting for parties outside of their country in a context of transnational European elections.

As we hope to have shown in this chapter, the contributions of VAA-generated data for the study of political parties and democratic representation are manifold. And while many of their possibilities and research avenues remain largely unexplored, we can expect these tools to be an increasingly used resource by scholars in the years to come.

Endnotes

ⁱ In candidate-centred electoral systems such as Switzerland, Finland or Luxembourg, VAAs may also present users with a comparison between their policy preferences and those of individual candidates.

ⁱⁱ Despite its strengths, Gemenis and van Ham (2014: 36-37) maintain that the iterative method still depends on the (often limited) cooperation from political parties, and that the mechanisms to reach consensus in cases of inter-coder disagreement remain suboptimal and potentially biased. To address the latter issue, the *Preference Matcher* consortium proposed an interaction method guaranteeing anonymity and controlled feedback, known as the *Delphi* method (Gemenis, 2015).

ⁱⁱⁱ Regardless of this attempt, there are still some dissimilarities in the statements used to build the dimensions in the EU Profiler/euandi dataset, and in the CHES and CMP. For instance, since the left-right socioeconomic positions in the CHES are not disaggregated into policies, it does not directly match the EU Profiler/euandi statements tapping tax policies, social programmes and general government spending. A key strength of the euandi dataset consists in collecting party positions longitudinally not only across dimensions but, especially, on specific policy items. Also for this reason, we resorted to the individual ‘content analytical data’ items from the CMP instead of the ‘programmatic dimensions’ variables such as *rile*, *planeco* or *markeco*, as the latter do not represent all the policy items comprised in the EU Profiler/euandi dimensions, or may include other absent items.

^{iv} For example, in the euandi dataset, if Party X was coded 4 in the statement ‘Social programs should be maintained even at the cost of higher taxes’ and 5 in the statement ‘Government spending should be reduced in order to lower taxes’, it would score 4.5 on the Left-Right dimension.

References

- Bakker, R., De Vries, C., Edwards, E., Hooghe, L., Jolly, S., Marks, G., ... & Vachudova, M. A. (2015). 'Measuring party positions in Europe: The Chapel Hill expert survey trend file, 1999–2010', *Party Politics*, 21(1), 143-152.
- Bright, J., Garzia, D., Lacey, J., & Trechsel, A. (2016). 'Europe's voting space and the problem of second-order elections: A transnational proposal', *European Union Politics*, 17(1), 184-198.
- Bureau, T., & Popp, R. (2015). *The ideological mapping of political parties in Romania*. Unpublished manuscript.
- Fivaz, J., Louwse, T., & Schwarz, D. (2014). 'Keeping promises: Voting Advice Applications and political representation' in D. Garzia & S. Marschall (eds.), *Matching voters with parties and candidates. Voting Advice Applications in comparative perspective*. Colchester: ECPR Press.
- Garzia, D., & Marschall, S. (2016). 'Research on Voting Advice Applications: State of the art and future directions'. *Policy & Internet* 8(4): 376–390.
- Garzia, D., & Marschall, S. (2019). 'Voting Advice Applications'. In *Oxford Research Encyclopedia of Politics*.
- Garzia, D., Trechsel, A., & De Sio, L. (2017). 'Party placement in supranational elections: An introduction to the euandi 2014 dataset', *Party Politics*, 23(4), 333-341.
- Gemenis, K. (2013). 'What to Do (and Not to Do) with the Comparative Manifestos Project Data', *Political Studies*, 61(1), 3-23.
- Gemenis, K. (2015). 'An iterative expert survey approach for estimating parties' policy positions', *Quality & Quantity*, 49(6), 2291-2306.
- Gemenis, K., & Van Ham, C. T. (2014). 'Comparing methods for estimating parties' positions in Voting Advice Applications' in D. Garzia & S. Marschall (eds.), *Matching voters with parties and candidates. Voting Advice Applications in comparative perspective*. Colchester: ECPR Press.
- Hansen, M. E., & Rasmussen, N. E. K. (2013). 'Does running for the same party imply similar policy preferences? evidence from voting advice applications', *Representation*, 49(2), 189-205.
- Krouwel, A., & van Elfrinkhof, A. (2014). 'Combining strengths of methods of party positioning to counter their weaknesses: the development of a new methodology to calibrate parties on issues and ideological dimensions', *Quality & Quantity*, 48(3), 1455-1472.
- Krouwel, A., Vitiello, T., & Wall, M. (2012). 'The practicalities of issuing vote advice: a new methodology for profiling and matching', *International Journal of Electronic Governance*, 5(3-4), 223-243.
- Laver, M. (ed.). (2003). *Estimating the policy position of political actors*. London: Routledge.

- Marks, G. (2007). 'Introduction: Triangulation and the square-root law', *Electoral Studies*, 26(1), 1-10.
- Marschall, S., & Garzia, D. (2014). 'Voting Advice Applications in a comparative perspective: An introduction' in D. Garzia & S. Marschall (eds.), *Matching voters with parties and candidates. Voting Advice Applications in comparative perspective*. Colchester: ECPR Press.
- Michel, E., Cicchi, L., Garzia, D., Ferreira da Silva, F., & Trechsel, A. (2019). 'euandi2019: Project description and datasets documentation', *Robert Schuman Centre for Advanced Studies Research Paper*. RSCAS, 61.
- van Praag, P. (2007). *De Stemwijzer: hulpmiddel voor de kiezers of instrument van manipulatie*. Amsterdam: Lezing Amsterdamse Academische Club.
- Ramonaite, A. (2010). 'Voting advice applications in Lithuania: promoting programmatic competition or breeding populism?', *Policy & Internet*, 2(1), 117-147.
- Reiljan, A., Ferreira da Silva, F. D., Cicchi, L., Garzia, D., & Trechsel, A. H. (2020a). *EU Profiler/euandi Trend File (2009-2019)*.
- Reiljan, A., Ferreira da Silva, F., Cicchi, L., Garzia, D., & Trechsel, A. H. (2020b). 'Longitudinal dataset of political issue-positions of 411 parties across 28 European countries (2009–2019) from voting advice applications EU profiler and euandi', *Data in Brief*.
- Schwarz, D., Schädel, L., & Ladner, A. (2010). 'Pre-Election Positions and Voting Behaviour in Parliament: Consistency among Swiss MPs', *Swiss Political Science Review*, 16(3), 533-564.
- Trechsel, A. H., & Mair, P. (2011). 'When parties (also) position themselves: An introduction to the EU Profiler', *Journal of Information Technology & Politics*, 8(1), 1-20.
- Wheatley, J. (2012). 'Using VAAs to explore the dimensionality of the policy space: experiments from Brazil, Peru, Scotland and Cyprus', *International Journal of Electronic Governance*, 5(3-4), 318-348.
- Wheatley, J. (2015). 'Restructuring the policy space in England: The end of the Left–Right paradigm?', *British Politics*, 10(3), 268-285.
- Wheatley, J., Carman, C., Mendez, F., & Mitchell, J. (2014). 'The dimensionality of the Scottish political space: Results from an experiment on the 2011 Holyrood elections', *Party Politics*, 20(6), 864-878.

APPENDIX A. Matching time-series across data sources

Country	EU Profiler/euandi	CHES	MARPOR
Austria	2009	2010	2008
	2014	2014	2013
	2019	2019	2017
Belgium	2009	2010	2010
	2014	2014	2014
	2019	2019	–
Bulgaria	2009	2010	2007
	2014	2014	2014
	2019	2019	2017
Croatia	2009	–	2011
	2014	2014	2015
	2019	2019	–
Cyprus	2009	–	2011
	2014	2011	2016
	2019	2019	–
Czech Rep.	2009	2010	2010
	2014	2014	2013
	2019	2019	2017
Denmark	2009	2010	2007
	2014	2014	2011
	2019	2019	–
Estonia	2009	2010	2011
	2014	2014	2015
	2019	2019	–
Finland	2009	2010	2007
	2014	2014	2011
	2019	2019	–
France	2009	2010	2007
	2014	2014	2012
	2019	2019	2017
Germany	2009	2009	2009
	2014	2014	2013
	2019	2019	2017
Greece	2009	2010	2009
	2014	2014	2015
	2019	2019	–
Hungary	2009	2010	2010
	2014	2014	2014
	2019	2019	–
Ireland	2009	2010	2011
	2014	2014	2016
	2019	2019	–
Italy	2009	2010	2008
	2014	2014	2013
	2019	2019	2018
Latvia	2009	2010	2010
	2014	2014	2014
	2019	2019	–
Lithuania	2009	2010	2008
	2014	2014	2016
	2019	2019	–

Country	EU Profiler/euandi	CHES	MARPOR
Luxembourg	2009	–	2009
	2014	2014	2013
	2019	2019	–
Malta	2009	–	–
	2014	2014	–
	2019	2019	–
Netherlands	2009	2010	2010
	2014	2014	2012
	2019	2019	2017
Poland	2009	2010	2007
	2014	2014	2011
	2019	2019	–
Portugal	2009	2010	2005
	2014	2014	2015
	2019	2019	–
Romania	2009	2010	2008
	2014	2014	2016
	2019	2019	–
Slovakia	2009	2010	2010
	2014	2014	2016
	2019	2019	–
Slovenia	2009	2010	2008
	2014	2014	2014
	2019	2019	–
Spain	2009	2010	2008
	2014	2014	2015
	2019	2019	–
Sweden	2009	2010	2010
	2014	2014	2014
	2019	2019	2018
United Kingdom	2009	2010	2010
	2014	2014	2015
	2019	2019	2017

APPENDIX B. CHES and MARPOR variables used to create analytical dimensions

Dataset	Dimension	Variable name	Variable description
CHES	Left-Right	<i>lrecon</i>	Position of the party in YEAR in terms of its ideological stance on economic issues
	Pro-Anti EU integration	<i>position</i>	Overall orientation of the party leadership towards European integration in YEAR
	GALTAN	<i>galtan</i>	Position of the party in YEAR in terms of their views on democratic freedoms and rights
MARPOR	Left-Right	<i>Per505</i>	Limiting state expenditures on social services or social security. Favourable mentions of the social subsidiary principle (i.e. private care before state care)
		<i>Per504</i>	Favourable mentions of need to introduce, maintain or expand any public social service or social security scheme
		<i>Per401</i>	Favourable mentions of the free market and free market capitalism as an economic model
		<i>Per402</i>	Favourable mentions of supply side oriented economic policies (assistance to businesses rather than consumers)
		<i>Per403</i>	Support for policies designed to create a fair and open economic market. May include: calls for increased consumer protection; increasing economic competition by preventing monopolies and other actions disrupting the functioning of the market; defence of small businesses against disruptive powers of big businesses; social market economy
		<i>Per409</i>	Favourable mentions of demand side oriented economic policies (assistance to consumers rather than businesses)
	Pro-Anti EU integration	<i>Per108</i>	European Community/Union: Positive. Favourable mentions of European Community/Union in general. May include the: Desirability of the manifesto country joining (or remaining a member); Desirability of expanding the European Community/Union; Desirability of increasing the ECs/EUs competences; Desirability of expanding the competences of the European Parliament.
		<i>Per110</i>	European Community/Union: Negative. Negative references to the European Community/Union. May include: Opposition to specific European policies which are preferred by European authorities; Opposition to the net-contribution of the manifesto country to the EU budget
	GALTAN	<i>Per410</i>	Economic Growth: Positive. The paradigm of economic growth. Includes: General need to encourage or facilitate greater production; Need for the government to take measures to aid economic growth.
		<i>Per416</i>	Anti-Growth Economy: Positive. Favourable mentions of anti-growth politics. Rejection of the idea that all growth is good growth. Opposition to growth that causes environmental or societal harm. Call for sustainable economic development.
		<i>Per601</i>	National Way of Life: Positive. Favourable mentions of the manifesto country's nation, history, and general appeals.
		<i>Per602</i>	National Way of Life: Negative. Unfavourable mentions of the manifesto country's nation and history.
		<i>Per603</i>	Traditional Morality: Positive. Favourable mentions of traditional and/or religious moral values.
		<i>Per604</i>	Traditional Morality: Negative. Opposition to traditional and/or religious moral values.
		<i>Per605_1</i>	Law and Order: Positive. Favourable mentions of strict law enforcement, and tougher actions against domestic crime. Only refers to the enforcement of the status quo of the manifesto country's law code.
		<i>Per605_2</i>	Law and Order: Negative. Favourable mentions of less law enforcement or rejection of plans for stronger law enforcement. Only refers to the enforcement of the status quo of the manifesto country's law code.

		<i>Per607</i>	Multiculturalism: Positive. Favourable mentions of cultural diversity and cultural plurality within domestic societies. May include the preservation of autonomy of religious, linguistic heritages within the country including special educational provisions.
		<i>Per608</i>	Multiculturalism: Negative. The enforcement or encouragement of cultural integration. Appeals for cultural homogeneity in society.