Two is better than one? Testing a deductive MARPOR-based left-right index on Western Europe (1999-2019)

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Abstract. Most of the existing indexes measuring parties' left-right positions through Manifesto Project (MARPOR) data, including the 'RILE', share a partially or fully inductive nature and an underlying assumption of left-right unidimensionality. However, as the structure of party competition in contemporary Western Europe has been recently moving away from traditional 'left-libertarian/right-authoritarian' patterns, the inductive and unidimensional characteristics of such instruments may hinder the quality of their measurements. In this article, I introduce and develop a new left-right instrument, which is wholly deductive and relies on an explicit linkage with theoretical sources in the conceptualisation of economic and cultural left and right as the basis for the subsequent index operationalisation through the justified selection of MARPOR items. After deriving the individual deductive economic and cultural left-right scores and employing them in the mathematical formalisation of a synthetic left-right measure to be compared with existing unidimensional instruments, I perform a comparison between the new left-right index and the RILE. Both instruments are empirically tested on a dataset made covering the 20-year period between 1999 and 2019 in 16 Western European countries, for a total of 72 elections and 474 party-election combinations. More specifically, the statistical probes take the form of rank correlation analyses between the election-specific left-right rankings of each index and those provided by the external benchmark of the "Chapel Hill Expert Survey" (CHES). Results are mixed and indicate that, whilst more traditional patterns of competition seem to still apply across the board in pre-Great-Recession years, the new left-right index is a more valid measure of parties' left-right positions both in the 'turbulent times' of the 2010s and in the vast majority of the areas across the region. This is especially true in Southern Europe, for which the RILE is known to be particularly problematic. Hence, this work calls for further discussion on the different patterns of Western European party competition across space and time, as well as differentiated and context-specific deductive left-right measurement.

Keywords: left-right index, party manifestos, political parties, elections, Western Europe, 1999-2019.

1. INTRODUCTION

In the scientific analysis of the electoral supply-side and party competition throughout decades of research, scholars have been interested – perhaps

above all – in measuring the left-right positions of political formations. To do so, they have employed a number of different data sources on party positions, amongst which are mass surveys, elite surveys (e.g., Benoit & Laver, 2006), roll call data (e.g., Poole & Rosenthal, 1985; Hix, 2002), political texts at large analysed through wordscoring (e.g., Laver, Benoit, & Garry, 2003), and party manifestos. With regard to the latter, the vast majority of researchers relied on the Manifesto Project (MARPOR): an incredibly rich source of longitudinal and cross-sectional data on party positions codified through electoral manifestos, which also provides a ready-made left-right measure, the 'RILE' (Budge & Klingemann, 2001), that, due to its accessibility and coverage, was bound to become routinely used in the literature. Despite the numerous existing criticisms stemming from the unavoidable scrutiny that it was subjected to, so far critics of the RILE, have not focused on issues of left-right dimensionality. These are important, as they relate to two broader questions in the measurement of left-right positions in party competition. Empirically, by focussing on contemporary Western Europe, we know that the structuring of party competition in spaces of contestation traditionally defined as two-dimensional has evolved from occurring along a main 'left-libertarian/right-authoritarian' axis (e.g., Kitschelt, 1992, 1994) to more original and unstructured patterns, challenging '20th-century ideological consistency' (De Sio & Lachat, 2020). This then relates to a second issue, which concerns conceptualisation and operationalisation: that is, existing instruments measuring left-right positions through manifesto data are mostly unidimensional in nature and, even when they are two-dimensional, they often overlook the theoretical meaning of left and right. In view of these changing patterns of party competition and given that – by definition – even spatial analogies that on paper look appropriate 'cannot convey all of that political world' (e.g., Weisberg, 1974), such unidimensional instruments may prove far from ideal to properly measure the composite, two-dimensional left-right positions that challenge traditional sets of party positions in contemporary politics across Western Europe.

It is in this light that I aim at achieving two goals in this article: (a) the introduction of a deductive left-right index, which measures such positions by both explicitly conceptualising and operationalising left-right semantics and applying to both the economic and cultural issue dimension; and (b) an empirical test of this instrument vis-à-vis the most prominent alternative amongst existing manifesto-based left-right measures, the MARPOR's own RILE, to assess the patterns of party competition in contemporary Western Europe (1999-2019). After relying on both seminal and more contemporary literature for the deductive foundation of my index and mathematically formalising its construction, I empirically test my measure against the RILE. I do so by performing a series of rank correlation analyses of the two indexes in terms of left-right party placement in Western Europe (1999-2019) vis-à-vis the external benchmark represented by the most widely employed comparative expert survey, the 'Chapel Hill Expert Survey' (CHES) (Bakker et al., 2020). Results are nuanced and have important implications both empirically and methodologically. Indeed, my original measure based on an explicit conceptualisation of left-right semantics along two main issue dimensions outperforms the RILE in the 2010s, confirming what we know from existing evidence with regard to party competition across the continent becoming more 'unstructured' from a traditional viewpoint. However, before the outbreak of the Great Recession patterns of electoral competition seem still structured along the usual main 'left-right' axis, collapsed along a single underlying dimension, as the RILE performs best during those years. Yet, the findings also highlight some interesting territorial variation across Western Europe, especially in the case of Southern European countries, where the RILE is notoriously problematic and the index introduced here performs much better. Hence, the introduction of a deductive and two-dimensional manifesto-based left-right index seems to lead to improved measurement in specific spatial-temporal contexts, pointing towards the necessity of a methodological discussion concerning differentiated and context-specific deductive left-right measurement.

The remainder of the article is structured as follows: the following section will introduce the theoretical framework, by focussing on the evolution of party competition dynamics in Western Europe, the conceptualisation of left-right semantics and its application in two-dimensional structures of party competition, and existing MARPOR-based left-right measures. Next, it will present the research design and methods, before developing the original deductive measure of left-right positions along two issue dimensions by, first, justifying the theory-based selection of MARPOR items making it up and, second, mathematically formalising its construction into a synthetic score. Results will follow, and I will conclude by recapping the article's contributions.

2. THEORETICAL FRAMEWORK

2.1 The evolution of party competition dynamics in Western Europe

The heuristic tool of the 'political space' posits that the positions of parties and voters are ordered along

issue dimensions. The literature assumes that Western European political spaces are two-dimensional, with two main dimensions of contestation (e.g., Kitschelt, 1992; Kriesi et al., 2006; van der Brug & van Spanje, 2009).[1] The horizontal axis of Western European political spaces represents the economic conflict, which revolves around the allocation of economic resources (e.g., Knutsen, 1989). Instead, non-economic matters defined as 'authoritarian' versus 'libertarian' (Flanagan & Lee, 2003), 'materialist/old politics' versus 'postmaterialist/new politics' (e.g., Inglehart, 1984), or 'Green-Alternative-Libertarian (GAL)' versus 'Traditional-Authoritarian-Nationalist (TAN)' positions (Hooghe, Marks, & Wilson, 2002) are subsumed under the vertical axis. This axis will be referred to as the cultural dimension.

Within such spaces, which are two-dimensional, empirical evidence shows that the actual patterns of party competition in Western Europe have changed over time (e.g., Rovny & Whitefield, 2019). What is meant here by patterns of competition is the clustering of the formations from a party system within such two-dimensional political spaces when competing in a given electoral contest, which will depend on the specific economic and cultural positions that they adopt and, hence, can be dimensionally configured in different ways.

Indeed, according to Kitschelt's 'axis of competition' argument (1992), in post-war decades the supply-side of electoral politics was organised along a single diagonal dimension, ranging from left-libertarian to right-authoritarian. Parties of the left adopted economic left and libertarian positions (Rovny, 2014; Rosset, Lutz, & Kissau, 2016), whilst right-wing formations presented economic right and authoritarian stances (Rovny, 2013). This meant that, effectively, the patterns of party competition across the region were structured in a unidimensional fashion (e.g., Bakker, Jolly, & Polk, 2012).

However, as parties increasingly deviated from this pattern, non-unidimensional dynamics of competition gained prominence in the literature (e.g., Bakker & Hobolt, 2013, p. 37).[2] Recent contributions (De Sio & Lachat, 2020) illustrate the increasing challenge to 'ideological consistency in 20th-century terms', especially in the post-Great-Recession decade of the 2010s. That is, presented with new electoral opportunities provided by the distribution of voters in the two-dimensional political space, several parties adopt strategies that combine economic and cultural stances innovatively. This results in a greater degree of off-diagonality from the traditional main axis of competition, with parties now further and more often deviating from it. Examples are the radical right (RRPs), which can associate either economic right or relatively left-of-centre positions with authoritarian stances (e.g., Hillen & Steiner, 2020; Wahl, 2020); 'left-authoritarians', which couple economic left and authoritarian positions (e.g., Lefkofridi, Wagner, & Willman, 2014); and 'free-market cosmopolitans', with their economic right and libertarian posture (De Sio & Lachat, 2020).

2.2 Left-right semantics in two-dimensional structures

Left-right accounts of party positions are mostly unidimensional. However, by reconstructing the theoretical meaning of left and right, it can easily be demonstrated how these concepts are applicable beyond unidimensional conceptions. Left and right simplify political complexities, thus being a general principle of orientation for communicating about politics (Laponce, 1981; Dalton, 2002). Yet, their conceptual meaning is frequently overlooked, due not only to their frequent usage, but also to their capability of absorbing new conflicts (Fuchs & Klingemann, 1990). To solve this issue, I believe a deductive approach should be adopted: that is, it is necessary to take a step back from practical applications and focus instead on theoretical sources.

Conceptually, we know from both seminal and more contemporary contributions that the left-right divide encapsulates conflict on three fundamental issues (e.g., White, 2011, 2013): inequality, social change, and human nature. The views on the first two of these fault lines derive from those on the latter, with left and right coherently associating stances on these matters. Firstly, regarding inequality, the left seeks the rectification of social inequalities (Bobbio, 1997; Anderson, 1998; Lukes, 2003; White, 2011), both economic (e.g., Bartolini & Mair, 1990), i.e. related to material conditions, and cultural (Noel & Therien, 2008), i.e. related to rights. These accounts describe the right as the pole that tolerates inequality. Secondly, the left and right are concerned with historical social change that goes in an egalitarian direction (Inglehart, 1984). This is described as the very mission of the left (Bobbio, 1997), while the right aims at preserving the existing social order (e.g., Thorisdottir et al., 2007). Thirdly, the most crucial distinction between the left and right concerns their views on human nature. As Bobbio (1997) argues, for the left what makes peo-

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[1] There are exceptions to this assumption, with some (e.g., Bakker, Jolly, & Polk, 2012) suggesting that party competition in Western Europe is structured along three dimensions. However, others argue that European integration does not constitute a full-fledged axis of party competition on its own (e.g., Marks et al., 2006), and that it is subsumed under the vertical cultural conflict (Kriesi et al., 2006).

[2] Yet, some authors argue that contemporary Western European party competition is shaped by unidimensional dynamics (e.g., van der Brug & van Spanje, 2009).
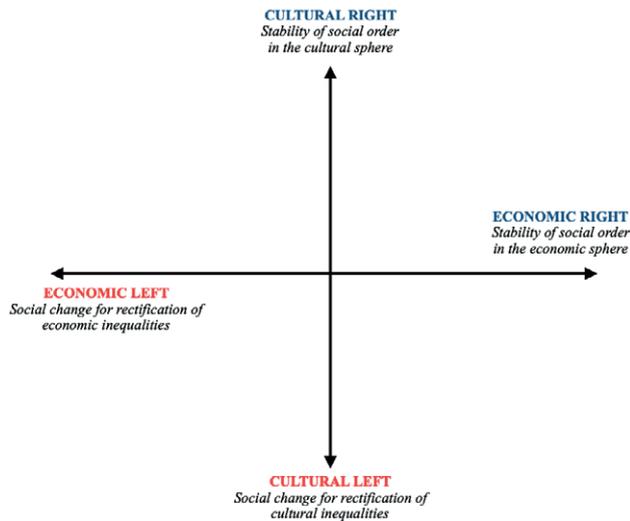
Figure 1. Left-right semantics in two-dimensional political spaces.

ple similar is more than what sets them apart, and the opposite is true for the right. Hence, conceiving the social order is a coherent extension of how the two poles view the natural order, permeating every contraposition between them.

In empirical investigations, the left-right opposition is subsumed under a single axis, in which cultural issues used are consistently associated with either of the two economic poles. This is in line with the broader idea of 'ideological consistency in 20th-century terms' (De Sio & Lachat, 2020). However, considering the illustrated theoretical meaning and heuristic function of these concepts, left and right can be applied beyond unidimensional structures of party competition. Indeed, several contributions already mention the existence of both economic and non-economic, or cultural, left-right positions (e.g., van der Brug & van Spanje, 2009; Hillen & Steiner, 2020).

Hence, left-right semantics can be applied to the economic and cultural dimensions making up two-dimensional political spaces in Western Europe according to the literature. Such an effort would result in a situation as per Figure 1. Here, whilst the usual, traditional economic divide is located horizontally, the vertical axis constitutes an application of left-right semantics to the cultural dimension in Western Europe. As such, a further point of clarification is needed. That is, to borrow from language often employed, for instance, in set-theoretic methods (e.g., Schneider & Wagemann, 2012), the cultural left-right dimension is a subset of the general cultural dimensions making up Western European political spaces. This means that there is no necessary overlap between all cultural issues and all cultural left-right issues. Rather, only those cultural issues that fit the

presented theoretical definition and conceptualisation of left and right, and hence reflect the illustrated division on whether to rectify cultural inequalities through social change or not, will belong to the cultural-left right dimension. This means that the cultural left-right dimension will encompass a smaller number of issues than the general cultural dimension, which will also include cultural themes that are not related to the illustrated left-right semantics.

2.3 Left-right measurement and (uni)dimensionality through manifesto data

The MARPOR dataset is one of the most widely employed data sources on electoral supply, due to its longitudinal scope and cross-sectional extension (e.g., Laver & Garry, 2000). Consequently, its party left-right measure, the RILE, has been thoroughly scrutinised and criticised from three viewpoints: methodological, theoretical, and in terms of measurement validity. Methodologically, the use of factor analysis is problematic because of issues such as sampling adequacy, interpretation of the many dimensions extracted, and violations of the linearity assumption (Franzmann & Kaiser, 2006; Jahn, 2010; Gemenis, 2013). Theoretically, the coding categories making up the left and right are criticised for being too outdated (Pennings & Keman, 2002). Moreover, Jahn (2014) argues that MARPOR authors neglect theory in their deductive *a priori* selection of items, whilst only mentioning political thinkers and politicians alike as sources for what is left and right in later publications. Finally, the RILE has well-known measurement validity issues, especially as it notoriously produces invalid estimates of party positions in Southern European countries such as Greece (Dinas & Gemenis, 2010), Italy (Pelizzo, 2003), and Portugal (Budge & Klingemann, 2001). Moreover, RILE estimates have a systematic centrist bias (e.g., Mikhaylov, Laver, & Benoit, 2012), which I argue might derive from including MARPOR items that do not pertain theoretically to left and right.

Several different MARPOR-based positional indexes have been proposed to address the presented issues. However, none of the alternatives took issues with the RILE's assumption of left-right unidimensionality, which is also present in such instruments.[3] This discrepancy between the unidimensionality of the MARPOR-based instruments routinely used to measure party left-right positions and the actual non-unidimensionality of the

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[3] Despite not developing an alternative index, Zulianello (2014) criticises the RILE on theoretical grounds for assuming that the political space is structured by a unidimensional left-right conflict.

configuration of parties economic and cultural left-right positions emerging in recent times (e.g., De Sio & Lachat, 2020) may be problematic. This is because the unidimensional spatial analogy may not be the most fitting one to represent patterns of party competition and economic left-right and cultural positions within two-dimensional political spaces in contemporary Western European (e.g., Weisberg, 1974).

Indeed, purely (Budge, 1987; Laver & Budge, 1992) and partially inductive (Klingemann, 1995) factor-analytic approaches adopted by MARPOR investigators employ the same conception of left-right dimensionality. Works outside of the MARPOR remit also explicitly operationalise a single left-right continuum (Gabel & Huber, 2000; Franzmann & Kaiser, 2006; Jahn, 2010; Elff, 2013).

Partially different considerations ought to be applied to the indexes developed by Bakker and Hobolt (2013): that is, two left-right indicators alongside two additional 'libertarian-authoritarian' and 'EU integration' instruments, to capture multidimensional patterns of party competition. Still, they only inductively introduce 'economic' and a 'general left-right' measures, which are very similar to one another, without developing a non-economic left-right index.[4] Similar reasoning applies to Prosser's (2014) 'economic left-right' and 'social liberal conservative' scales, which are developed on inductive grounds only and without prior theoretical justification, not relating conceptually second-dimension issues to left and right. Furthermore, as already noted for the RILE (Keman, 2007), additional problems of measurement validity might emerge in these indexes due to the variety of issues subsumed under these left-right scales. Dolezal et al. (2016), instead, did already develop separate 'economic left-right' and 'cultural left-right' indexes, hence explicitly distinguishing different components of left and right. However, three aspects are problematic: firstly, in this case too the authors did not conceptualise economic and cultural left-right with reference to theoretical sources, thus only proceeding inductively. Moreover, their indexes present limited spatial applicability, as they were specifically devised for Austria only.

3. RESEARCH DESIGN AND METHODS

The presented review of the literature highlighted the necessity of developing a MARPOR-based left-right measure that can recognise non-unidimensional patterns of party competition in contemporary Western

Europe. Additionally, I argue that this instrument ought to be developed deductively, differently from most of the available alternatives. The need for deduction stems from deficiencies specific to inductive approaches, such as the potential lack of construct validity deriving from the absence of any theoretical reference linking the selected MARPOR items to left and right (Drost, 2011). Moreover, results yielded by statistical techniques in terms of which scale components to employ are data-specific, and therefore different datasets are very likely to generate different indexes and scores (e.g., Prosser, 2014).[5] Instead, by relying on the aforementioned conceptualisation of left and right as the basis for index operationalisation (Adcock & Collier, 2001), I aim to develop a deductive measure of left-right positions that can be economic or cultural in nature.

On this basis, the next steps of the article will be, firstly, the illustration and justification of the deductive selection of the MARPOR categories making up the economic and cultural left-right poles of the introduced index. Secondly, in line with the logical quantitative modelling approach (Taagepera, 2008), I will formalise the construction of the index as a single synthetic left-right score, grounded in two left-right measures specific

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[4] Bakker and Hobolt's (2013) 'general left-right' index corresponds to the RILE.

[5] An application of Gabel and Huber's (2000) 'vanilla' method is highly illustrative of this point. This consists of performing a principal factor analysis of all 56 MARPOR main categories, extracting the first factor and assuming that it is the left-right dimension, hence making up the left and right poles of the index by looking at the direction (i.e., the sign) of factor loadings. I replicate their procedure on all data available in the MARPOR dataset concerning the entirety of the Western European region (i.e., the following 19 countries: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom) for the covered twenty-year period (1999-2019). The results are reported in Table A1 in the Appendix. As evident, several contradictions emerge from the application of this purely inductive method, which should lead to seriously questioning the validity of the left-right measurement based on it. First, given this method employs all MARPOR categories regardless of the presence (or lack thereof) of any theoretical connection to the political left and right, the resulting index employs scale components that have nothing to do with these concepts specifically (e.g., the per106 on 'Peace' being exclusively linked to the left and the per410 on 'Economic Growth: Positive' being exclusively linked to the right). Second, even by conceptually stretching some of such associations, a number of MARPOR items are scale components of the pole that seems the furthest away from them theoretically (e.g., the per103 on 'Anti-Imperialism' is associated with the right, and the per606 on 'social harmony' – see, e.g., Jahn, 2010 – with the left). Third, this operation results in some of the opposite positional items available in the MARPOR codebook being included in the same pole (e.g., both the positive and negative items on 'Protectionism' with the right, and both the positive and negative items on 'Constitutionalism' with the left). These issues, which should evidently call into question the validity of such measurements, stem directly from the purely inductive nature of the 'vanilla' method, as they determine and measure left-right positions based only on empirical associations that, in turn, depend entirely on the specific data at hand.

to the economic and cultural issue dimensions, which will allow comparability in terms of measurement and performance with other existing indexes whilst, at the same time, still making it possible to rely on the two individual economic and cultural left-right scores to identify parties' left-right position in a two-dimensional space.

Whilst the deductive development of my measure will ensure its construct validity (Drost, 2011), in the empirical part of the article I will test this index against the RILE by assessing the respective measurements vis-à-vis the external benchmark constituted by CHES data (Bakker et al., 2020). Methodologically, this will take the form of several rank correlation tests by employing Spearman's ρ coefficient (e.g., Prion & Haerling, 2014), to identify which between the two measures is the better indicator of party placement vis-à-vis the election-specific left-right ranks determined by CHES data. In terms of spatial-temporal framework and, consequently, case selection, to allow for the largest possible scope of analysis, I will cover all elections in every Western European country for which and to the extent that both main sources of data, that is the MARPOR and CHES, provide information. This criterion allows for taking into consideration the 20-year period between 1999 and 2019 and 16 countries, for a total of 72 elections and 474 party-election combinations.[6] The distribution of electoral contests across each country is reported in Table A2 in the Appendix.

4. INDEX DEVELOPMENT

4.1 Deductive selection of index' scale components

The first step in developing the original left-right index is the deductive selection of the MARPOR categories making up the individual economic and cultural left-right scores. Based on the presented conceptualisation of left and right, the focus now turns to the operationalisation of these concepts (Adcock & Collier, 2001), in which the selection of scale components ought to occur and be justified with explicit reference to the literature. As to the economic left-right dimension, the selected MARPOR items are, in the left pole, market regulation and social market economy (per403), economic planning (per404), the protection of internal markets (per406), Keynesian demand management, social expenditure and support through public spend-

ing (per409), introducing minimum wages (per412), nationalisation of essential services to enlarge access to them (per413), expansion of welfare state (per504) and educational provisions (per506), and support for labour groups (per702); in the right pole, free-market economy and promotion of unhampered personal enterprise (per401), supply-side economic policies and preference for assisting businesses rather than consumers (per402), free trade and opening up markets in an opposition to protectionism (per407), economic orthodoxy, austerity policies and reduction of public expenditure in the face of crises (per414), limitation of welfare state (per505) and educational provisions (per507), and opposition to labour groups (per702).

These categories were chosen as they all specifically relate to overcoming economic inequalities on the left and trying to replicate the natural order amongst men in the economic system on the right. In particular, the desire to regulate capitalism is identified within the 'social Keynesianism' strand of economic left-wing thought (e.g., Heine, 2010), which in traditional left-wing economic practice is amongst the objectives to be achieved through long-term planning. Moreover, national economies should be sheltered from external competition and pressures, which may be particularly impactful first and foremost for workers. Additionally, demand-side economic policies to support the weakest in society and allow access to fundamental services to as many people as possible are also key characteristics of the political left. These goals are reflected in the items that operationalise policies such as the expansion of social expenditure and economic intervention, introducing minimum wages and nationalising key services, expanding the access to the welfare state in its Beveridgean (1942) conception and hence including education services, and guaranteeing better conditions for workers. Conversely, the political right usually takes the opposite stance on such positions, as its greater focus on unhampered individual freedoms translates into less support from the state to people in disadvantaged economic positions, with such differences usually perpetuated in 'pure' market economies (e.g., Böhm, 1979). Hence, it is in this spirit that links ideas of societal structure and inequality that the political right traditionally pursues economic growth without concerns for distributive outcomes (e.g., Boix, 1997). Specifically, this occurs both through free-market supply-side economic policies devised as an incentive for private investments, the anti-protectionism viewpoint concerning the opposition to interferences with free markets, and running balanced budgets by cutting down on social expenditures at large, as operationalised in the selected MARPOR items.

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[6] The included countries are Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

The cultural left-right dimension includes, in the left pole, the MARPOR codes concerning opposing war and conflicts given they harm fellow human beings (per105), support for human, civil and refugee rights (per201.2), negative attitudes towards nationalism and discrimination coupled with positive views on immigration (per602), secularist stances supportive of issues such as same-sex families and abortion whilst opposed to traditional morality (per604), rejection of stronger policing and measures such as the death penalty, coupled with liberal stances on issues such as drugs and prostitution (per605.2), promoting multiculturalism, diversity and indigenous rights (per607), and defending non-economic underprivileged minorities (per705); in the right pole, supporting greater military capacity for self-defence and external security against threats (per104), positively viewing nationalism and the suspension of some freedoms to prevent subversion, coupled with opposing immigration (per601), traditional religious and moral stances favourable to maintaining the existing social order, both public and private (per603), a tough 'law and order' view of society for internal security (per605.1), national solidarity (per606), and cultural assimilation in opposition to multiculturalism (per608).

As with the economic left-right dimension, these MARPOR categories explicitly deal with the expansion of rights and equal treatment of all men on the left and with supporting and preserving clear sociocultural distinctions amongst different people on the right. In this regard, the political left combines its more antimilitarian character with the focus on promoting and extending human rights (e.g., Rathbun, 2004; Fonck, Haesebrouck, & Reykers, 2018), as well as broader rights that reduce non-economic forms of inequality between people coming from different countries, cultures, and underprivileged categories, in a universalistic ethos. Conversely, the literature also shows that the opposite approach is taken up by the political right as it has a much narrower conception of the national interest – which, similarly to the existing external and internal order, is to be preserved also through force –, and hence the social status, position, and rights of different people on this basis, as well as the solidarity that is owed to them. These elements are to be coupled with traditional stances on moral and religious issues, typical of conservative postures and again preserving clear differences

between people, very much in a Tocquevillian fashion (e.g., Lakoff, 1998, p. 444). As per the economic left-right score, the cultural version also operationalises all the illustrated aspects of cultural left and right conceptualised on the basis of the literature through the employed MARPOR items.

Figure 2 summarises the scale components of the original left-right index introduced here.[7] Lastly, in this deductive selection not only the inclusion of some MARPOR categories, but also the exclusion of others requires a detailed justification. For reasons of space, this is reported in the Appendix.

4.2 Formalisation of synthetic left-right measure

By using the presented MARPOR items for two separate indicators of economic and cultural left-right, it is possible to locate party left-right positions on a plane. As illustrated, this measurement occurs on a deductive basis, that is by operationalising an explicit conceptualisation of left and right through the selection of scale components. It follows from this that it would also be possible to derive a general left-right score from this two-dimensional and theory-based placement of parties. The utility of this lies in the possibility of comparing, through a synthetic score, the left-right placements of my measure with the vast majority of existing alternatives, whilst still being able to represent parties' left-right positions in a two-unidimensional space through the individual economic and cultural scores.

Summarising the economic and cultural left-right positions of parties into a single value would graphically

Economic Left	Cultural Left
per403 - Market Regulation	per105 - Military: Negative
per404 - Economic Planning	per201.2 - Human Rights
per406 - Protectionism: Positive	per602 - National Way of Life: Negative
per409 - Keynesian Demand Management	per604 - Traditional Morality: Negative
per412 - Controlled Economy	per605.2 - Law and Order: Negative
per413 - Nationalisation	per607 - Multiculturalism: Positive
per504 - Welfare State Expansion	per705 - Underprivileged Minority Groups
per506 - Education Expansion	
per701 - Labour Groups: Positive	

Economic Right	Cultural Right
per401 - Free Market Economy	per104 - Military: Positive
per402 - Incentives: Positive	per601 - National Way of Life: Positive
per407 - Protectionism: Negative	per603 - Traditional Morality: Negative
per414 - Economic Orthodoxy	per605.1 - Law and Order: Positive
per505 - Welfare State Limitation	per606 - Civic Mindedness: Positive
per507 - Education Limitation	per608 - Multiculturalism: Negative
per702 - Labour Groups: Negative	

Figure 2. Scale components of the original left-right index.

[7] Although hardly appropriate due to the ipsative nature of MARPOR data (see, e.g., Chan, 2003), the routinely employed Cronbach's alpha test to check if the items employed in MARPOR-based positional indexes fit together empirically, performed against all available Western European observations in the MARPOR database between 1999 and 2019, results in a 0.1 improvement in the score of the original left-right index vis-à-vis the one of the RILE (Cronbach's alpha values of, respectively, 0.63 and 0.53). In relative terms, this indicates a better empirical fit with the data of the new instrument compared to the MARPOR's measure with regard to the internal consistency of these instruments in the analysed spatial-temporal framework.

correspond to projecting each point in the plane, representing party positions as indicated by their economic and cultural left-right scores, on a diagonal line synthesising the two left-right domains. As a preliminary step, consider projecting a point $P(x_p, y_p)$ on a line $r{:}y = mx$, whereby m is the slope of r. The slope, which is the ratio between cultural (y-axis) and economic (x-axis) left-right, effectively represents the relative weight of the two dimensions in determining the summary projected score.[8] For ease of interpretation and comparability, I assume here that the economic and cultural components of parties' left-right positions across the analysed elections weigh the same, although a more granular assessment of this assumption – which is beyond the scope of the article –may show otherwise depending on the specific case. Hence, this method makes it possible to empirically assess, e.g., vis-à-vis an external benchmark, which assumption as to the relation between the economic and cultural left-right dimensions is the best fit to place parties in terms of their left-right positions, by changing the value of the slope (m).

With this in mind, it is then possible to derive the equation to orthogonally project a point on a line in general terms. It was already shown that point $P(x_p, y_p)$ ought to be projected on line $r{:}y = mx$. To do so, it is necessary to first derive the equation of line s, which passes through point P and is itself orthogonal to line r. In general, the equation of a line passing through a point given its slope and the coordinates of the point is $y - y\_p = m(x - x\_p)$. Given that line s must be orthogonal to line r, and that the slopes of two perpendicular lines are each other's negative reciprocal, it follows that $ms = -1/mr$ and, therefore, assuming that $mr = m$, the equation

of line s will be $s{:}y - y\_p = -1/m(x - x\_p)$. By considering the equations of lines r and s in a system, it follows that:

$$\begin{cases} y = mx \\ y - y\_p = -1/m(x - x\_p) \end{cases} \quad (1)$$

The system is then resolved in the following steps:

$$\begin{cases} y = mx \\ mx - y\_p = -1/m(x - x\_p) \end{cases} \quad (2)$$

$$\begin{cases} y = mx \\ y - y\_p = -\dfrac{x}{m} + \dfrac{x\_p}{m} \end{cases} \quad (3)$$

$$\begin{cases} y = mx \\ mx + \dfrac{x}{m} = \dfrac{x\_p}{m} + y\_p \end{cases} \quad (4)$$

$$\begin{cases} y = mx \\ x\left(m + \dfrac{1}{m}\right) = \dfrac{x\_p}{m} + y\_p \end{cases} \quad (5)$$

In the final step, the general system of equations for identifying the coordinates of the projection of point P on the line r can be identified, given the value of slope $mr = m$:

$$\begin{cases} y = mx \\ x = \dfrac{\dfrac{x\_p}{m} + y\_p}{m + \dfrac{1}{m}} \end{cases} \quad (6)$$

Hence, it is now possible to obtain the coordinates of P_r, i.e. the orthogonal projection of point P on line r, by substituting the known coordinates of point $P(x_p, y_p)$ and the slope in equation (6). Therefore, this general system of equations is applicable to any assumption concerning the relative weight of economic and cultural left-right in party competition. At this point, it is then necessary to translate the coordinates of P_r into a single numerical value, in order to summarise the two-dimensional theory-based left-right positions into a general left-right score. To do this, it is possible to rely on the equation for deriving the distance of a point from another one, which in general terms can be expressed as the squared root of the sum of the squared horizontal and vertical distances, i.e. $\sqrt{(x2 - x1)^2 + (y2 - y1)^2}$. Here, $x2$ and $x1$ represent the coordinates on the x-axis of, respectively, P_r and the point from which one is meas-

[8] A potential additional application of this methodological approach is that the underlying process will yield different results according to the adopted assumption on the weight of the two issue dimensions in party competition, which can be operationalised by the slope of such a diagonal line. That is, depending on whether the economic and cultural domains are assumed to have the same or different importance for parties' political offer, both the slope of the diagonal and the summary scores that will be derived by employing the economic and cultural left-right indicators will be different. This would allow testing different assumptions concerning the salience of the different issue dimensions in each specific context, either in a confirmatory or exploratory fashion. For instance, if one considers the quadrant of the plane where both the horizontal and vertical dimensions take on positive values, an m of 4 would entail a much more inclined line as values on the y-axis would equate to those on the x-axis multiplied by four. Vice-versa, an m of ¼ would result in a much flatter line, as this time values on the x-axis would correspond to those on the y-axis multiplied by four. By substituting economic and cultural left-right respectively to the x- and y-axis, the value of the slope (m) represents the relationship between these two dimensions in terms of their importance for party competition. In the first case ($m=4$) the projected coordinate will be mostly determined by the y-coordinate of a point, while in the second case ($m=¼$) it will be mostly determined by the x-coordinate.

uring the distance; the same reasoning applies to the y-axis, with $y2$ and $y1$ respectively the coordinates along this dimension of Pr and the point from which the distance is being measured. Given P_r, of which the coordinates are now known, it is possible to derive its summary score by calculating its distance from the origin $O(0, 0)$. Indeed, if there were a point $P_0(0, 0)$ coinciding with the origin O, substituting its coordinates in the presented general system of equations for orthogonally projecting a point P on the line r would result in a point with the same coordinates: $P_{0r}(0, 0)$, also coinciding with the origin O. Hence, this means that a perfectly centrist party (i.e., with economic and cultural left-right scores of 0) will always remain a perfectly centrist party, regardless of the weight assigned to either of the two dimensions. This makes it ideal as a reference point from which to calculate the distance of other points. Therefore, by substituting 0 for both $x1$ and $x2$, it is possible to obtain:

$$\sqrt{(x2 - 0)^2 + (y2 - 0)^2} \tag{7}$$

It follows that:

$$\sqrt{(x2)^2 + (y2)^2} \tag{8}$$

Hence, equation (8) is the general equation for deriving summary left-right scores by employing the x- and y-axis coordinates of the projection of a given point, measured through the deductive economic and cultural left-right instruments, on a line with any given value of the slope m, representing the relative importance of the economic and cultural left-right dimensions in party competition.

As mentioned above, by following the presented deductive aggregation of MARPOR items and index formalisation, the version of the original left-right index constructed here is the one with $m = 1$, hence assuming that economic and cultural left-right have the same importance in party competition. Table 1 presents summary statistics for this instrument and the RILE related to all 474 observations.

Firstly, by looking at the negative sign of the mean values taken on by both instruments, it is possible to observe how the average positioning of Western European parties in the last 20 years is left-of-centre in general terms. Another interesting conclusion can be derived by looking at the standard deviation and range between minimum and maximum value empirically taken on by these instruments in the employed dataset. Indeed, the original left-right index introduced here presents smaller standard deviations and ranges compared to the RILE, which may be due to the inclusion in the MARPOR's

Table 1. Summary statistics for the original left-right index and RILE.

	Original left-right index	RILE
Mean	-13.14	-6.79
Standard deviation	17	19.25
Min	-53.57	-52.67
Max	45	70.59
Range	98.57	123.26
Theoretical min	-100	-100
Theoretical max	100	100
obs.	474	474

measure of very broad and general items (for instance, the per202 on democracy in the left pole and the per203 on positive views concerning constitutionalism in the right pole) that do not seem to have much in common with the presented theory-based conceptualisation of left and right.

5. EMPIRICAL ANALYSIS

A preliminary step in the empirical analysis is assessing the convergent validity (Drost, 2011) of the newly introduced left-right index with the RILE: that is, if the measurements of the same object – in this, parties' left-right positions – made by these two alternative instruments are in accordance with each other. To do so, I calculate the related Pearson's r value between the two instruments, which can take scores between -1 (perfect negative correlation) and 1 (perfect positive correlation), with 0 meaning no correlation. The related r score of 0.88, significant at $p<0.001$ and calculated over all 474 observations in the dataset, indicates a strong positive correlation (Ross, 2017), reassuring about the different indexes converging in their measurement of the same object.

Convergent validity tests also ought to be performed vis-à-vis survey expert data from the CHES, which is another instrument measuring parties' left-right positions but external to the MARPOR. This is an important step in determining which between the new left-right index introduced here and the RILE provides better measurement of parties left-right positions, and in which cases. Indeed, agreement between manifesto data and expert surveys is considered fundamental in the specialised literature (Krouwel & van Elfrinkhof, 2014).

This test is performed by generating the election-specific left-right ranking orders of parties deriving

Table 2. Spearman's ρ values new left-right index and RILE vis-à-vis CHES data.

Spearman's ρ	New left-right index	RILE
CHES	0.81*	0.8*
obs.	474	474

Note: * indicates statistical significance at p<0.001.

Table 3. Spearman's ρ values for the new left-right index and RILE vis-à-vis CHES data by decade.

Spearman's ρ with CHES data	New left-right index	RILE	obs.
1999-2009	0.75*	0.8*	236
2010-2019	0.86*	0.8*	238
obs.			474

Note: * indicates statistical significance at p<0.001.

from the new left-right index, the RILE, and CHES for the entire spatial-temporal framework, to then compare the degree of accordance between these ranks by employing Spearman's ρ. This is a nonparametric rank correlation coefficient that measures if two variables are related monotonically (Meyers & Well, 2013). ρ ranges between -1 and 1, representing respectively negative and positive monotone functions between variables, and takes on the value of 0 when there is no correlation between the two. Table 2 reports this information. As evident, the party left-right ranks of both MARPOR-based instruments are very strongly correlated with those resulting from CHES data. Whilst it is true that the left-right index introduced in this paper does outperform the RILE (Spearman's ρ values of, respectively, 0.81 and 0.8),[9] it only does so very marginally, leaving the question open as to when and where there are discrepancies between the two instruments.

This can be identified through a more granular analysis. Table 3 reports the Spearman's ρ scores for the original left-right index and RILE vis-à-vis the CHES by dividing the analysed timeframe into its two decades. These are the 2000s, captured here between 1999-2009, and the 2010s, between 2010-2019, during which the socio-economic and political effects of the watershed event represented the Great Recession are fully fledged and, as mentioned, innovative patterns of party competition (e.g., De Sio & Lachat, 2020) in such 'turbulent

times' (e.g., Chiaramonte & Emanuele, 2019) can be identified. Here, an interesting finding emerges: whilst the outperformed in the 2000s (Spearman's ρ values of, respectively, 0.75 and 0.8), the new left-right index decisively improves parties' left-right measurement in the 2010s (Spearman's ρ values of, respectively, 0.86 and 0.8). This confirms arguments in the literature according to which party competition in Western Europe increasingly deviated from 'traditional' ideological configurations during this decade (De Sio & Lachat, 2020), operationalised in the left and right poles of the RILE index, showing a higher degree of off-diagonality and exploiting the two-dimensionality of the political space much more even in their left-right economic and cultural positions. Moreover, the greater fit with CHES data displayed by the new left-right index compared to the RILE, with a noticeable improvement in Spearman's ρ score of around 6, indicates that this instrument includes topics that are more relevant to party competition during the 2010s compared to the MARPOR's measure, which cannot be updated for obvious reasons of longitudinal and cross-sectional comparability.

After looking at longitudinal differences between the two measures, I now compare the new left-right index and RILE across space within the Western European context. Table 4 reports the Spearman's ρ scores of these two instruments vis-à-vis the CHES in 4 geographical Western European clusters: the British Isles, Continental Europe, Northern Europe, and Southern Europe.[10] As evident, the differences between the two measures across these geographical clusters are much more marked in Continental and Southern Europe than in the British Isles and Northern Europe. Even considering this, the new left-right index outperforms the RILE in all areas but the Continental European cluster, where at this level of aggregation the structure of party competition over the 20 analysed years seems, overall, to be best described by the traditional unidimensional pattern *à-la* Kitschelt (1992, 1994) captured by the MARPOR's measure. However, recall that the Continental European category constitutes the largest group of countries in my analysis, with six countries and 175 observations, hence contributing to its internal differentiation. Indeed, a more granular investigation of this result illustrates how it is chiefly determined by two out of the six included countries, Belgium (Spearman's ρ values of, respectively, 0.66 and 0.8) and France (Spearman's ρ values of, respectively, 0.73 and 0.84), whereas the new left-right index is more

[9] As reported in Table A3 in the Appendix, these results are robust when employing other comparable rank correlation coefficients in Kendall's τ, Somers' *D*, and Goodman and Kruskal's γ.

[10] The geographical clusters are constructed as follows. British Isles: Ireland, United Kingdom. Continental Europe: Austria, Belgium, France, Germany, Luxembourg, Netherlands. Northern Europe: Denmark, Finland, Sweden. Southern Europe: Cyprus, Greece, Italy, Portugal, Spain.

Table 4. Spearman's ρ values for the new left-right index and RILE vis-à-vis CHES data by geographical cluster.

Spearman's ρ with CHES data	New left-right index	RILE	obs.
British Isles	0.72*	0.71*	37
Continental Europe	0.81*	0.85*	175
Northern Europe	0.77*	0.76*	115
Southern Europe	0.8*	0.74*	147
obs.			474

Note: * indicates statistical significance at p<0.001.

efficient than the RILE in the remaining four national contexts in Continental Europe (Spearman's ρ values of, respectively, 0.84 and 0.74 in Austria; 0.9 and 0.85 in Germany; 0.94 and 0.89 in Luxembourg; and 0.89 and 0.88 in the Netherlands).

Conversely, the deductive left-right instrument based on an explicit distinction between economic and cultural components of this dimension introduced here slightly outperforms the RILE in the British Isles (Spearman's ρ values of, respectively, 0.72 and 0.71) and in Northern Europe (Spearman's ρ values of, respectively, 0.77 and 0.76) whilst, especially, performing much better in Southern Europe (Spearman's ρ values of, respectively, 0.8 and 0.74). This is interesting and especially relevant, given that the validity of RILE measurements in this region has been called into question several times by scholars focusing on Greece (Dinas & Gemenis, 2010) and Italy (Pelizzo, 2003), as well as by MARPOR's researchers themselves regarding Portugal (Budge & Klingemann, 2001, pp. 44–47).

To provide an example of the new left-right index 'in action', it is in specific regard to this problematic region that I will now show descriptive evidence as to how the index introduced here operates in an exemplary Southern European case compared to the RILE, as well as its analytical utility both from a two-dimensional perspective and in the comparison with existing unidimensional MARPOR-based left-right measures. To this end, I select the election with the highest differential in Spearman's ρ scores between the new left-right index and RILE in a country where the latter notoriously produces invalid measurements (Dinas & Gemenis, 2010), Greece: specifically, the May 2012 electoral contest.[11] As will be shown, the reason why the new left-right index operates better than the RILE in a case such as this one is that it resolves some contradictions

that emerge whilst employing the MARPOR's measure in terms of construct validity (Drost, 2011). That is, the measure introduced here is able to locate parties in a way that corresponds more closely to expectations derived from sources such as academic classifications (e.g., Rooduijn et al., 2019; Döring & Manow, 2020; Nordsieck, 2021), hence providing more valid left-right measurements. At the root of this improvement is the two-dimensional and theory-based conception of left and right adopted by the new left-right measure of this article, which allows for making sense of the contradictory placements derived when applying the RILE.

This can be shown graphically: Figure 3 illustrates the left-right location of Greek parties according to the RILE, the individual economic and cultural left-right components of the new left-right index, and the new left-right index itself in the May 2012 election. Here, the RILE comes to some implausible conclusions: for instance, considers the Greek communist party, *Kommounistikó Kómma Elládas* (KKE), as a markedly right-wing formation and one of the rightmost in the party system, even more so than mainstream centre-right *Néa Dimokratía* (ND). Furthermore, radical right parties *Anexartitoi Ellines* (ANEL), *Laïkós Orthódoxos Synagermós* (LAOS) and *Laïkós Sýndesmos* (XA, Golden Dawn) are scattered across the left-right spectrum, in vastly different positions; with ANEL appearing as an overall left-wing formation. Instead, separating the economic and cultural components of left-right semantics allows for making sense of most of these incoherencies, for instance by locating the KKE as a markedly economically left-wing party and only just right-of-centre culturally, not too different than mainstream centre-left PASOK. Moreover, radical right ANEL, LAOS, and XA are all clustered along the economic left-cultural right quadrant of the alternative diagonal, whilst instead ND is as expected (by far) the most economically right-wing party, with also right-of-centre cultural positions. Hence, when synthesising these two-dimensional measurements in the single new left-right index, it is evident how the left-right placement of Greek parties is much more in line with theoretical expectations. The KKE moves back to the left side of the spectrum, where it joins all the other left-of-centre parties: radical left SYRIZA to its left, and centre-left DIMAR and PASOK to its right, with the latter closer to the dimensional centre. For context, at this time the former main party of the Greek centre-left was moving to the centre also in light of the bailout agreement signed by the Papandreou government just months before this election (Sotiropoulos, 2014). The ranking order on the right-hand side also highlights

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[11] The differential in Spearman's ρ scores between the new left-right index and RILE in the Greek elections are as follows: 2000 = -0.2; 2004 = 0; 2009 = 0; May 2012 = 0.6; June 2012 = 0.54.
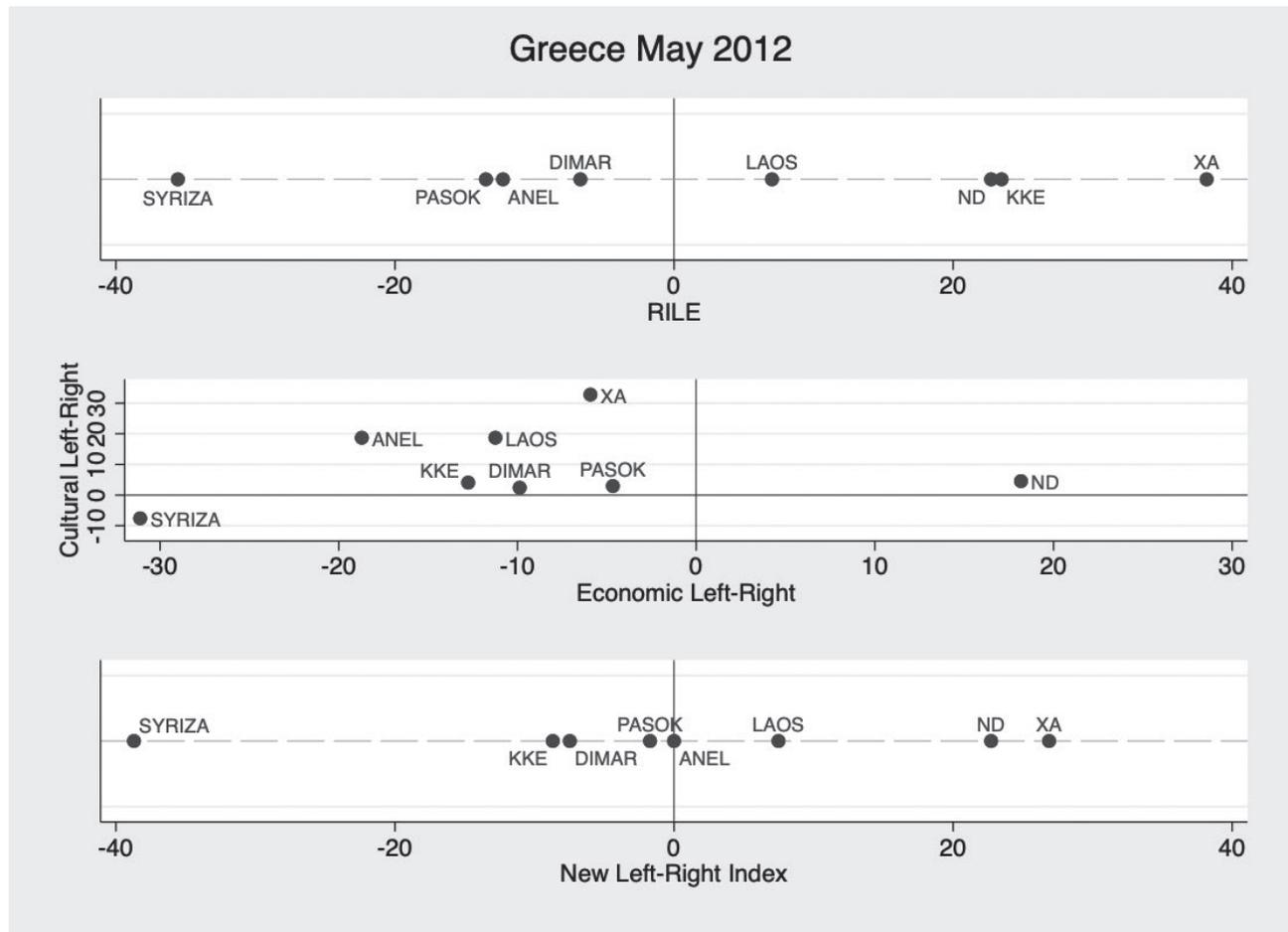
Figure 3. Greek parties left-right positions in the May 2012 election as per the RILE, the individual economic and cultural left-right scores, and the new left-right index.

interesting findings, which especially resonate with the well-known differentiation internal to the radical right chiefly with regard to the economy (e.g., Hillen & Steiner, 2020; Wahl, 2020). Indeed, due to their different economic and cultural positions that emerges from the two-dimensional graphic representation, the radical right bloc is differentiated between relatively more leftist (ANEL and LAOS) and right-wing (XA) formations, whilst the main centre-right party in ND appears as overall markedly right-of-centre due to its economic and cultural right-wing positions, as expected. Overall, these graphic illustrations demonstrate the analytical utility of deriving deductively and explicitly separating economic and cultural components of left and right, both in using them to represent party competition vis-à-vis left-right issues in two-dimensional patterns and by synthesising such scores into a unique value for the sake of comparability with other measures.

6. CONCLUSION

In this article I (a) introduced a deductive left-right index based on MARPOR data that relies on a theory-based conceptualisation of left-right semantics applied to both the economic and cultural issue dimensions as the basis for operationalisation; and (b) empirically tested this instrument against MARPOR's widely used (and criticised) RILE, allowing for an assessment of not just how the two measures perform, but also patterns of party competition in contemporary Western Europe (1999-2019). Building on a theoretical framework that discussed the evolution of the electoral supply-side in the region, left-right semantics and its application to an economic and a cultural domain, and the existing measures of party left-right positions through manifesto data, I constructed a new such left-right index to be applied on a dataset made up of 72 elections and 474 party-election combinations in 16 Western European coun-

tries between 1999-2019. I did so in two steps. First, I made a deductive selection of the MARPOR items that would make up the left and right economic and cultural poles of my index, with explicit reference to the theoretical reasons underlying the inclusion of the selected items. Second, following a logical quantitative modelling approach (Taagepera, 2008), I mathematically formalised the construction of a synthetic left-right measure, deriving from the individual deductive economic and cultural scores built here, which can be used both individually for comparisons with existing such instruments – the vast majority of which are unidimensional – and in conjunction with the two underlying scores for a comprehensive analysis of parties' left-right positions. Further, this method allows for assessing the orthogonality (or lack thereof) and the relation between the economic and cultural left-right dimension in determining patterns of party competition around left-right issue on a case-by-case basis by testing and modifying the different assumptions concerning the slope in the illustrated system of equations. This represents another novel element introduced by my approach to measuring left-right positions via MARPOR data, which can be employed in many different applications in future research.

I then empirically tested the new left-right index and RILE, assessing their performance in the article's dataset vis-à-vis the external benchmark represented by expert survey data from the CHES. These tests, which mainly employed Spearman's ρ index of rank-order correlation, were both pooled and differentiated across space and time within the dataset, allowing for both general and more granular comparisons between the two measures. Further, descriptive evidence concerning the new left-right index 'in action' was also presented, by showing a brief within-case analysis for the May 2012 election in Greece, which was also confirmed in my data as one of the most problematic countries for the measurements performed by the MARPOR's RILE (Dinas & Gemenis, 2010).

The article provides methodological and substantive contributions to the relevant literature. On the former front, the key element is the introduction of a deductive MARPOR-based left-right index, whereas as shown most existing such instruments are either partially or fully inductive in nature. The main advantage of a deductive approach is strong construct validity, which is based on an explicit theory-based conceptualisation of left and right as the basis for operationalisation. By virtue of this linkage with theoretical sources, this type of validity cannot be affected by the specific data to which left-right indexes are applied, which instead could change entirely both the scale components of inductive measures and the results provided by such instruments.

Substantively, the empirical analysis returned mixed results, which provide a differentiated and very interesting picture. Indeed, albeit overall the performance of the two measures is not too different, the traditional patterns of party competition captured through manifesto data by the RILE seem to apply better to the pre-Great Recession, 'turbulent times' (e.g., Chiaramonte & Emanuele, 2019) decade and in the Continental European cluster of countries at large. On the contrary, the explicitly deductive new left-right index that is based on the underlying application of the semantics of left and right to the economic and cultural issue dimensions is better placed to capture the patterns of competition in the 'turbulent' 2010s, confirming the expectations on the increased innovation and diminished 'ideological consistency in 20th-century terms' of Western European electoral supply during these years (e.g., De Sio & Lachat, 2020). Further, it also presents measurement improvements most geographical contexts across the region, including some Continental European countries as well as across the British Isles, Northern Europe, and – especially – Southern Europe, where the RILE has notoriously been found to produce invalid left-right estimates even by the MARPOR researchers themselves (Budge & Klingemann, 2001, pp. 44–47; Pelizzo, 2003; Dinas & Gemenis, 2010).

The evidence presented here points to two considerations in particular. First, these differentiated results underline how patterns of party competition in contemporary Western Europe have not developed in a uniform fashion everywhere. Rather, they may rather still be informed by contextual specificities that at times leave them rather unchanged from the more traditional structures seen throughout the 20th century, and at times lead them to deviate from them. Second, another point follows from the differentiated picture emerging from the test of a uniform deductive left-right index provided in this work. That is, whilst still grounded in deduction and hence based both on theoretical sources and case knowledge to justify why specific items are included, future MARPOR-based left-right measurement of party positions should move more and more towards differentiated approaches specific to given countries and time periods even when not relying on statistical induction, which as seen can be problematic in other ways. This, of course, will require a great deal of attention to the evolution of patterns of party competition in specific national contexts, to understand which specific MARPOR items that are either left- or right-wing are truly relevant, with a significant qualitative effort in the integration of case knowledge into the development and empirical application of MARPOR-based left-right indexes. Whilst by no means whatsoever being conclusive, I hope that this

research can lead to discussions related to both the illustrated substantive and methodological points.

REFERENCES

Adcock, R., & Collier, D. (2001). Measurement Validity: A Shared Standard for Qualitative and Quantitative Research. *American Political Science Review*, 95(3), 529–546.

Anderson, P. (1998). A Sense of the Left. *New Left Review*, 231(1), 73–81.

Bakker, R., & Hobolt, S. B. (2013). Measuring Party Positions. In Evans, G., & De Graaf, N. D. (eds.), *Political Choice Matters: Explaining the Strength of Class and Religious Cleavages in Cross-National Perspective* (pp. 27–45). Oxford: Oxford University Press.

Bakker, R., Hooghe, L., Jolly, S., Marks, G., Polk, J., Rovny, J., Steenbergen, M., & Vachudova, M.A. (2020). *1999 – 2019 Chapel Hill Expert Survey Trend File*. Version 1.2. Retrieved from chesdata.eu.

Bakker, R., Jolly, S., & Polk, J. (2012). Complexity in the European party space: Exploring dimensionality with experts. *European Union Politics*, 13(2), 219–245.

Bartolini, S., & Mair, P. (1990). Policy competition, spatial distance and electoral instability. *West European Politics*, 13(4), 1–16.

Benoit, K., & Laver, M. (2006). *Party Policy in Modern Democracies*. London: Routledge.

Beveridge, W. (1942). *Social Insurance and Allied Services*. Report. London: H. M. Stationery Office.

Bobbio, N. (1997). *Left and Right: The Significance of a Political Distinction*. Chicago: University of Chicago Press.

Boix, C. (1997). Political Parties and the Supply Side of the Economy: The Provision of Physical and Human Capital in Advanced Economies, 1960-90. *American Journal of Political Science*, 41(3), 814–845.

Budge, I. (1987). The Internal Analysis of Election Programmes. In Budge, I., Robertson, D., & Hearl, D. J. (eds.), *Ideology, Strategy and Party Change* (pp. 15–38). Cambridge: Cambridge University Press.

Budge, I., & Klingemann, H. D. (2001). Finally! Comparative Over-Time Mapping of Party Policy Movement. In Budge, I., Klingemann, H. D., Volkens, A., Bara, J., & Tanenbaum, E. (eds.), *Mapping Policy Preferences: Estimates for Parties, Electors, and Governments 1945-1998* (pp. 19–50). Oxford: Oxford University Press.

Chan, W. (2003). Analyzing ipsative data in psychological research. *Behaviormetrika*, 30(1), 99–121.

Chiaramonte, A., & Emanuele, V. (2019). Towards turbulent times: measuring and explaining party system (de-)institutionalization in Western Europe (1945–2015). *Italian Political Science Review/Rivista Italiana Di Scienza Politica*, 49(1), 1–23.

Dalton, R. J. (2002). *Citizen Politics: Public Opinion and Political Parties in Advanced Industrial Democracies*. New York/London: Chatham House/Seven Bridges.

De Sio, L., & Lachat, R. (2020). Making sense of party strategy innovation: challenge to ideology and conflict-mobilisation as dimensions of party competition. *West European Politics*, 43, 688–719.

Dinas, E., & Gemenis, K. (2010). Measuring parties' ideological positions with manifesto data: A critical evaluation of the competing methods. *Party Politics*, 16(4), 427–450.

Döring, H., & Manow, P. (2020). *Parliaments and governments database (ParlGov)*. Development version.

Dolezal, M., Ennser-Jedenastik, L., Müller, W. C., & Winkler, A. K. (2016). Analyzing manifestos in their electoral context: a new approach applied to Austria, 2002–2008. *Political Science Research and Methods*, 4(3), 641–650.

Drost, E. A. (2011). Validity and Reliability in Social Science Research. *Education Research and Perspectives*, 38(1), 105–123.

Elff, M. (2013). A Dynamic State-Space Model of Coded Political Texts. *Political Analysis*, 21, 217–232.

Flanagan, S. C., & Lee, A. (2003). The New Politics, Culture Wars, and the Authoritarian Libertarian Value Change in Advanced Industrial Democracies. *Comparative Political Studies*, 36(3), 235–270.

Fonck, D., Haesebrouck, T., & Reykers, Y. (2019). Parliamentary involvement, party ideology and majority-opposition bargaining: Belgian participation in multinational military operations. *Contemporary Security Policy*, 40(1), 85–100.

Franzmann, S. T., & Kaiser, A. (2006). Locating Political Parties in Policy Space: A Reanalysis of Party Manifesto Data. *Party Politics*, 12(2), 163–188.

Fuchs, D., & Klingemann, H. D. (1990). The Left-Right Schema. In Kent Jennings, M., & van Deth, J. V. (eds.), *Continuities in Political Action: A Longitudinal Study of Political Orientations in Three Western Democracies* (pp. 203–234). Berlin: Walter de Gruyter.

Gabel, M. J., & Huber, J. D. (2000). Putting Parties in Their Place: Inferring Party Left-Right Ideological Positions from Party Manifestos Data. *American Journal of Political Science*, 44(1), 94–103.

Gemenis, K. (2013). What to Do (and Not to Do) with the Comparative Manifestos Project Data. *Political Studies*, 61(1), 3–23.

Heine, S. (2010). Left versus Europe? The Ideologies Underlying the Left's 'No' to the Constitutional Treaty in France and Germany. *Perspectives on European Politics and Society*, 11(3), 313–332

Hillen, S., & Steiner, N. D. (2020). The consequences of supply gaps in two-dimensional policy spaces for voter turnout and political support: The case of economically left-wing and culturally right-wing citizens inWestern Europe. *European Journal of Political Research*, 59, 331–353.

Hix, S. (2002). Parliamentary Behavior with Two Principals: Preferences, Parties, and Voting in the European Parliament. *American Journal of Political Science*, 46(3), 688–698.

Hooghe, L., Marks, G., & Wilson, C. J. (2002). Does left/right structure party positions on European integration? *Comparative Political Studies*, 35(8), 965–989.

Horn, A., Kevins, A., Jensen, C., & Kersbergen, K. V. (2017). Peeping at the corpus – What is really going on behind the equality and welfare items of the Manifesto project? *Journal of European Social Policy*, 27(5), 403–416.

Inglehart, R. (1984). The Changing Structure of Political Cleavages in Western Society. In Dalton, R. J., Flanagan, S. E., & Allen Beck, P. (eds.), *Electoral Change in Advanced Industrial Democracies: Realignment or Dealignment?* (pp. 25–69). Princeton: Princeton University Press.

Jahn, D. (2010). Conceptualizing Left and Right in comparative politics: Towards a deductive approach. *Party Politics*, 17(6), 745–765.

Jahn, D. (2014). Left and Right in Comparative Politics. Paper presented at the 'Mapping Policy Preferences from Texts' conference, WZB Berlin Social Science Center, May 15–16, 2014.

Keman, H. (2007). Experts and manifestos: different sources-same results for comparative research? *Electoral Studies*, 26, 76–89.

Kitschelt, H. (1992). The Formation of Party Systems in East Central Europe. *Politics & Society*, 20(1), 7–50.

Kitschelt, H. (1994). *The Transformation of European Social Democracy* (Cambridge Studies in Comparative Politics). Cambridge: Cambridge University Press.

Klingemann, H. D. (1995). Party Positions and Voter Orientations. In Klingemann, H.D., & Fuchs, D. (eds), *Citizens and the State* (pp. 183–205). Oxford: Oxford University Press.

Knutsen, O. (1989). Cleavage Dimension in Ten West European Countries – A Comparative Empirical Analysis. *Comparative Political Studies*, 21(4), 495–534.

Kriesi, H., Grande, E., Lachat, R., Dolezal, M., Bornschier, S., & Frey, T. (2006). Globalization and the transformation of the national political space: Six European countries compared. *European Journal of Political Research*, 45, 921–956.

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 and Quantity*, 48, 1455–1472.

Lakoff, S. (1998). Tocqueville, Burke, and the Origins of Liberal Conservatism. *The Review of Politics*, 60(3), 435–464.

Laponce, J. (1981). *Left and Right: The Topography of Political Perceptions*. Toronto: University of Toronto Press.

Laver, M., Benoit, K., & Garry, J. (2003). Extracting Policy Positions from Political Texts Using Words as Data. American Political Science Review, 97(2), 311–331.

Laver, M., & Budge, I. (1992). Measuring Policy Distances and Modelling Coalition Formation. In Laver, M., & Budge, I. (eds), *Party Policy and Government Coalitions* (pp. 15–40). Basingstoke: Macmillan.

Laver, M., & Garry, J. (2000). Estimating policy positions from political texts. *American Journal of Political Science*, 44(3), 619–634.

Lefkofridi, Z., Wagner, M., & Willmann, J. E. (2014). Left-Authoritarians and Policy Representation in Western Europe: Electoral Choice across Ideological Dimensions. *West European Politics*, 37(1), 65–90.

Lukes, S. (2003). Epilogue: The Grand Dichotomy of the Twentieth Century. In Ball, T., & Bellamy, R. (eds.), *The Cambridge History of Twentieth Century Political Thought* (pp. 602–626). Cambridge: Cambridge University Press.

Marks, G., Hooghe, L., Nelson, M., & Edwards, E. (2006). Party competition and European integration in the East and West: Different structure, same causality. *Comparative Political Studies*, 39(2), 155–175.

Mikhaylov, S., Laver, M., & Benoit, K. R. (2012). Coder reliability and misclassification in the human coding of party manifestos. *Political Analysis*, 20(1), 78–91.

Noel, A., & Therien, J. P. (2008). *Left and Right in Global Politics*. Cambridge: Cambridge University Press.

Nordsieck, W. (2021). *Parties and Elections in Europe*. Retrieved from www.parties-and-elections.eu.

Pelizzo, R. (2003). Party position or party direction? An analysis of party manifesto data. *West European Politics*, 26, 67–89.

Pennings, P., & Keman, H. (2002). Towards a New Methodology of Estimating Party Policy Positions. *Quality and Quantity*, 36, 55–79.

Poole, K. T., & Rosenthal, H. (1985). A Spatial Model for Legislative Roll Call Analysis. *American Journal of Political Science*, 29(2), 357–384.

Prion, S., & Haerling, K. A. (2014). Making sense of methods and measurement: Spearman-rho ranked-order correlation coefficient. *Clinical Simulation in Nursing*, 10(10), 535–536.

Prosser, C. (2014). Building policy scales from manifesto data: A referential content validity approach. *Electoral Studies*, 35, 88–101.

Rathbun, B. C. (2004*). Partisan interventions: European party politics and peace enforcement in the Balkans*. Ithaca, NY: Cornell University Press.

Rooduijn, M., Van Kessel, S., Froio, C., Pirro, A., De Lange, S., Halikiopoulou, D., Lewis, P., Mudde, C. & Taggart, P. (2019). *The PopuList*. Retrieved from www.popu-list.org.

Ross, S. M. (2017). *Introductory statistics*. Cambridge, MA: Academic Press.

Rosset, J., Lutz, G., & Kissau, K. (2016). Representation of political opinions: is the structuring pattern of policy preferences the same for citizens and elites? In Bühlmann, M., & Fivaz, J. (eds.), *Political Representation. Roles, Representatives and the Represented* (pp. 117–134). London: Routledge.

Rovny, J. (2013). Where do radical right parties stand? Position blurring in multidimensional competition. *European Political Science Review*, 5(1), 1–26.

Rovny, J. (2014). The other 'other': party responses to immigration in eastern Europe. *Comparative European Politics*, 12(6), 637–662.

Rovny, J., & Whitefield, S. (2019). Issue dimensionality and party competition in turbulent times. *Party Politics*, 25(1), 4–11.

Schneider, C. Q., & Wagemann, C. (2012). *Set-Theoretic Methods for the Social Sciences*. Cambridge: Cambridge University Press.

Scruton, R. (2012). *Green Philosophy: How to Think Seriously about the Planet*. London: Atlantic Books.

Sotiropoulos, D. A. (2014). Triumph and collapse: PASOK in the wake of the crisis in Greece (2009 13). In Bailey, D. J., De Waele, J., Escalona, F., & Vieira, M. (eds.): *European social democracy during the global economic crisis* (pp. 193–212). Manchester: Manchester University Press.

Taagepera, R. (2008). *Making Social Sciences More Scientific: The Need for Predictive Models*. Oxford: Oxford University Press.

Thorisdottir, H., Jost, J. T., Liviatan, I., & Shrout, P. E. (2007). Psychological needs and values underlying left-right political orientation: cross-national evidence from Eastern and Western Europe. *Public Opinion Quarterly*, 71(2), 175–203.

van der Brug, W., & van Spanje, J. (2009). Immigration, Europe and the "New Sociocultural Dimension". *European Journal of Political Research*, 48(3), 309–334.

Volkens, A., Burst, T., Krause, W., Lehmann, P., Matthieß, T., Merz, N., Regel, S., Weßels, B., & Zehnter, L. (2020). *The Manifesto Project Dataset - Codebook. Manifesto Project (MRG / CMP / MARPOR)*. Version 2020b. Berlin: Wissenschaftszentrum Berlin für Sozialforschung (WZB).

Wahl, K. (2020). *The radical right: Biopsychosocial roots and international variations*. London: Springer Nature.

Weisberg, H. F. (1974). Dimensionland: An Excursion into Spaces. *American Journal of Political Science*, 18(4), 743–776.

White, J. (2011). Left and right as political resources. *Journal of Political Ideologies*, 16(2), 123–144.

White, J. (2013). Left and right in the economic crisis. *Journal of Political Ideologies*, 18(2), 150–170.

Zulianello, M. (2014). Analyzing party competition through the comparative manifesto data: some theoretical and methodological considerations. *Quality & Quantity*, 48, 1723–1737.

APPENDIX

Justification for excluding specific MARPOR categories from new left-right index's economic and cultural left-right's scale components

Additional items that constituted potential candidates for inclusion were not selected because of either of two reasons. Firstly, albeit new political issues, which contain some positions or goals that became customarily associated with either of the two poles, may have emerged in time, this does not necessarily mean that they all pertain to the left-right divide from a theoretical standpoint. Stances related to the issue of immigration, for instance, fit very well the illustrated left-right semantics, as they reflect views on human nature, social hierarchy, and order. However, the same cannot be said of other prominent themes, such as the European Union integration and environmentalism. Indeed, from a theoretical viewpoint, neither of such topics is directly or clearly related to the semantics of left and right conceptualised in this work, which chiefly revolves around social change for the rectification of economic and cultural inequalities. Indeed, on the one hand, it is difficult to argue that different stages of EU integration are inherently related with the reduction of inequalities, and in some fully integrated member states of the EU pro-European stances mean supporting the status quo. On the other, environmental protection may be seen, theoretically, from both a left-wing viewpoint on sustainable development to shelter the most vulnerable from inequalities and societal harm (e.g., in the per416.2 MARPOR item), and from a right-wing perspective on preserving natural resources (e.g., in the per501 MARPOR

Table A1. 'Vanilla' method results for Western European elections (1999-2019).

Left pole		Right pole	
per105	Military: Negative	per101	Foreign Special Relationships: Positive
per106	Peace	per102	Foreign Special Relationships: Negative
per107	Internationalism: Positive	per103	Anti-Imperialism
per108	European Community/Union or Latin America Integration: Positive	per104	Military: Positive
per201	Freedom and Human Rights	per109	Internationalism: Negative
per202	Democracy	per110	European Community/Union or Latin America Integration: Negative
per203	Constitutionalism: Positive	per302	Centralisation: Positive
per204	Constitutionalism: Negative	per303	Governmental and Administrative Efficiency
per301	Decentralisation: Positive	per305	Political Authority
per304	Political Corruption	per401	Free Market Economy
per403	Market Regulation	per402	Incentives: Positive
per404	Economic Planning	per406	Protectionism: Positive
per405	Corporatism/Mixed Economy	per407	Protectionism: Negative
per409	Keynesian Demand Management	per408	Economic Goals
per412	Controlled Economy	per410	Economic Growth: Positive
per413	Nationalisation	per411	Technology and Infrastructure: Positive
per415	Marxist Analysis: Positive	per414	Economic Orthodoxy
per416	Anti-Growth Economy and Sustainability	per505	Welfare State Limitation
per501	Environmental Protection	per507	Education Limitation
per502	Culture: Positive	per601	National Way of Life: Positive
per503	Equality: Positive	per603	Traditional Morality: Positive
per504	Welfare State Expansion	per605	Law and Order
per506	Education Expansion	per608	Multiculturalism: Negative
per602	National Way of Life: Negative	per702	Labour Groups: Negative
per604	Traditional Morality: Negative	per703	Agriculture and Farmers
per606	Civic Mindedness: Positive	per704	Middle Class and Professional Groups
per607	Multiculturalism: Positive	per706	Non-economic Demographic Groups
per701	Labour Groups: Positive		
per705	Underprivileged Minority Groups		

item) typical, for instance, of green conservativism (e.g., Scruton, 2012).

Secondly, while employing ready-made analytical tools such as the MARPOR categories, any researcher needs to be especially aware of how these are formulated, in order not to apply them inappropriately. Especially, attention should be paid to the limitations within the MARPOR codebook and its prescriptions. Here, some categories have not been included because their characteristics made them ambiguous vis-à-vis the theoretical framework of reference. For instance, per503 on equality could have belonged either to the economic ('fair redistribution of resources') or cultural left ('the end of discrimination') (Horn et al., 2017): it has therefore been discarded, as it would be impossible to empirically distinguish the scores related to the one or the other component of this category. The same reasoning applies to per201.1 on 'freedom', as it includes both economic and cultural elements pertaining individualism and liberties, which can also be interpreted differently by the left and the right as conceptualized here. A different example of ambiguity in the construction of MARPOR items is represented by the residual per706 on 'non-economic demographic groups', whereby it is not specified at all whether these are underprivileged groups or special interests. All the other categories were not included because they were not relevant to the presented theory-based conceptualisation of left and right.

Table A3. Rank correlation coefficients between the new left-right index and RILE vis-à-vis CHES data.

Rank correlation coefficients with CHES data	New left-right index	RILE
Spearman's ρ	0.81*	0.8*
Kendall's τ	0.69*	0.68*
Somers' D	0.7*	0.68*
Goodman and Kruskal's γ	0.77*	0.76*
obs.	474	474

Note: * indicates statistical significance at $p<0.001$.

Table A2. Distribution of elections per country.

Country	Number of elections
Austria	6
Belgium	5
Cyprus	2
Denmark	5
Finland	5
France	4
Germany	5
Greece	5
Ireland	4
Italy	5
Luxembourg	1
Netherlands	5
Portugal	6
Spain	5
Sweden	5
United Kingdom	4
total	72