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Economic well-being and self-placements on a Left-Right scale: evidence from undergraduate students in seven countries

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ABSTRACT

Despite its conceptual and empirical ambiguities, the Left-Right distinction of political preferences is a widely used tool in academic debates on voting and party behaviour, coalition formation and political culture. In a novel contribution to scholarship on the social construction of ideological identities, we investigate the context-dependent nature of the association between different conceptualizations of economic well-being and political orientations along a Left-Right scale. Our theoretical framework distinguishes economic well-being into a materialist and post-materialist dimension, and derives its hypotheses from Social Modernization Theory. Using multivariate analyses with original survey data from 3,449 undergraduate students in Bolivia, Brazil, Italy, Kenya, Sweden, Switzerland and the UK, our results show clear patterns and large effect sizes in the association between respondents' macro-economic context and their micro-level ideological orientations. In non-high-income countries, respondents' Left-Right self-placements correlate with a materialist conceptualization of economic well-being, which centres on assessments of their family's real-life economic status. In high-income countries, by contrast, respondents' Left-Right self-placements are associated with a post-materialist conceptualization of economic well-being that is based on normative judgements about inequality aversion.

Introduction

The Left-Right distinction of political preferences is a prime example of a conceptually and empirically ambiguous but nonetheless widely used – and frequently useful – tool in the social sciences.¹ Questions of Left-Right ideological identification feature in prominent data collection exercises such as the World Values Survey,² the Manifesto Project³ or the Comparative Study of Electoral Systems⁴ as well as in numerous academic publications on voting behaviour,⁵ party behaviour,⁶ coalition formation⁷ and political culture.⁸

Yet, despite being hailed as one of, if not ‘the major category in comparative political analysis in highly industrialized societies’,⁹ the Left-Right distinction of political preferences also comes with a range of conceptual and empirical challenges. These include *inter alia* the context-dependent meaning of ‘Left’ and ‘Right’ across space, time and individuals; questions of how many dimensions are needed to capture the essence of this meaning; and issues of how to collect data on ‘Left’ and ‘Right’ ideological identification most appropriately and feasibly¹⁰

We contribute to the academic debate on the social construction of ‘Left’ and ‘Right’ identities in three key regards. Firstly, by using different dimensions of economic well-being as our analytical prism, we make novel use of established Economics discussions¹¹ in Political Science research on ideological orientations. Secondly, by using Social Modernization Theory to inform our hypotheses, we add to scholarship on the interplay between socio-economic developments and ideological identities.¹² Thirdly, through the aforementioned two points, we highlight the versatility and usefulness of the economic well-being concept in public opinion research.

Our underlying research questions ask: What is the correlation between different conceptualizations of economic well-being and Left-Right self-placements? How does this correlation differ depending on macro-economic context? To answer these questions, we conceptualize economic well-being as comprising an absolute and a relative facet,¹³ and disaggregate it further into its materialist and post-materialist dimensions. The materialist dimension of economic well-being includes absolute and relative assessments of one’s own real-life economic standing. We describe these assessments as materialist, as they quantify respondents’ concrete living standards and are likely linked to their feelings of economic (in)security.¹⁴ The post-materialist dimension of economic well-being, by contrast, abstracts from one’s real-life economic status and captures absolutist and relativist value judgements relating to inequality aversion. We describe these judgements as post-materialist, because they focus on respondents’ normative attitudes towards economic (in)equality in hypothetical scenarios, and thus go beyond their own material conditions.¹⁵

Our findings are based on primary data collected from 3,449 undergraduate students of 21 disciplines at 14 public and private universities¹⁶ in three non-high-income countries (Bolivia, Brazil and Kenya; NHICs hereafter) and four high-income countries (Italy, Sweden, Switzerland and the UK; HICs hereafter). Countries were identified as NHIC or HIC following the World Bank classification at the time of the survey.¹⁷ The survey was carried out in 2007 with the aim of exploring cross-country perspectives on economic well-being, its different conceptualizations and correlates. We acknowledge that the external validity of our findings is limited, and do not seek to make inferences beyond our underlying sample.

Using multivariate analyses and controlling for a range of covariates, we find that the relationship between respondents’ Left-Right self-placements and economic well-being differs depending on the HIC or NHIC context. In NHICs, Left-Right self-placements correlate with the materialist (but not the post-materialist) dimension of economic well-being. In HICs, by contrast, they correlate with the post-materialist (but not the materialist) dimension. These findings are in line with expectations based on Social Modernization Theory that a country’s macro-level of economic development affects micro-level patterns of ideological orientations.¹⁸ They also illustrate the usefulness of

economic well-being as a conceptual tool in public opinion research, as its materialist and post-materialist dimensions help to map ideological patterns in a way that unveils heterogeneity across macro-economic contexts.

In the following sections, we will discuss key issues in social science research on Left-Right ideological orientations; outline our theoretical framework; clarify our data and method; and present our empirical findings before some concluding remarks.

‘Left’ and ‘Right’: an imperfect but useful way of capturing political preferences

Tracing their origins to the seating arrangement in the French revolutionary parliament – ‘where radical representatives sat to the left of the presiding officer’s chair, while “conservatives sat to the right”¹⁹ –, the terms ‘Left’ and ‘Right’ are frequently invoked labels of ideological identification in academic circles and beyond.²⁰ They are heuristic devices that help ‘to understand, order and store political information’,²¹ ‘facilitate political communication’²² and enable ‘citizens to make reasonable political evaluations and choices’,²³ at least in those countries where a majority of citizens is able to describe their political preferences in Left and Right terms.²⁴ They provide relevant ‘simplifying’ functions of often complex processes to the benefit of individuals, groups and the political system as a whole²⁵: For the individual, they help to make sense of ‘a complex political world’²⁶ around them, to orient themselves within this world and make political decisions.²⁷ At the group level, ‘Left’ and ‘Right’ serve to summarize political programs and, in doing so, contribute to the development of group cohesion and social trust.²⁸ For the political system as a whole, the Left-Right distinction provides shortcuts for the identification of key political actors and issues, facilitates communication between citizens and their political representatives, and thus makes political processes overall more efficient.²⁹ Consequently, ‘worldwide evidence shows the continued relevance of the L[eft] R[ight] divide for mass politics’.³⁰

The benefits of the Left-Right distinction, however, also have a more challenging flipside. As simplifying devices of political discourse, ‘Left’ and ‘Right’ are not only adaptable but also highly context-dependent.³¹ Lacking fixed meaning, the Left-Right distinction of political preferences can be associated with attitudes towards a variety of issues, such as – to name a few – redistribution, business regulation, gender equality, environmentalism or multiculturalism, each of which may differ in relevance for the definition of ‘Left’ and ‘Right’ depending on space, time and even individuals.³² Some scholars identify this as an advantage of the Left-Right distinction that indicates its ‘inclusive nature’,³³ while others raise concerns about the possible risks of conceptual stretching if researchers fail to investigate the specific meaning of ‘Left’ and ‘Right’ in the context they study.³⁴

Directly linked to this discussion are questions about how many dimensions may be needed to capture the ‘essence’ of the Left-Right distinction in various spatial and temporal settings,³⁵ and how to collect data on ‘Left’ and ‘Right’ orientations most appropriately and feasibly. The latter considerations include, for instance, issues regarding the wording of survey questions³⁶ and choice of response formats.³⁷

The aforementioned conceptual and empirical challenges are well-known³⁸ and indicate that – like other terms such as ‘class’, ‘gender’ or ‘ethnicity’ – the Left-Right distinction is a social science tool with limitations. Consequently, academics remain divided over the usefulness of the Left-Right distinction,³⁹ given its lack of consistent content.⁴⁰ As it goes beyond the scope of this paper to bridge the academic divide over the usefulness of the Left-Right distinction, suffice to say that we side with those who see its adaptability and lack of pre-defined content as a strength.⁴¹ Despite its imperfections, the Left-Right distinction is a useful way of capturing political preferences that has relevant meaning for academics,⁴² policy-makers⁴³ and a majority of mass publics.⁴⁴ Put differently, it is a social construct with relevant symbolic and instrumental functions.⁴⁵ Arguably, it is one of the best heuristic devices currently at our disposal to capture patterns of ideological orientations, ‘even if the specific definitions of Left and Right vary across [time,] individuals and nations’.⁴⁶

The Left-Right distinction, social modernization and economic well-being

The acknowledgement that ‘Left’ and ‘Right’ are highly context-dependent raises questions about which contextual factors are likely to shape their relevance and meaning. These factors may include, for instance, the age of a country’s democracy,⁴⁷ its geopolitical location,⁴⁸ the manner in which political elites instrumentalize ideological labels⁴⁹ and levels of economic development.⁵⁰

This latter argument, which emphasizes the relevance of a country’s macro-economic context in shaping the content and prevalence of different types of ideological orientations at the micro-level of its citizens, is also known as Social Modernization Theory. In a nutshell, this theory argues that macro-economic conditions (specifically: a country’s level of economic development and welfare system) not only affect individuals’ feelings of economic and physical security, but also their political norms, values and beliefs.⁵¹ According to Social Modernization Theory, higher levels of economic development at the macro-level – if and when they are combined with an expansion of the welfare state – make ‘people ... materially more secure, intellectually more autonomous, and socially more independent’⁵² and, in doing so, lead to changes in ideological orientations.⁵³

Following this argument, rising income levels and improved welfare provisions in highly industrialized societies after the end of the Second World War have facilitated the fulfilment of crucial (material) survival needs for a majority of the population in these societies.⁵⁴ This, in turn, has affected the content and patterns of political orientations amongst citizens in these societies, as rising levels of economic development (indicated e.g. in rising GDP *per capita*) and comparatively extensive welfare states arguably contributed to an erosion of the economic bases of the Left-Right distinction of political preferences. By making economic security concerns less urgent, they allowed non-economic issues to become increasingly relevant, which fundamentally altered the content of ideological identities amongst those who experienced such macro-economic security in their pre-adult years.⁵⁵

None of this is to say that economic issues such as the government’s role in managing the economy cease to play any role for patterns of ideological orientations once countries have reached a certain level of economic development – they still matter for the content of ‘Left’ and ‘Right’ also in advanced industrial societies.⁵⁶ Rather,

Social Modernization Theory describes a process of social construction in which post-materialist issues become increasingly important for the content of ideological identities, while materialist issues decrease in relevance amongst citizens that grew up at a time of rising economic prosperity and welfare provisions.⁵⁷ These post-materialist issues centre on questions of belonging, self-expression and the quality of life, including e.g. attitudes towards multiculturalism, LGBTQ+ rights or the protection of the environment.⁵⁸ They are qualitatively different from materialist concerns, which centre on questions of physical and economic security (e.g. the stability of the economy or levels of crime), as they go beyond mere material conditions or immediate survival needs.⁵⁹

Of course, these changes in the relative relevance of materialist and post-materialist issues for the social construction of ideological identities do not happen overnight, but are notable especially in the form of intergenerational differences.⁶⁰ Nor are they irreversible, as rising inequalities in the distribution of economic wealth, economic crises and associated economic insecurities can lead to shifts in the proportion of materialist and post-materialist values amongst a given population.⁶¹ The key point according to Social Modernization Theory, however, is that these are profound value shifts that affect the content of Left and Right ideology itself,⁶² and are not driven by issues of research design such as scale interpretation or measurement of political orientations. This is supported by studies that use alternative ways to capture political orientations, materialist and post-materialist values, and still find patterns in line with Social Modernization Theory's basic tenets.⁶³

Social Modernization Theory as outlined above has both a longitudinal and cross-sectional dimension. In this paper, we do not seek to test the relative relevance of materialist or post-materialist issues for ideological self-identification across time or generations. Instead, we are interested in cross-country correlates of Left-Right self-placements depending on macro-economic context. Specifically, we want to know how different levels of economic development in HICs as opposed to NHICs may affect these self-placements at a given point in time.

In a novel contribution to existing scholarship on the social construction of ideological identities, we present the first systematic analysis into the relationship between different conceptualizations of economic well-being and self-placements on a Left-Right scale. As highlighted in the Economics literature, economic well-being refers to the socially constructed nature of what it means to be economically well off.⁶⁴ According to this literature, individuals' understanding of economic well-being is not just about assessments of one's own economic status (e.g. in terms of absolute income), but also about comparisons between people's relative economic standing (e.g. income level compared to others in a given society). We use this distinction of economic well-being in absolute vs. relative terms, and disaggregate it further into its materialist and post-materialist dimensions.

On the one hand, the materialist dimension of economic well-being includes absolute and relative assessments of one's own, 'real-life' economic standing. We define this as the materialist dimension of economic well-being, as one's (absolute and relative) economic standing arguably affects one's feelings of economic (in)security.⁶⁵ The post-materialist dimension of economic well-being, on the other hand, centres on respondents' value judgements relating to normative issues of inequality aversion. We define this as the post-

materialist dimension of economic well-being, because it captures normative judgements of different types of economic inequality, as opposed to the assessment of one's real-life economic standing.⁶⁶

Economic well-being thus possesses both a materialist and post-materialist dimension, that allow us to analyse correlates of ideological identities which may relate either to feelings of economic security (the materialist dimension) or value judgements relating to normative inequality aversion (the post-materialist dimension). We assess the potential benefits of this multi-dimensionality in public opinion research by asking: What is the correlation between different conceptualizations of economic well-being and Left-Right self-placements? How does this correlation differ depending on macro-economic context?

According to the central claims of Social Modernization Theory, we would expect Left-Right self-placements to be associated with the post-materialist dimension of economic well-being in countries with a comparatively high level of economic development⁶⁷:

Hypothesis 1: Among HIC respondents, Left-Right self-placements are linked to the post-materialist dimension of economic well-being.

Conversely, we would expect Left-Right self-placements to be associated with the materialist dimension of economic well-being in countries with a comparatively lower level of economic development, due to the likely prevalence of concerns relating to material survival needs and economic security:

Hypothesis 2: Among NHIC respondents, Left-Right self-placements are linked to the materialist dimension of economic well-being.

We describe our data and method to test these hypotheses in the following section.

Data and methods

Data

To test our hypotheses, we carry out multivariate analyses using original data from a survey conducted among 3,449 undergraduate students in 2007, of which 1,490 attended university in a NHIC (Bolivia, Brazil or Kenya) and 1,959 attended university in a HIC (Italy, Sweden, Switzerland or the UK) – data and replication codes are available from the authors upon request. The survey took the form of an anonymous written questionnaire that was administered in supervised classroom sessions (either the first or last twenty minutes of a regular university lecture). Classrooms were selected on the basis of convenience, while ensuring heterogeneity in terms of discipline and year of study. Previous analyses indicate a potential correlation between respondents' discipline of study and their ideological self-identification, with Economics students being more likely to exhibit right-leaning political preferences.⁶⁸ We therefore made sure that in every country the survey was administered to undergraduate students from both an Economics background (1,004 students) and a Non-Economics one (2,445 students).

Except for Swedish students, who received the questionnaire in English, respondents were presented with the questionnaire in their own native language, after versions in French, Italian, Portuguese and Spanish had been carefully produced and checked by back translations. In order to make the survey questions as easily understandable as possible, we kept the use of technical locutions and abstract notations to a minimum, conducted pilot tests to help improve the text, and performed spot checks with students to ensure that they had understood the questions and hypothetical scenarios depicted in the questionnaire. The survey sessions were personally run by one of the authors with the exception of Kenya, where the author had carefully instructed an agent (Project Manager of a local NGO) to carry out the survey on their behalf. The response rate for the entire sample was 96% (4% of students returned blank or doodled questionnaire sheets).

Gathering data from university students has a long tradition in research on political orientations.⁶⁹ It enables researchers to reach a relatively large number of respondents in a cost-effective way thanks to the concentration of highly literate respondents in one setting,⁷⁰ and reduces the potentially confounding effect of different education levels.⁷¹ It has to be stressed, however, that the use of data from university students limits the external validity of our findings. We acknowledge this clearly, and do not seek to make inferences about the whole population of the countries under consideration.

We also recognize the temporal limitations of our research, as – unlike longitudinal databases such as Eurobarometer, Latinobarómetro or the World Values Survey – our data do not allow us to test patterns of ideological self-identification over time. This implies that our data do not allow us to assess the effects of events after the survey was conducted, such as the adoption of austerity measures,⁷² the growing strength of populist actors,⁷³ or other political elite and party dynamics.⁷⁴ According to Inglehart's socialization hypothesis, however, it is likely that, due to the long-term effects of pre-adult experiences on individuals' basic values, the core attitudes we found amongst our participants will have remained broadly similar over the past ten years.⁷⁵

Dependent and explanatory variables

Political theorists rightly emphasize the rich and multi-faceted content of different political ideologies, while empirical social scientists tend to reduce these ideologies to simple Left-Right scales.⁷⁶ In line with the latter tradition, our survey asked respondents to place themselves on a 7-point Likert scale ranging from 'extreme left' to 'extreme right', with an additional option to state 'I don't have a political view'. This was presented in the English version of the questionnaire as follows:

How would you define your political views?

- ☐ extreme left ☐ left ☐ centre-left ☐ centre ☐ centre-right ☐ right ☐ extreme right
☐ I don't have a political view

The response 'I don't have a political view' allowed participants to opt out easily in case they had no clear political preference, were unable to express their political preferences in Left and Right terms,⁷⁷ or preferred not to share their political preferences in the survey. The response 'centre' gives the survey question a clear midpoint, which allows respondents to take what is perceived to be a relatively neutral stance and helps to

improve the quality of our data.⁷⁸ We chose a 7-point response scale as it contains more refined response categories than a 3- or 5-point scale, while still allowing us to assign a written meaning to each scale descriptor for clarification purposes without losing visual clarity. As discussed in the preceding section, we did not ask respondents for their individual interpretations of ‘Left’ and ‘Right’ and thus the uni- or multi-dimensional meaning these terms may have across our sample, but rather use the Left-Right scale as shorthand for respondents’ broad political orientations.⁷⁹

Our key explanatory variables capture the materialist and post-materialist dimension of economic well-being. To capture the former, we asked respondents to assess their family’s actual economic status in absolute and relative terms, by referring first to their family income without any benchmark, and then to their family’s relative standard of living compared to other families in the respondent’s country. The two variables that we derived from these answers are labelled ‘*Income*’ and ‘*RelStandard*’ respectively. The relevant survey questions in the English questionnaire read as follows:

How would you evaluate the current income of your family?

☐ very low ☐ low ☐ sufficient ☐ high ☐ very high ☐ excellent

How would you compare the standard of living of your family with that of other families in your country?

☐ very much lower ☐ lower ☐ almost the same ☐ higher ☐ very much higher

To capture the post-materialist dimension of economic well-being, we code two further variables. The first variable is based on respondents’ answers when confronted with six hypothetical scenarios in the position of an external observer. Respondents were asked to compare the condition of two individuals, John and Paul, living in two isolated societies, A and B, which are identical in everything other than inhabitants’ income levels. The design of the six hypothetical scenarios enables us to detect different degrees of inequality aversion, specifically the extent to which economic well-being was perceived in absolutist or relativist terms. In the example below, the numbers represent income vectors that describe hypothetical income distributions in societies A and B. An absolutist (relativist) attitude to economic well-being would indicate Paul (John) as being better off, because Paul has a higher income but John enjoys a higher hierarchical position. The variable that we derive from respondents’ answers to the six hypothetical scenarios is a count indicator labelled ‘*Absolutist*’ that ranges from 0 to 6 depending on how many times respondents have adopted an absolutist stance. Full details of the six hypothetical scenarios are included in Appendix 1 and further discussed in Corazzini, Esposito and Majorano.⁸⁰

Which of John and Paul is better off?

$A = (6, 8, 9, 11, 12, \underbrace{14}_{\text{John}})$ $B = (\underbrace{16}_{\text{Paul}}, 35, 40, 55, 65, 80)$

The second variable to capture the post-materialist dimension of economic well-being is derived from respondents' answers when presented with an 'Island Dilemma' that enables us to elicit their preferences from a different angle. The Island Dilemma is phrased as follows in the English questionnaire:

D and E are two islands where the inhabitants are identical in all respects other than income. Prices are the same in the two islands. Suppose that you have to migrate to one of them. In island D your income would be 18 Fantadollars – much lower than most people's incomes in D – whilst in island E it would be 13 Fantadollars – the same as most people's incomes in E. Income levels will remain constant throughout people's lives. Where would you choose to go?

We coded a dichotomous variable labelled 'islandAbs' on the basis of respondents' answers to the Island Dilemma. This variable takes on the value 1 when respondents expressed their preference for a situation of higher income despite worse relative standing (i.e. when they chose island D) and the value 0 when respondents preferred lower income but better relative standing (i.e. when they chose island E). The *Absolutist* and *islandAbs* variables relate to a post-materialist notion of wellbeing, as they quantify respondents' value judgements around the acceptance of inequality in hypothetical situations and thus go beyond their own material conditions.

Analysis and control variables

We present results from multivariate ordered probit regressions given the ordinal nature of our dependent variable,⁸² and run a number of robustness checks through alternative estimation strategies (see below). In our regressions, we cluster standard errors at the classroom level to reduce the risk of Type I error and potential bias in our results.⁸³ We include respondents' gender, age, discipline of study, year of study, their mother's and father's professions as well as country dummies as control variables. Information on all of these variables apart from the country dummies was provided anonymously by respondents in the survey questionnaire.

The inclusion of gender as a control variable is motivated by previous research indicating that there may be relevant differences in patterns of political preferences depending on gender.⁸⁴ We control for respondents' Economics/Business degree programme as this may affect their political orientations,⁸⁵ and include parents' profession because children of business owners have been found to be more likely to locate themselves on the Right rather than the Left side of the political spectrum.⁸⁶ We add year of study as a control variable because undergraduate students' political opinions may change over the course of their degree, due to exposure to academic subjects, socialization and peer effects.⁸⁷ We include country dummies as they allow us to account for country-to-country variations that may affect respondents' ideological self-placements but that we are unable to capture – due to lack of appropriate quantitative measures – in more fine-grained variables.⁸⁸

The selection of criteria for statistical significance has recently undergone considerable discussion. The current debate revolves around two related but distinct issues. The first regards the proposal of stricter criteria for accepting a result as 'statistically significant', typically in the form of a lower *p*-value. For example, Benjamin et al.⁸⁹ question the widely

used p -value threshold of 0.05 and recommend a threshold of 0.005. The second issue relates to the fact that any clear-cut threshold for statistical significance arbitrarily dichotomizes results into ‘significant’ and ‘non-significant’, even though the strength of empirical evidence is a continuous function of the p -value.⁹⁰ Authors such as McShane and Gal or McShane et al.⁹¹ therefore call for a more holistic approach to present empirical evidence, which does not merely rely on a p -value but also accounts for effects magnitude.

We take both issues into account when presenting our findings. In [Tables 2 and 3](#), we adopt statistical significance thresholds of 0.05, 0.001 and 0.005. In [Appendix 2](#), we provide an alternative version of these tables, where we refrain from setting any thresholds but provide the exact p -values resulting from our estimations. Finally, we estimate the magnitudes of our effects by calculating and plotting predicted margins.

In order to test the stability of our results, we carry out a number of robustness checks under alternative estimation strategies (full details for these checks can be found in [Appendix 3](#)). These include i) the estimation of multilevel ordered probit models as alternative ways to deal with data clustering; ii) linear regression models based on a continuous understanding of our dependent variable; iii) binary probit models based on a binary outcome variable; iv) zero-inflated ordered probit models to analyse Left-Right self-placements whilst at the same time including students who chose the ‘I don’t have a political view’ option; v) multiple-imputation informed models to model our dependent variable and include those respondents who chose the ‘I don’t have a political view’ option in the analysis; and vi) models jointly including variables for both a materialist and a post-materialist conceptualization of economic well-being (to test our results also when both well-being types coexist in the same regression). Robustness checks iv) and v) have the additional benefit of bringing the HICs and NHICs samples to similar sizes. As the results in [Appendix 3](#) demonstrate, our findings are robust to each of these alternative estimation strategies.

Empirical results

The descriptive statistics for our variables are provided in [Table 1](#). Our sample is predominantly composed of female students (60% in HICs and 53% in NHICs), and the average age is 21.45 years (21.66 in HICs and 21.15 in NHICs). Less than a third of our respondents in the entire sample chose the ‘I don’t have a political view’ option. This includes around 15% of respondents in Italy, Sweden and Switzerland, 25% in Kenya, and around 33% in Brazil and the UK. The ‘I don’t have a political view’ figure is considerably higher for Bolivia with 71%. Given the closed-ended nature of our questions and the education level of our respondents, it is unlikely that the ‘opt out’ rate is driven by interviewer effects or cognitive issues.⁹² Instead, it may be affected by motivational reasons related to political interest and engagement.⁹³ We do not explore these potential reasons further as we lack the data to do so, but include information from those respondents who chose the ‘I don’t have a political view’ option in the fourth and fifth robustness checks in [Appendix 3](#).

A first look at our dependent variable suggests that our respondents in both HICs and NHICs locate themselves predominantly on the Left side of the scale ([Figure 1](#)). We then scrutinize their Left-Right self-placements along socio-demographic axes by means of Wilcoxon-Mann-Whitney statistical tests.⁹⁴ In line with the literature discussed above, males, Economics/Business students and children of businesswomen or businessmen are

Table 1. Descriptive statistics.

	Mean	Std. Dev	Min	Max	Observations
<i>Outcome Variables</i>					
No Political View	0.31	0.46	0	1	3,320
Political View ^a	3.62	1.57	1	7	2,285
<i>Regressors</i>					
<i>Materialist Conceptualization of Economic Well-Being</i>					
Income	3.23	0.83	0	6	3,370
RelStandard	3.18	0.77	0	5	3,364
<i>Post-Materialist Conceptualization of Economic Well-Being</i>					
Absolutist	3.00	2.25	0	6	3,429
IslandAbs	0.49	0.50	0	1	3,390
<i>Controls</i>					
Females	0.57	0.49	0	1	3,382
Economics/Business	0.29	0.45	0	1	3,449
Mother Businesswoman	0.09	0.29	0	1	3,237
Father Businessman	0.21	0.41	0	1	3,231
Age	21.45	4.23	16	79	3,353
Year of Study	1.94	1.14	1	4	2,768
HIC	0.57	0.50	0	1	3,449
Bolivia	0.18	0.38	0	1	3,449
Brazil	0.17	0.38	0	1	3,449
Italy	0.23	0.42	0	1	3,449
Kenya	0.08	0.28	0	1	3,449
Sweden	0.13	0.34	0	1	3,449
Switzerland	0.11	0.31	0	1	3,449
UK	0.10	0.30	0	1	3,449

^aThis variable refers to those respondents who have placed themselves on the Left-Right scale and did not choose the 'I don't have a political view' option.

significantly more likely to locate themselves on the Right side of the political spectrum ($p < 0.005$). Interestingly, this holds not only for the sample as a whole but also for the HIC and NHIC subsets, meaning that in both groups of countries our respondents have given answers which are in line with what the literature would predict (results are available upon request).

We present our main findings from testing Hypotheses 1 and 2 in [Tables 2 and 3](#), which contain estimates for the whole sample as well as for the HIC and NHIC subsamples. [Table 2](#) contains the analysis of our variables to capture the materialist conceptualization of economic well-being (*Income* and *RelStandard*), while [Table 3](#) contains the analysis of our variables to capture the post-materialist conceptualization of economic well-being (*Absolutist* and *IslandAbs*).

We first comment on [Table 2](#). Given the non-interval nature of *Income* and *RelStandard*, these are entered as categorical variables using the lowest category as baseline. *Income.2* and *RelStandard.2* are the second categories, *Income.3* and *RelStandard.3* are the third, and so forth. Model 1 in [Table 2](#) suggests that *Income* is a significant predictor of respondents' Left-Right self-placements, holding all other variables constant; the positive signs of the *Income* categories indicate that perceived affluence of one's family is associated with self-placements on the Right side of the scale *ceteris paribus*. However, Models 2 and 3 qualify this result by showing that this significance is entirely driven by the NHIC subsample. Looking at Models 4–6, it can be seen that this pattern is repeated in the case of *RelStandard*. It also can be noted that the results in [Table 2](#) confirm the likely relevance of gender, degree programme and parental background for respondents' ideological self-identification. We note that age is

Table 2. Materialist conceptualization of economic well-being: ordered probit for increasing right-wing orientation.

	Model 1: All countries	Model 2: NHICs	Model 3: HICs	Model 4: All countries	Model 5: NHICs	Model 6: HICs
Income.2	0.448** (0.162)	0.641*** (0.165)	−0.034 (0.384)			
Income.3	0.537*** (0.170)	0.758*** (0.249)	0.072 (0.331)			
Income.4	0.748*** (0.164)	1.005*** (0.232)	0.247 (0.316)			
Income.5	0.917*** (0.202)	1.499*** (0.347)	0.343 (0.305)			
Income.6	1.034*** (0.232)	1.369*** (0.231)	0.432 (0.363)			
RelStandard.2				0.627* (0.267)	0.709** (0.274)	0.045 (0.465)
RelStandard.3				0.767*** (0.269)	0.797** (0.290)	0.288 (0.444)
RelStandard.4				0.940*** (0.288)	0.936*** (0.333)	0.450 (0.445)
RelStandard.5				1.005*** (0.313)	1.148*** (0.350)	0.373 (0.558)
Female	−0.266*** (0.047)	−0.246* (0.102)	−0.269*** (0.040)	−0.241*** (0.048)	−0.213* (0.104)	−0.252*** (0.043)
Economics/Bus	0.290* (0.123)	0.328 (0.227)	0.320* (0.141)	0.309* (0.121)	0.378 (0.215)	0.320* (0.143)
MotherBus	0.208*** (0.071)	0.162 (0.100)	0.285** (0.103)	0.221*** (0.068)	0.188* (0.091)	0.308*** (0.103)
FatherBus	0.143* (0.072)	0.030 (0.095)	0.216* (0.085)	0.156* (0.075)	0.045 (0.105)	0.221* (0.087)
Age	−0.023* (0.010)	−0.041* (0.018)	−0.015 (0.011)	−0.022* (0.010)	−0.037* (0.018)	−0.015 (0.011)
Year of study	0.012 (0.048)	0.116 (0.066)	−0.095 (0.061)	0.002 (0.049)	0.105 (0.072)	−0.100 (0.063)
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N	1,708	641	1,067	1,712	640	1,072

Ordered probit regressions with standard errors clustered at classroom level. *, ** and *** denote statistical significance at 0.05, 0.01 and 0.005 levels, respectively.

significant and negative, but this result should not be overemphasized given the limited age range of our student sample (around 90% of respondents are between 18 and 25 years old). Our results are unaffected by including an age squared term or excluding age outliers.

To go beyond statistical significance and provide effect sizes, we compute post-estimation predicted margins of respondents' Left-Right self-placements for increasing values of *Income* and *RelStandard*.⁹⁵ As can be seen in the left panel of Figure 2, in NHICs the probability of respondents placing themselves on the Left side of the Likert scale of political orientations decreases with rising *Income* levels. It is as high as 69.7% to 73.1% for students who reported 'low' or 'very low' *Income* levels, but only 29.6% to 43.7% for those who reported 'very high' or 'excellent' *Income* levels. Conversely, the probability that respondents place themselves on the Right side of the Likert scale increases with *Income*, as it is only 11.5% to 13.6% for respondents who reported 'low' or 'very low' *Income* levels, but 48.3% to 33.8% for those who reported 'very high' or 'excellent' *Income* levels. Notably, the probabilities for respondents in HICs to place themselves on the Left or

Table 3. Post-materialist conceptualization of economic well-being: ordered probit for increasing right-wing orientation.

	Model 1: All countries	Model 2: NHICs	Model 3: HICs	Model 4: All countries -No interaction	Model 5: All countries - Interaction	Model 6: All countries	Model 7: NHICs	Model 8: HICs
Absolutist	0.030* (0.013)	-0.010 (0.014)	0.051*** (0.017)	0.023 (0.013)	-0.020 (0.016)			
HIC				0.498*** (0.141)	0.293 (0.170)			
HIC*Absolutist					0.069*** (0.023)			
IslandAbs						0.109*** (0.039)	0.016 (0.050)	0.146** (0.053)
Female	-0.261*** (0.049)	-0.248* (0.116)	-0.259*** (0.040)	-0.263*** (0.039)	-0.263*** (0.041)	-0.257*** (0.047)	-0.249* (0.111)	-0.253*** (0.039)
Economics/ Bus	0.349*** (0.124)	0.419 (0.229)	0.361** (0.137)	0.302* (0.136)	0.303* (0.135)	0.338** (0.124)	0.408 (0.229)	0.351* (0.139)
MotherBus	0.241*** (0.067)	0.196* (0.090)	0.325*** (0.106)	0.254*** (0.069)	0.252*** (0.071)	0.228*** (0.069)	0.184* (0.091)	0.311*** (0.105)
FatherBus	0.186** (0.071)	0.058 (0.094)	0.258*** (0.080)	0.210*** (0.069)	0.209*** (0.067)	0.190** (0.074)	0.053 (0.103)	0.259*** (0.083)
Age	-0.028** (0.010)	-0.050*** (0.018)	-0.017 (0.011)	-0.029** (0.011)	-0.029** (0.010)	-0.026** (0.010)	-0.050** (0.018)	-0.015 (0.011)
Year of study	0.011 (0.051)	0.127 (0.073)	-0.100 (0.060)	0.045 (0.067)	0.045 (0.067)	0.014 (0.050)	0.130 (0.071)	-0.095 (0.061)
Country dummies	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
N	1,715	642	1,073	1,715	1,715	1,698	633	1,065

Ordered probit regressions with standard errors clustered at classroom level. *, ** and *** denote statistical significance at 0.05, 0.01 and 0.005 levels, respectively.

Right side of the Likert scale of political orientations do not exhibit any clearly identifiable patterns along the *Income* scale (right panel of Figure 2), but rather oscillate between 40% to 60%.

The difference between NHICs and HICs emerges rather strikingly also in Figure 3, which shows predicted values of political preferences at different levels of *RelStandard*. In NHICs, the probability of respondents placing themselves on the Left side of the Likert scale decreases along *RelStandard* levels, from 83.1% for respondents who reported their family's relative economic standing to be 'very much lower' than others, to 42.3% for those who reported it to be 'very much higher' (left panel of Figure 3). Conversely, the probability that respondents place themselves on the Right side of the Likert scale increases from 6.2% for those who report their family's relative economic standing to be 'very much lower', to 35.2% for those who report it to be 'very much higher'. As was the case for Figure 2, no clear pattern emerges for respondents in HICs (right panel of Figure 3).

Models 1–3 and 6–8 in Table 3 follow the same organization as Table 2, whereby Models 1 and 6 use the whole sample, Models 2 and 7 are only based on data from HICs, and Models 3 and 8 on data from NHICs. In Models 4 and 5 of Table 3, we exploit the interval nature of *Absolutist* by interacting it with the dummy for HICs, in order to assess whether the role of *Absolutist* is significantly different for HIC and NHIC respondents. Holding all other variables constant, the *Absolutist* variable is significant in Model 4 but

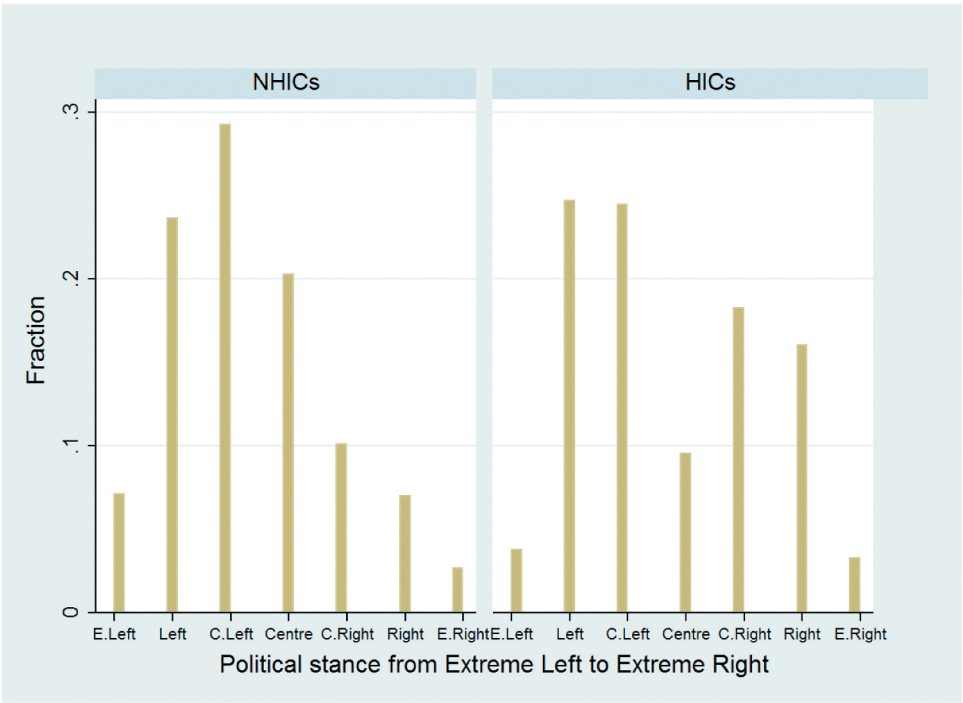


Figure 1. Distribution of political orientations along the Left-Right scale.

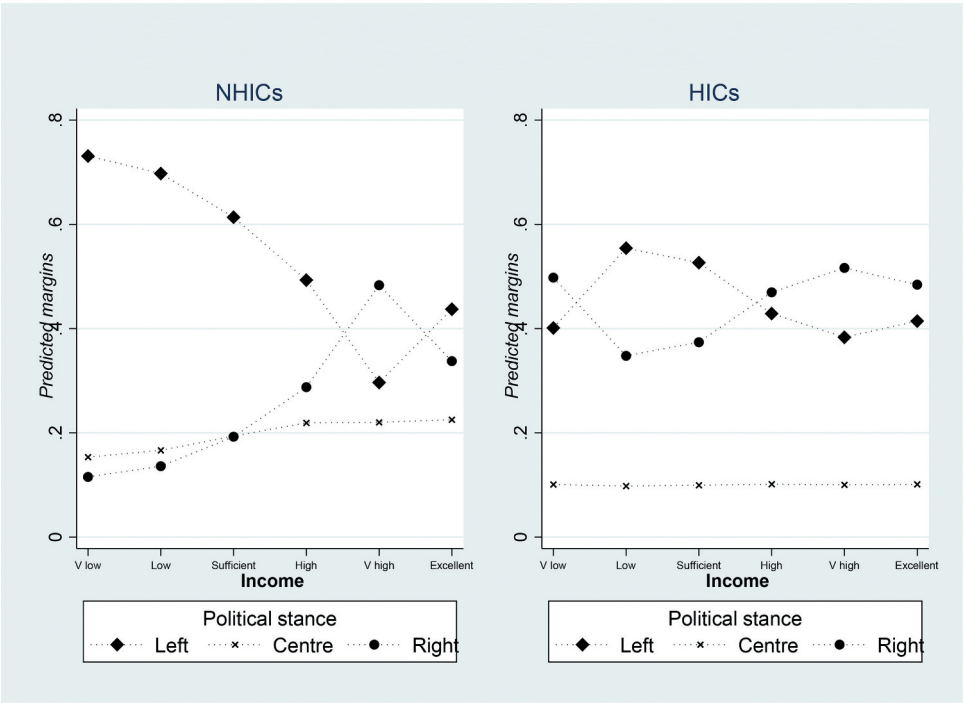


Figure 2. Predicted margins of income on Political Stance.

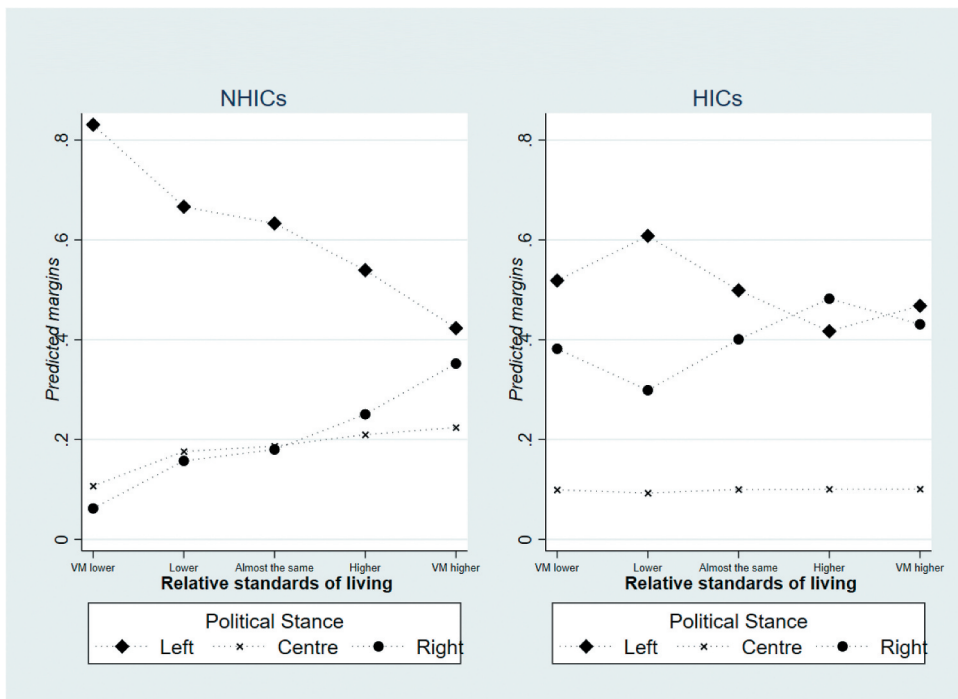


Figure 3. Predicted margins of RelStandard on political stance.

no longer in Model 5, where only the interaction with HIC is significant. This is an additional indication that *Absolutist* is a relevant predictor of respondents' Left-Right self-placements only for HICs, *ceteris paribus*.

In Figures 4 and 5, we plot post-estimation predicted margins of respondents' Left-Right self-placements at different levels of *Absolutist* and *IslandAbs*. In contrast to Figures 2 and 3, we observe no clear pattern for NHICs, as illustrated in the nearly flat lines in the left panels of Figures 4 and 5. For HICs, however, respondents' ideological self-placements vary at different values of *Absolutist* and *IslandAbs* (right panels of Figures 4 and 5). Specifically, the probability for respondents in HICs to place themselves on the Left side of the Likert scale of political orientations decreases from 53.0% to 41.1% along the *Absolutist* domain. Conversely, the probability that respondents in HICs place themselves on the Right side of the Likert scale increases along the same domain from 37.2% to 49.0%. For the 'island dilemma', respondents in HICs who have chosen the island denoting inequality aversion are 12.7% more likely to place themselves on the Left rather than Right of the political spectrum, while this difference vanishes for those opting for the other island.

Our empirical findings lend strong support to our theoretical expectations. The results presented in Tables 2 and 3 as well as Figures 2 to 5 indicate that respondents' Left-Right self-placements are linked to a materialist conceptualization of economic well-being in NHICs (but not in HICs), and to a post-materialist conceptualization of economic well-being in HICs (but not in NHICs). In addition, our graphs indicate that our results have

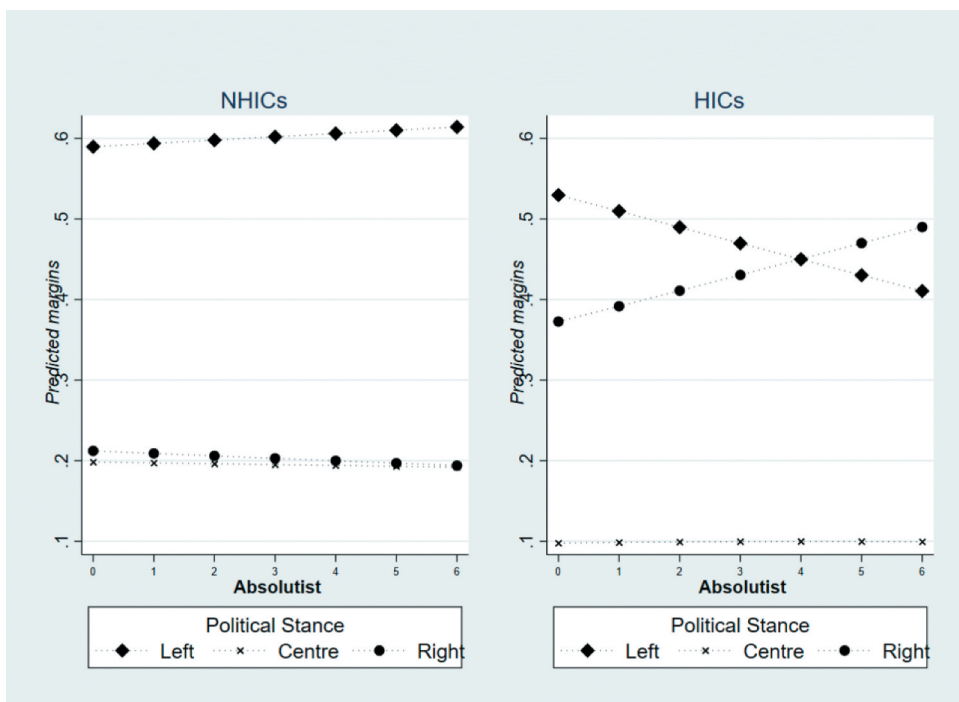


Figure 4. Predicted margins of Absolutist on political stance.

substantive meaning beyond patterns of statistical significance, because respondents' predicted probabilities of self-identifying as Left or Rights in HIC or NHIC contexts change considerably over the domain of the relevant explanatory variables.

Conclusion

Using multivariate analyses with original data from seven countries, we found robust empirical evidence – in line with expectations based on Social Modernization Theory – that the relationship between Left-Right self-placements and the materialist or post-materialist dimension of economic well-being differs depending on respondents' macro-economic context. The Left-Right self-placements of respondents in NHICs correlate with the materialist (but not the post-materialist) dimension of economic well-being, captured by absolute and relative assessments of their family's 'real-life' economic status. Conversely, respondents' Left-Right self-placements in HICs correlate with the post-materialist (but not the materialist) dimension of economic well-being, based on absolutist and relativist value judgements relating to inequality aversion.

Our contribution to the academic debate on the social construction of ideological identities is threefold. Firstly, we make novel use of economic well-being as a conceptual tool in public opinion research. This is a noteworthy endeavour, as the different meanings of economic well-being have been widely discussed in Economics,⁹⁶ but hardly in the Political Science or Sociology literature on ideological orientations.⁹⁷ Secondly, by testing hypotheses based on Social Modernization Theory, we contribute to a well-

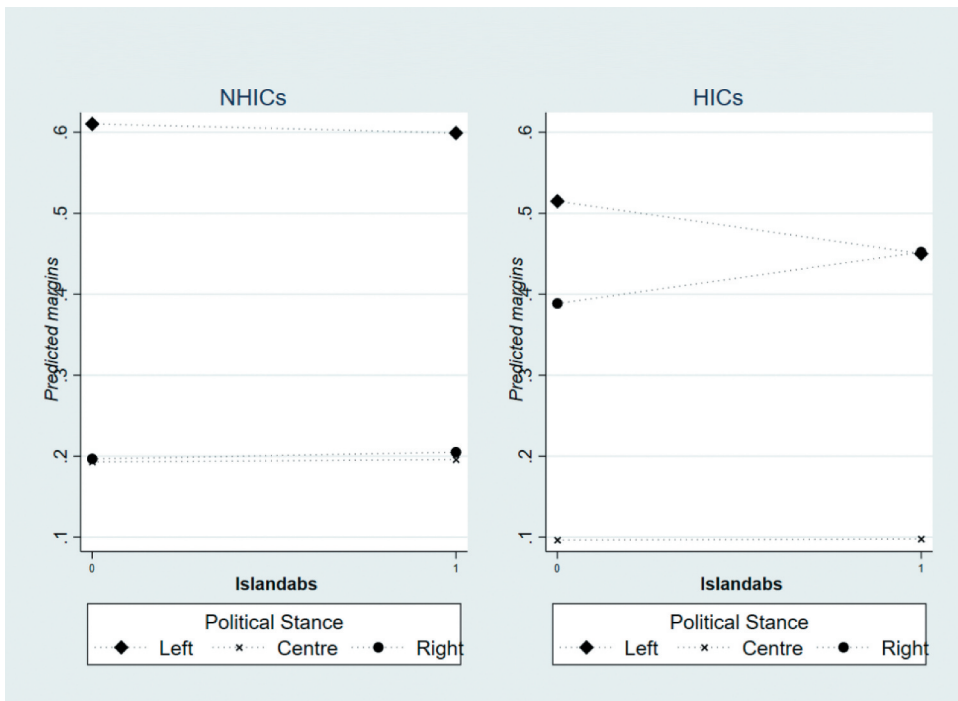


Figure 5. Predicted margins of IslandAbs on political stance.

established body of literature on the interplay between socio-economic developments and ideological identities.⁹⁸ Thirdly, we highlight the versatility of the economic well-being concept, as its multi-dimensionality allows detailed analyses of how a country's macro-level of economic development may affect micro-level patterns of Left and Right orientations. In this way, we answer previous calls by other academics to further refine and analyse different conceptualizations of materialism and post-materialism.⁹⁹

At the same time, it is important to be aware of the limitations in our research. These include the use of a non-random sample of university students, which constrains the external validity of our findings. We covered a large number of disciplines and years of study, yet our sample cannot be seen as representative of the entire student population of the countries that we included in our study. Moreover, students are a specific subset of respondents, whose views may differ from those of other population groups. It also should be noted that our choice of HIC and NHIC countries was largely based on convenience and practical considerations. Equally, it should be stressed that our data was collected in one point in time, which poses questions as to whether the observed patterns may be consistent over time and whether they may have changed since 2007. Finally, our results may be specific to the measures used. While we used standard scales to detect political views and measures of economic well-being informed by recent debates in Economics, these capture only some of nuances of the underlying constructs.

Future research thus could build on our findings by using alternative measures and response formats; time-series and birth cohort analysis to identify potential changes across time or generations; and a larger sample to include further countries and population

groups. These additional avenues for research are a worthwhile endeavour, as our analysis clearly illustrates the usefulness and versatility of the economic well-being concept in public opinion studies, and should encourage further investigation in this area.

Notes

1. A. Freire, 'Left-right ideology as a dimension of identification and of competition', *Journal of Political Ideologies*, 20 (2015), pp. 43–68; P. C. Bauer, P. Barberá, K. Ackermann and A. Venetz, 'Is the left-right scale a valid measure of ideology? Individual-level variation in associations with "left" and "right" and left-right self-placement', *Political Behaviour*, 39 (2017), pp. 553–583.
2. R. Inglehart, C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin and B. Puranen, *World Values Survey: Round Six – Country-Pooled Datafile*, 2014, available at www.worldvaluessurvey.org/WVSDocumentationWV6.jsp
3. A. Volkens, W. Krause, P. Lehmann, T. Matthieß, N. Merz, S. Regel and B. Weißels, *The Manifesto Data Collection. Manifesto Project (MRG/CMP/MARPOR)*. Version 2018b. Berlin: Wissenschaftszentrum Berlin für Sozialforschung (WZB).
4. CSES, The Comparative Study of Electoral Systems, *CSES Integrated Module Dataset (IMD) [Dataset and Documentation]*, December 4, 2018 version, available at <http://www.cses.org/datacenter/download.htm>
5. See, for instance, P. Achterberg and D. Houtman, 'Why do so many people vote "unnaturally"? A cultural explanation for voting behaviour', *European Journal of Political Research*, 45 (2006), pp. 75–92; R. J. Dalton, 'Left-right orientations, context, and voting choices', in Russel J. Dalton and Christopher J. Anderson (Eds.) *Citizens, Context, and Choice: How Context Shapes Citizens' Electoral Choices* (Oxford: Oxford University Press, 2010), pp. 103–125; Freire, *op. cit.*, Ref. 1.
6. See, for instance, K. Benoit and M. Laver, *Party Policy in Modern Democracies* (London: Routledge, 2006); K. Benoit and M. Laver, 'Estimating party policy positions: comparing expert surveys and hand-coded content analysis', *Electoral Studies*, 26 (2007), pp. 90–107; S. Hix and H.-W. Jun, 'Party Behaviour in the Parliamentary Arena: the Case of the Korean National Assembly', *Party Politics*, 15 (2009), pp. 667–694.
7. See, for instance, A. Kreppel and G. Tsebelis, 'Coalition formation in the European Parliament', *Comparative Political Studies*, 32 (1999), pp. 933–966; P. V. Warwick, 'Do policy horizons structure the formation of parliamentary governments?: The evidence from an expert survey', *American Journal of Political Science*, 49 (2005), pp. 373–387; S. N. Golder, 'Pre-electoral coalition formation in parliamentary democracies', *British Journal of Political Science*, 36 (2006), pp. 193–212.
8. See, for instance, J. Rydgren, 'Is extreme right-wing populism contagious? Explaining the emergence of a new party family', *European Journal of Political Research*, 44 (2005), pp. 413–437; S. Hutter, *Protesting Culture and Economics in Western Europe: New Cleavages in Left and Right Politics* (Minneapolis, MN: University of Minnesota Press, 2014); J. M. Dostal, 'The Pegida movement and German political culture: is right-wing populism here to stay?', *The Political Quarterly*, 86 (2015), pp. 523–531.
9. D. Jahn, 'Conceptualizing left and right in comparative politics: towards a deductive approach', *Party Politics*, 17 (2010), p. 746, emphasis added.
10. Benoit and Laver, *op. cit.*, Ref. 6; M. Kroh, 'Measuring left-right political orientation: the choice of response format', *Public Opinion Quarterly*, 71 (2007), pp. 204–220; Jahn, *op. cit.*, Ref. 9; A. Aspelund, M. Lindeman and M. Verkasalo, 'Political conservatism and left-right orientation in 28 Eastern and Western European countries', *Political Psychology*, 34 (2013), pp. 409–417; Freire, *op. cit.*, Ref. 1.
11. A. C. Pigou, *The Economics of Welfare* (London: Macmillan, 1932); R. H. Frank, 'The demand for unobservable and other nonpositional goods', *American Economic Review*, 75 (1985), pp. 101–116; F. Carlsson, O. Johansson-Stenman and P. Martinsson, 'Do you enjoy

- having more than others? Survey evidence of positional goods,' *Economica*, 74 (2007), pp. 586–598; L. Corazzini, L. Esposito and F. Majorano, 'Reign in hell or serve in heaven? A cross-country journey into the relative vs absolute perceptions of wellbeing,' *Journal of Economic Behaviour & Organization*, 81 (2012), pp. 715–730.
12. R. Inglehart, *The Silent Revolution: Changing Values and Political Styles among Western Publics* (Princeton, NJ: Princeton University Press, 1977); R. A. Cialalone and C. L. Jurkiewicz, 'The interaction of materialist and postmaterialist values in predicting dimensions of personal and social identity,' *Human Relations*, 57 (2004), pp. 1379–1405; R. Inglehart and C. Welzel, *Modernization, Cultural Change and Democracy: The Human Development Sequence* (Cambridge: Cambridge University Press, 2005); R. Inglehart and P. Norris, 'Trump and the populist authoritarian parties: the silent revolution in reverse', *Perspectives on Politics*, 15 (2017), pp. 443–454; M. Henn, B. Oldfield and J. Hart, 'Postmaterialism and young people's political participation in a time of austerity,' *The British Journal of Sociology*, 69 (2018), pp. 712–737; M. A. C. Gatto and T. J. Power, 'Postmaterialism and political elites: The value priorities of Brazilian federal legislators,' *Journal of Politics in Latin America*, 8 (2016), pp. 33–68.
 13. See, for instance, Pigou, *op. cit.*, Ref. 11; J. S. Mill, *On Social Freedom* (New York: Columbia University Press, 1941); J. S. Duesenberry, *Income, Saving and the Theory of Consumer Behaviour* (Cambridge, MA: Harvard University Press, 1949); Frank, *op. cit.*, Ref. 11; A. Robson, 'Status, the distribution of wealth, private and social attitudes to risk,' *Econometrica*, 60 (1992), pp. 837–857; E. Hopkins and T. Kornienko, 'Running to keep in the same place: Consumer choices as a game of status,' *American Economic Review*, 94 (2004), pp. 1085–1107; Corazzini, Esposito and Majorano, *op. cit.*, Ref. 11.
 14. Cf. Inglehart, *The silent revolution*, *op. cit.*, Ref. 12; R. Inglehart, *Modernization and Postmodernization: Cultural, Economic, and Political Change in 43 Societies* (Princeton, NJ: Princeton University Press, 1997); R. Inglehart and J.-R. Rabier, 'Political realignment in advanced industrial society: from class-based politics to quality-of-life politics', *Government and Opposition*, 21 (1986), pp. 456–479; R. Inglehart and C. Welzel, *Modernization, Cultural Change and Democracy: The Human Development Sequence* (Cambridge: Cambridge University Press, 2005).
 15. Cf. also Gatto and Power, *op. cit.*, Ref. 12; M. D. Promislo, R. A. Giacalone and J. R. Deckop, 'Assessing three models of materialism-postmaterialism and their relationship with well-being: A theoretical extension,' *Journal of Business Ethics*, 143 (2017), pp. 531–541; D. E. Booth, 'Postmaterial Experience Economics,' *Journal of Human Values*, 24 (2018), pp. 83–100.
 16. The universities involved are: Universidad Mayor de San Simón, and Universidad Católica Boliviana (Bolivia); Universidade Federal do Rio de Janeiro, and Fundação Getulio Vargas do Rio de Janeiro (Brazil); Bocconi University, Università dell'Insubria, LIUC, Università di Milano, and Università di Novara (Italy); University of Nairobi (Kenya); Goteborg University (Sweden); Université de Genève, and Università di Lugano (Switzerland); and University of East Anglia (UK). Students' disciplines entail: Agricultural Studies, Biology, Chemistry, Cultural Mediation, Development Studies, Economics and Business, Education, Engineering, Environmental Sciences, Journalism, Law, Law and Public Administration, Mathematics, Medicine, Pharmacy, Philosophy of Communication, Political Science, Psychology, Social Work, Social Science and Sociology.
 17. The World Bank, *World Bank Country and Lending Groups: Historical Classification by Income in XLS Format*, 2019, available at <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>.
 18. Inglehart, *The silent revolution*, *op. cit.*, Ref. 12; Inglehart, *Modernization and postmodernization*, *op. cit.*, Ref. 14; R. Inglehart, 'Globalization and postmodern values', *The Washington Quarterly*, 23 (2000), pp. 215–228; Inglehart and Rabier, *op. cit.*, Ref. 14; Inglehart and Welzel, *op. cit.*, Ref. 14.
 19. J. M. Schwartz, 'Left', in Joel Krieger (Ed.) *The Oxford Companion To Politics of the World*, [online] 2nd edition (Oxford: Oxford University Press, 2004), para. 1.

20. A. Kenny, 'The end of left and right: Andrew Kenny says that the only purpose political labels serve is to allow fools to argue furiously', *The Spectator*, 5th February (2005), pp. 18–19; Freire, *op. cit.*, Ref. 1; Bauer et al., *op. cit.*, Ref. 1.
21. O. Knutsen, 'Value orientations, political conflicts and left-right identification: a comparative study', *European Journal of Political Research*, 28 (1995), p. 63.
22. E. Zechmeister, 'What's left and who's right? A Q-method study of individual and contextual influences on the meaning of ideological labels', *Political Behaviour*, 28 (2006), p. 151.
23. Zechmeister, *ibid.*
24. See also R. J. Dalton, 'Social modernization and the end of ideology debate: patterns of ideological polarization', *Japanese Journal of Political Science*, 7 (2006), pp. 1–22.
25. Knutsen, *op. cit.*, Ref. 21; P. Corbetta, N. Cavazza and M. Roccato, 'Between ideology and social representations: four theses plus (a new) one on the relevance and the meaning of the political left and right', *European Journal of Political Research*, 48 (2009), pp. 622–641.
26. Knutsen, *op. cit.*, Ref. 21, p. 63.
27. Knutsen, *ibid.*; Zechmeister, *op. cit.*, Ref. 22; Corbetta, Cavazza and Roccato, *op. cit.*, Ref. 25.
28. Knutsen, *op. cit.*, Ref. 21; Zechmeister, *op. cit.*, Ref. 22; Corbetta, Cavazza and Roccato, *op. cit.*, Ref. 25.
29. Knutsen, *op. cit.*, Ref. 21; Zechmeister, *op. cit.*, Ref. 22; Corbetta, Cavazza and Roccato, *op. cit.*, Ref. 25.
30. A. Freire and K. Kivistik, 'Western and non-Western meanings of the left-right divide across four continents', *Journal of Political Ideologies*, 18 (2013), p. 172.
31. Freire and Kivistik, *ibid.*; Benoit and Laver, *op. cit.*, Ref. 6; Dalton, Social modernization, *op. cit.*, Ref. 24; Dalton, Left-right orientations, *op. cit.*, Ref. 5; Aspelund, Lindeman and Verkasalo, *op. cit.*, Ref. 10; R. Farneti, 'Cleavage lines in global politics: left and right, East and West, earth and heaven', *Journal of Political Ideologies*, 17 (2012), pp. 127–145; A. Malka, Y. Lelkes and C. J. Soto, 'Are cultural and economic conservatism positively correlated? A large-scale cross-national test', *British Journal of Political Science*, 49 (2019), pp. 1045–1069.
32. Aspelund, Lindeman and Verkasalo, *ibid.*; Benoit and Laver, *op. cit.*, Ref. 6; Dalton, Social modernization, *op. cit.*, Ref. 24; Dalton, Left-right orientations, *op. cit.*, Ref. 5; Farneti, *ibid.*
33. Dalton, Left-right orientations, *op. cit.*, Ref. 5, p. 107.
34. Cf., for instance, Zechmeister, *op. cit.*, Ref. 22.
35. Freire, *op. cit.*, Ref. 1.
36. Dalton, Social modernization, *op. cit.*, Ref. 24.
37. Kroh, *op. cit.*, Ref. 10.
38. Kenny, *op. cit.*, Ref. 20; Benoit and Laver, *op. cit.*, Ref. 6; Bauer et al., *op. cit.*, Ref. 1.
39. E. Scholz and C. Zuell, 'Item non-response in open-ended questions: Who does not answer on the meaning of left and right?' *Social Science Research*, 41 (2012), pp. 1415–1428.
40. D. Caughey, T. O'Grady and C. Warshaw, 'Policy ideology in European mass publics, 1981–2016', *American Political Science Review*, 113 (2019), pp. 674–693.
41. See also Scholz and Zuell, *op. cit.*, Ref. 39; F. Vegetti and D. Širinić, 'Left-right categorization and perceptions of party ideologies', *Political Behaviour*, 41 (2019), pp. 257–280.
42. Bauer et al., *op. cit.*, Ref. 1.
43. Benoit and Laver, *op. cit.*, Ref. 6.
44. Dalton, Social modernization, *op. cit.*, Ref. 24.
45. G. V. Caprara, 'Distinctiveness, functions and psycho-historical foundations of left and right ideology', *Current Opinion in Behavioural Sciences*, 34 (2020), pp. 155–159.
46. Dalton, *op. cit.*, Ref. 5, p. 106.
47. Benoit and Laver, *op. cit.*, Ref. 6.
48. Hix and Jun, *op. cit.*, Ref. 6.
49. Zechmeister, *op. cit.*, Ref. 22.
50. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14.

51. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14; Inglehart and Rabier, *op. cit.*, Ref. 14; Inglehart and Norris, *op. cit.*, Ref. 12.
52. Inglehart and Welzel, *op. cit.*, Ref. 14, p. 24.
53. Inglehart and Welzel, *ibid.*; Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14; Inglehart, Globalization, *op. cit.*, Ref. 18; Inglehart and Rabier, *op. cit.*, Ref. 14.
54. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14; Inglehart and Welzel, *op. cit.*, Ref. 14; Dalton, Social modernization, *op. cit.*, Ref. 24.
55. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14; see also Farneti, *op. cit.*, Ref. 31; R. Inglehart, 'Aggregate stability and individual-level flux in mass belief systems: The level of analysis paradox,' *American Political Science Review*, 79 (1985), pp. 97–116; R. Inglehart and P. R. Abramson, 'Economic security and value change,' *The American Political Science Review*, 88 (1994), pp. 336–354.
56. For instance, Benoit and Laver, *op. cit.*, Ref. 6; Dalton, Social modernization, *op. cit.*, Ref. 24.
57. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart and Welzel, *op. cit.*, Ref. 14; Dalton, Social modernization, *op. cit.*, Ref. 24.
58. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14; Inglehart and Rabier, *op. cit.*, Ref. 14.
59. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14; Inglehart and Rabier, *op. cit.*, Ref. 14; Inglehart and Welzel, *op. cit.*, Ref. 14.
60. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14; Inglehart and Rabier, *op. cit.*, Ref. 14; Inglehart, Globalization, *op. cit.*, Ref. 18.
61. Inglehart and Norris, *op. cit.*, Ref. 12.
62. Dalton, Social modernization, *op. cit.*, Ref. 24, p. 4.
63. See, for instance, R. A. Giacalone and C. L. Jurkiewicz, 'The interaction of materialist and postmaterialist values in predicting dimensions of personal and social identity,' *Human Relations*, 57 (2004), pp. 1379–1405; Gatto and Power, *op. cit.*, Ref. 12; Booth, *op. cit.*, Ref. 15; cf. also Promislo, Giacalone and Deckop, *op. cit.*, Ref. 15.
64. See, for instance, Pigou, *op. cit.*, Ref. 11; Mill, *op. cit.*, Ref. 13; Duesenberry, *op. cit.*, Ref. 13; Frank, *op. cit.*, Ref. 11; Robson, *op. cit.*, Ref. 13; Hopkins and Kornienko, *op. cit.*, Ref. 13; Corazzini, Esposito and Majorano, *op. cit.*, Ref. 11.
65. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Inglehart, Modernization and postmodernization, *op. cit.*, Ref. 14; Inglehart and Rabier, *op. cit.*, Ref. 14; Inglehart and Welzel, *op. cit.*, Ref. 14; Dalton, Social modernization, *op. cit.*, Ref. 24.
66. Cf. also Gatto and Power, *op. cit.*, Ref. 12; Promislo, Giacalone and Deckop, *op. cit.*, Ref. 15; Booth, *op. cit.*, Ref. 15.
67. As our previous arguments make clear, we are aware that Social Modernization Theory is not just about levels of economic development as measured in GNI *per capita*, but also about the size of the welfare state. Due to the lack of reliable data on the size of the welfare state in the countries included in our analysis at the time of the survey, we focus on their distinction as HIC or NHIC based on GNI *per capita* only, see also The World Bank, *op. cit.*, Ref. 13.
68. J. Haucap and T. Just, 'Not guilty? Another look at the nature and nurture of economics students', *European Journal of Law and Economics*, 29 (2010), pp. 239–254; J. C. Lopes, J. C. Graça and R. G. Correia, 'Effects of economic education on social and political values, beliefs and attitudes: results from a survey in Portugal', *Procedia Economics and Finance*, 30 (2015), pp. 468–475.

69. See, for instance, D. H. Willick and R. K. Ashley, 'Survey question order and the political party preferences of college students and their parents', *Public Opinion Quarterly*, 35 (1971), pp. 189–199; J. D. Smyth, D. A. Dillman, L. M. Christian and M. McBride, 'Open-ended questions in web surveys: can increasing the size of answer boxes and providing extra verbal instructions improve response quality?', *Public Opinion Quarterly*, 73 (2009), pp. 325–337.
70. Y. Amiel and F. A. Cowell, 'Measurement of income inequality: Experimental test by questionnaire', *Journal of Public Economics*, 47 (1992), pp. 3–26.
71. See also Bauer et al., *op. cit.*, Ref. 1; P. J. Henry and J. L. Napier 2017, 'Education is related to greater ideological prejudice', *Public Opinion Quarterly*, 81 (2017), pp. 930–942; D. L. Weakliem, 'The effects of education on political opinions: An international study', *International Journal of Public Opinion Research*, 14 (2002), pp. 141–157.
72. Henn, Oldfield and Hart, *op. cit.*, Ref. 12.
73. Caprara, *op. cit.*, Ref. 45.
74. Gatto and Power, *op. cit.*, Ref. 12.
75. Inglehart, Aggregate stability, *op. cit.*, Ref. 55; Inglehart and Abramson, *op. cit.*, Ref. 55; see also Booth, *op. cit.*, Ref. 15; Henn, Oldfield and Hart, *op. cit.*, Ref. 12.
76. T. Buckle, 'Surveying ideology in mass populations: a new conceptual method', *Journal of Political Ideologies*, 18 (2013), pp. 219–242.
77. Cf. Dalton, Social modernization, *op. cit.*, Ref. 24.
78. Kroh, *op. cit.*, Ref. 10.
79. See also Dalton, Social modernization, *op. cit.*, Ref. 24; Dalton, Left-right orientations, *op. cit.*, Ref. 5.
80. L. Corazzini, L. Esposito and F. Majorano, 'Exploring the absolutist vs relativist perception of poverty using a cross-country questionnaire survey', *Journal of Economic Psychology*, 32 (2011), pp. 273–283; Corazzini, Esposito and Majorano, *op. cit.*, Ref. 11.
81. See also Y. Amiel, F. A. Cowell and W. Gaertner, 'To be or not to be involved: a questionnaire-experimental view on Harsanyi's utilitarian ethics', *Social Choice and Welfare*, 32 (2009), pp. 299–316.
82. C. Winship and R. D. Mare, 'Regression models with ordinal variables', *American Sociological Review*, 49 (1984), pp. 512–525; M. J. Peel, M. M. H. Goode and L. A. Moutinho, 'Estimating consumer satisfaction: OLS versus ordered probability models', *International Journal of Commerce and Management*, 8 (1998), pp. 75–93; T. M. Liddell and J. K. Kruschke, 'Analyzing ordinal data with metric models: what could possibly go wrong?', *Journal of Experimental Social Psychology*, 79 (2018), pp. 328–348.
83. B. R. Moulton, 'Random group effects and the precision of regression estimates', *Journal of Econometrics*, 32 (1986), pp. 385–397; B. R. Moulton, 'An illustration of a pitfall in estimating the effects of aggregate variables on micro units', *The Review of Economics and Statistics*, 72 (1990), pp. 334–338.
84. L. Edlund and R. Pande, 'Why have women become left-wing? The political gender gap and the decline in marriage', *The Quarterly Journal of Economics*, 117 (2002), pp. 917–961; S. Abendschön and S. Steinmetz, 'The gender gap in voting revisited: women's party preferences in a European context', *Social Politics: International Studies in Gender, State & Society*, 21 (2014), pp. 315–344; J. Morgan, 'Gender and the Latin American voter', in R. E. Carlin, M. M. Singer and E. J. Zechmeister (Eds.) *The Latin American Voter: Pursuing Representation and Accountability in Challenging Contexts* (Ann Arbor, MI: University of Michigan Press, 2015), pp. 143–167.
85. Haucap and Just, *op. cit.*, Ref. 68; Lopes, Graça and Correia, *op. cit.*, Ref. 68.
86. O. Johansson-Stenman, F. Carlsson and D. Daruvala, 'Measuring future grandparents' preferences for equality and relative standing', *The Economic Journal*, 112 (2002), pp. 362–383; F. Carlsson, D. Daruvala and O. Johansson-Stenman, 'Are people inequality-averse, or just risk-averse?', *Economica*, 72 (2005), pp. 375–396.

87. E. L. Dey, 'Undergraduate political attitudes: An examination of peer, faculty, and social influences', *Research in Higher Education*, 37 (1996), pp. 535–554; M. Elchardus and B. Spruyt, 'The culture of academic disciplines and the socio-political attitudes of students: A test of selection and socialization effects', *Social Science Quarterly*, 90 (2009), pp. 446–460; M. Fischer, B. Kauder, N. Potrafke and H. W. Ursprung, 'Support for free-market policies and reforms: Does the field of study influence students' political attitudes?', *European Journal of Political Economy*, 48 (2017), pp. 180–197; I. L. Lottes and P. J. Kuriloff, 'The impact of college experience on political and social attitudes', *Sex Roles*, 31 (1991), pp. 31–54.
88. T. S. Clark and D. A. Linzer, 'Should I use fixed or random effects?', *Political Science Research and Methods*, 3 (2015), pp. 399–408.
89. D. J. Benjamin, J. O. Berger, M. Johannesson et al., 'Redefine statistical significance', *Nature Human Behaviour*, 2 (2018), pp. 6–10.
90. B. B. McShane, D. Gal, A. Gelman, C. Robert and J. L. Tackett, 'Abandon statistical significance', *The American Statistician*, 73 (2019), pp. 235–245; B. B. McShane and D. Gal, 'Statistical significance and the dichotomization of evidence', *Journal of the American Statistical Association*, 112 (2017), pp. 885–895.
91. McShane and Gal, *ibid.*; McShane et al., *ibid.*
92. E. Scholz and C. Zuell, 'Item non-response in open-ended questions: Who does not answer on the meaning of left and right?' *Social Science Research*, 41 (2012), pp. 1415–1428.
93. Scholz and Zuell, *ibid.*
94. This is a non-parametric test used for ordinal or continuous variables instead of a *t*-test when the variable of interest is not normally distributed.
95. In order to make the graph more intelligible, we have collapsed the 'extreme Left', 'Left' and 'centre Left' categories into 'Left', and likewise the 'extreme Right', 'Right' and 'centre Right' categories into 'Right' – leaving 'centre' as the central category.
96. Pigou, *op. cit.*, Ref. 11; Frank, *op. cit.*, Ref. 11; Carlsson, Johansson-Stenman and Martinsson, *op. cit.*, Ref. 11; Corazzini, Esposito and Majorano, *op. cit.*, Ref. 11.
97. Booth, *op. cit.*, Ref. 15.
98. Inglehart, The silent revolution, *op. cit.*, Ref. 12; Giacalone and Jurkiewicz, *op. cit.*, Ref. 63; Inglehart and Welzel, *op. cit.*, Ref. 14; Inglehart and Norris, *op. cit.*, Ref. 12; Henn, Oldfield and Hart, *op. cit.*, Ref. 12; Gatto and Power, *op. cit.*, Ref. 12.
99. Promislo, Giacalone and Deckop, *op. cit.*, Ref. 15.

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