

# Economic Hardship and Policy Preferences: The Mediating Role of Elite Discourse

## Appendix: Supplementary Information

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# 1 Cross-Sectional Analysis

## 1.1 Measurement of Economic and Social Policy Positions

The Comparative Manifesto Project (Volkens et al. 2013) codes manifesto sentences based on the topic area and the policy orientation of the manifesto claims. We used the following variables to measure the share of sentences that mention **right-wing** economic and social policy positions:

- per401 (Free Market Economy)
- per402 (Incentives)
- per414 (Economic Orthodoxy)
- per702 (Labour Groups: Negative)
- per407 (Protectionism: Negative)

For **left-wing positions** we relied on the following items:

- per403 (Market Regulation)
- per404 (Economic Planning)
- per406 (Protectionism: Positive)
- per409 (Keynesian Demand Management)
- per412 (Controlled Economy)
- per413 (Nationalisation)
- per415 (Marxist Analysis: Positive)
- per701 (Labour Groups: Positive)
- per503 (Social Justice)

**Table A.1:** Categories not Used to Compute Left-wing and Right-wing Economic Policy Indices

Issue category	Reason for exclusion
Welfare State Expansion (per504)	Valence issue, does not discriminate between Left and Right
Welfare State Limitation (per505)	Valence issue, does not discriminate between Left and Right
Corporatism (per405)	Not included, meaning specific to continental Europe
Economic goals (per408)	Residual category, meaning ambiguous
Technology and Infrastructure (per411)	Valence issue, does not discriminate between Left and Right
Marxist Analysis (per415)	Never mentioned
Anti-Growth Economy : positive (per416)	Never mentioned
Education Expansion (per506)	Valence issue, does not discriminate between Left and Right
Education Limitation (per507)	Never mentioned

Table A.1 further lists the categories that were not used and the reason why.

The party positions ( $\theta^{(L)}$ ) were calculated using the log-odds ratio of normalized sentences, an approach proposed by Lowe et al. (2011):

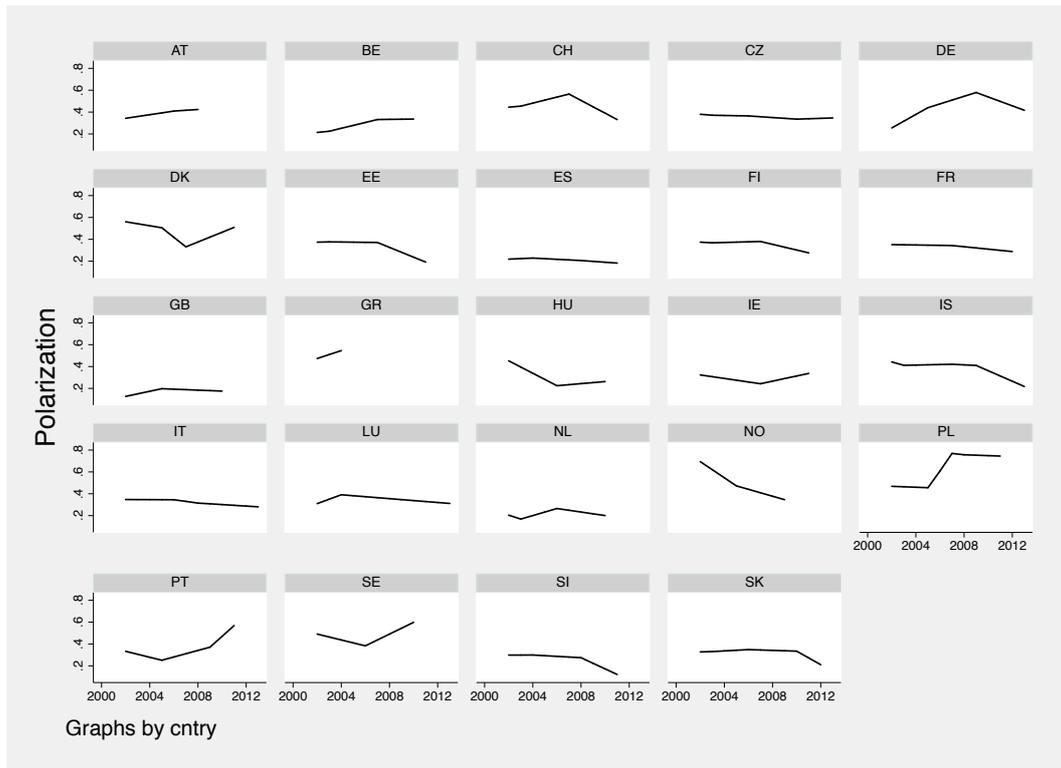
$$\theta^{(L)} = \log\left(\sum_1^3 R + 0.5\right) - \log\left(\sum_1^8 L + 0.5\right)$$

Positive values indicate a pro-market anti-redistribution position, while negative values indicated a left-wing economic position. Lowe et al. (2011) are critical of the more common additive index and have proposed the above index to replace it. The rationale is summarized by the authors as follows: “By this reasoning, the marginal effect of one more sentence is decreasing in the amount that has already been said on the topic (...) changes must be perceivable against the background of existing policy emphasis” (p130). In the paper, we are interested in how voters react to changes in the discursive context. Because a change is perceived relative to the previous status quo, this modified index better fits our purpose.

## 1.2 Economic Polarization Across time and space

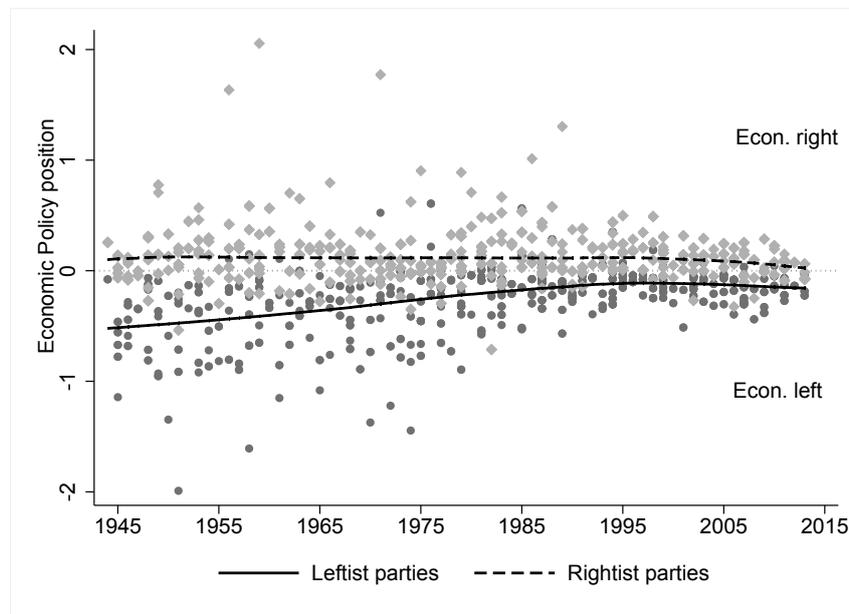
As documented in Figure A.1, there are only few cases of increased polarization over the 2002-2012 period (Germany and Poland). Figure A.2 examines country-year polarization scores for all Western European countries, starting after WWII. Over time, the general trend is one of de-polarization from the left: left-wing European parties have moved to the center on issues relating to traditional questions of redistribution and state-intervention in the economy. While left-wing parties have clearly changed their position on economic policy, by becoming more moderate, there is not much movement among right-wing parties. Overall, the discursive context is not favorable to an aggregate increase in support for redistribution, even among low-income individuals. However, within this general trend, some countries show stronger de-polarization than others (e.g. the UK, Netherlands, Portugal, Finland, Estonia, just to name a few), while other countries experience some amount of re-polarization (e.g. Germany, or Poland)

**Figure A.1:** Weighted Mean Economic Polarization Over Time by Country



Source: CMP. Using Lowe et al. (2011) formula. Weights applied at the parties' vote shares.

**Figure A.2:** Weighted Mean Economic Policy Positions of Left-Wing and Right-wing Parties over Time



Source: CMP. Only Western European countries. Using Loewe et al. 2011 formula. Each dot represents the mean positions of all leftist (circles) and all rightist (diamonds) political parties in each election. The lines represent lowess functions. Parties were classified as left and right based on the typology provided by Volkens et al. (2013).

### 1.3 Detailed Results of Cross-Lagged Models

Table A.2 reports the logit coefficients of a cross-classified model, estimated for the three different proxies of material hardship: unemployment, subjective income satisfaction and actual income. For each, we estimate four models. The first – empty – model reports the results of the model including only the individual-level covariates. The second – simple – model includes polarization as a main effect. The third – interaction – model tests our main argument about the interplay between individuals’ hardship and elites’ discursive context. The fourth mode, which adds country-level controls is presented in the manuscript in Table 1.

**Table A.2:** Cross-classified, Logistic model: M1-M3

	SUBJ INCOME STRUGGLE			ACTUAL INCOME		
	<i>M1.1</i> <i>Empty</i>	<i>M2.1</i> <i>Simple</i>	<i>M3.1</i> <i>Interact.</i>	<i>M1.2</i> <i>Empty</i>	<i>M2.2</i> <i>Simple</i>	<i>M3.2</i> <i>Interact.</i>
Age	0.005*** (0.000)	0.005*** (0.000)	0.005*** (0.000)	0.004*** (0.000)	0.004*** (0.000)	0.004*** (0.000)
Years of educ.	-0.047*** (0.001)	-0.047*** (0.001)	-0.047*** (0.001)	-0.044*** (0.002)	-0.045*** (0.002)	-0.044*** (0.002)
Female	0.218*** (0.010)	0.218*** (0.010)	0.219*** (0.010)	0.238*** (0.012)	0.238*** (0.012)	0.242*** (0.012)
Union memb.	0.337*** (0.014)	0.337*** (0.014)	0.337*** (0.014)	0.354*** (0.016)	0.355*** (0.016)	0.34*** (0.016)
<b>Indiv. Material interest</b>						
Subj Income struggle	0.498*** (0.014)	0.499*** (0.014)	0.331*** (0.044)			
Income (ref: bottom-20%)						
Income: Middle				-0.205*** (0.016)	-0.207*** (0.016)	-0.226*** (0.045)
Income: Top 20%				-0.776*** (0.021)	-0.780*** (0.021)	-0.544*** (0.060)
<b>Context</b>						
Polarization		0.941*** (0.088)	0.867*** (0.090)		1.024*** (0.096)	1.109*** (0.136)
<b>Interaction: Polarization x</b>						
Subj. Income struggle			0.477*** (0.119)			
Income (ref: bottom-20%)						
Income: middle						0.047 (0.119)
Income: Top 20%						-0.669*** (0.157)
Intercept	0.997***	0.661***	0.689***	1.903***	1.540***	1.007***
<b>Variance components</b>						
Year	0.186***	0.185***	0.186***	0.195***	0.198***	0.191***
Country	0.474***	0.476***	0.473***	0.504***	0.509***	0.51***
N of obs	183,029	183,029	183,029	146,743	146,743	146,743
LogLik	-107,209	-107,151	-107,143	-85,074	-85,017	-84,894

Significance levels: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ . Data: European Social Survey, 2002-2012; Comparative Manifesto Project.

Note: The table reports the logit coefficients and standard errors in parentheses estimated from a cross-classified model predicting above country-median support for the statement that government should reduce the differences in income levels.

### 1.4 Additional Results Controlling for Tax Progressivity

Table A.3 further reports the results of the main models presented in Table 1 of the manuscript, but further controlling for tax progressivity (Beramendi and Rehm 2011). By including this control variable, the analysis excludes Greece, Hungary, Portugal and Spain for which data on tax progressivity is not available. This smaller sample, as well as the inclusion of tax progressivity somewhat weakens our results, especially for the subjective income measure. However,

the baseline results remain unchanged: the more polarized the party system is on economic issues, the more subjective and objective measures of hardship are associated with higher support for redistribution.

**Table A.3:** Cross-classified, Logistic model: Controlling for Progressivity

	ACTUAL INCOME Model 4.1		SUBJ INCOME STRUGGLE Model 4.2	
	Coef.	s.e.	Coef.	s.e.
<b>Economic hardship:</b>				
Income: (ref: bottom-20%)				
Middle	-0.447***	(0.059)		
Top(20%)	-0.794***	(0.073)		
Income difficult			0.551***	(0.057)
<b>Polarization</b>	0.313	(0.178)	0.473***	(0.121)
<b>Interaction: Polarization x</b>				
Income: (ref: bottom(20%))				
Middle	0.315*	(0.149)		
Top(20%)	-0.376*	(0.186)		
Income difficult			0.125	(0.146)
<b>Macro-level controls:</b>				
Tax progressivity	0.587	(1.109)	0.461	(0.955)
Gov. Expenditure	-0.009*	(0.004)	-0.012***	(0.004)
GDP per capita	0.000	(0.000)	0.000	(0.000)
Inflation	0.014	(0.010)	-0.004	(0.008)
Unemployment	0.005	(0.005)	0.009	(0.004)
Gini	0.022**	(0.008)	0.036***	(0.008)
<b>Individual-level controls:</b>				
Age	0.009***	(0.001)	0.008***	(0.000)
Education (in years)	-0.054***	(0.002)	-0.061***	(0.002)
Female	0.310***	(0.014)	0.288***	(0.013)
Union memb.	0.336***	(0.018)	0.341***	(0.017)
Intercept	0.591	(0.697)	-0.091	(0.598)
Variance components:				
Year (N=11)	0.175***	(0.044)	0.190***	(0.044)
Countries (N=18)	0.372***	(0.070)	0.320***	(0.057)
N of obs.	95,887		115,942	
LogLik	-57,742		-71,286	

Significance levels: \*  $p < .05$ , \*\*  $p < .01$  \*\*\*  $p < .001$ . Sources: ESS, 2002-2012, CMP, IMF, WDB.

Note: The table reports the logit coefficients and standard errors in parentheses estimated from a cross-classified model predicting support for the statement that government should reduce the differences in income levels. Polarization is measured using the formula of Lowe et al. (2011). Working-age population only.

## 2 Germany: A Case of Increased Polarization on Economic Issues

In this section, we extensively document using both qualitative and quantitative evidence, the change in elite-behavior and its effect on the discursive context in Germany.

The German Social Democratic Party (SPD)'s attempt to fashion a New Middle (*Neue Mitte*), mirroring the British Labour Party's "Third Way," generated a backlash from the left-wing of the party, contributing to the re-polarization of redistributive issues. Indeed, in contrast to Great Britain, the German proportional electoral system enabled the emergence of a pro-redistribution splinter party with a heavy emphasis on government intervention and Keynesian counter-cyclical spending. Disgruntled voters threatened by the policy changes advocated by the SPD have found a discursive context more conducive to translating their economic interest into demand for higher levels of redistribution.

We use manifesto data to document the changes in elite-level competition starting with the 2005 election. We then rely on newspaper data collected by Kriesi et al. (2012) to examine the effect of this elite-level change in electoral competition on the discursive context. Kriesi et al. (2012*b*) conducted a textual analysis of mainstream newspapers in the two months preceding major elections. Using this data, we document changes in the discursive context comparing the two-months period preceding the 1994, 1998, 2002 and 2005 elections. To examine changes in the discursive context following the 2005 election, we rely on three years worth of newspaper data (2004, 2005 and 2006), collected in a separate dataset by Kriesi and his team Kriesi et al. (2012*a*). This additional dataset further documents the politicization of economic and redistributive issues following the 2005 election and in reaction to *Die Linke's* electoral success.

### 2.1 Changes in Electoral Dynamics in Germany

Figure A.3 plots the share of parties manifesto sentences that mention left-wing and right-wing economic and social policy positions (see sections 1.1 for detail on the manifesto data). The measure takes into account the electoral weights of each party using each party's share of seats in the main legislative body. *Die linke's* contribution to these indices is thus limited to its final share of seats in the Federal Assembly. For comparison, we have also plotted the overall share of sentences that allude to moral and cultural issues. Table A.4 gives an overview of the categories used to compute this latter index.

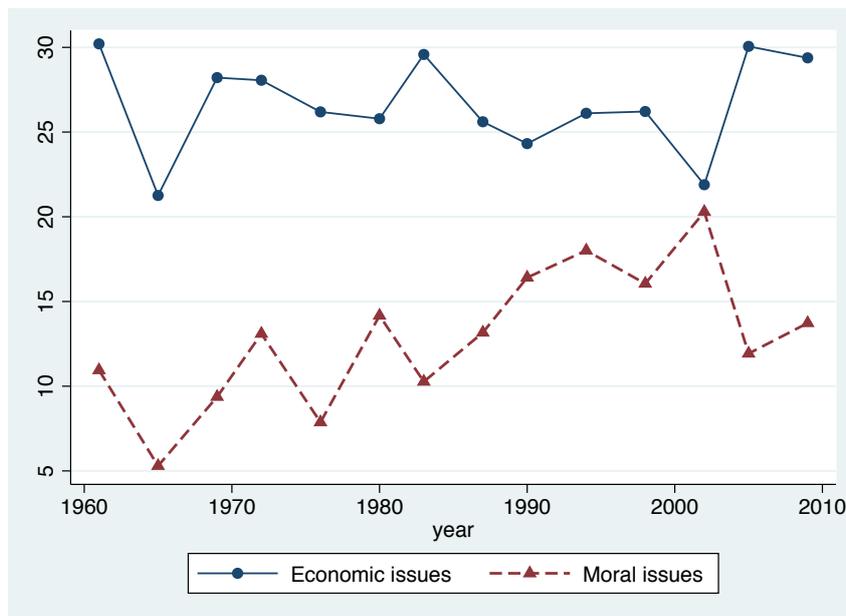
Unlike in the British case (see Appendix 3), there is no evidence of a decline in the salience of economic issues. To the contrary, it has increased in recent elections. While the share of sentences devoted to cultural and moral issues has also increased, it did not come at the expense of economic/social issues.

Figure A.4 plots a left-right index for each party with representation in the Federal Assembly. To compute this index, we take the share of sentences dedicated to right-wing economic and social policies and subtract the share of sentences dedicated to left-wing economic and social policies. The higher the value the more right-wing this party's manifesto is. With the appearance of *Die Linke* on the left and the shift to the right of the CSU/CDU and the Liberals, the supply side of German politics now appears to cover a very large swath of the economic policy spectrum, especially when compared to decades preceding the unification of Germany.

**Table A.4:** Categories Used to Compute Security/Cultural/Moral Salience Index

Military: pos (per104)	Military: neg (per105)
Internationalism: pos (per107)	Internationalism: neg (per109)
National Way of Life: pos (per601)	National Way of Life: neg (per602)
Traditional Morality : pos (per603)	Traditional Morality: neg (per604)
Law and Order (per605)	Multiculturalism: pos (per607)
Multiculturalism: neg (per608)	

**Figure A.3:** Over Time Changes in the Share of Sentences Addressing Right-wing vs Left-wing Economic Policies - Germany -



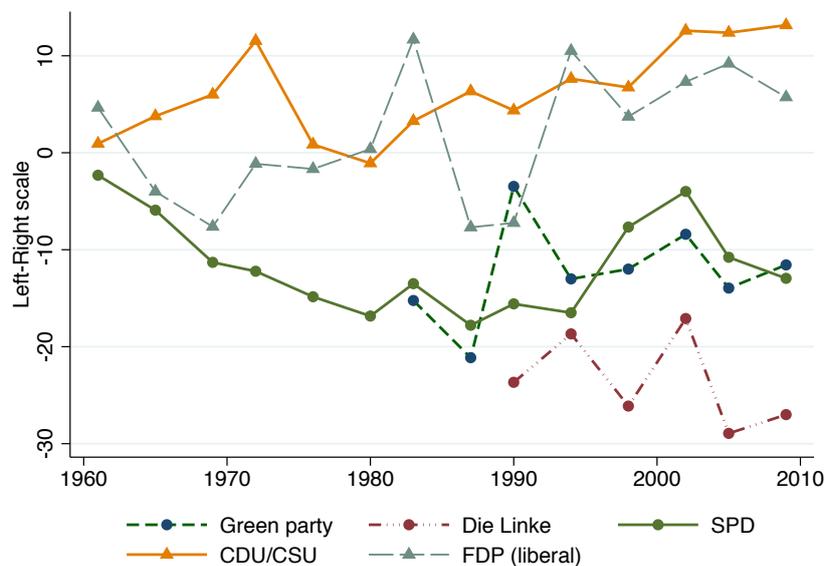
Source: The Manifesto Data Collection, (Volkens et al. 2013).

The manifesto data provides evidence that the SPD’s shift to the center has further polarized the supply side of redistributive politics in Germany. We now switch to newspaper data to better understand how the political discursive context is impacted by these changes in these elite-level dynamics.

## 2.2 Measuring Changes in the German Discursive Context Using Newspaper Data

The data collection project by Kriesi et al. (2012b) allows us to use newspaper data to better capture the change in the discursive context (see chapter 2 in Kriesi et al. (2012) ). This project is explicitly aimed at approximating how political competition among candidates affects the types of political claims and statements voters get exposed to. It does so by using a textual analysis of mainstream newspapers in the **two months preceding major elections**. Researchers coded headlines and the lead of the article. Researcher have used 12 “meta-categories” to capture the thematic conflicts articulated in the political arena during elections. Each category denotes a particular direction, either in “support of” or “opposition to.” The categories used are reproduced in Table A.5.

**Figure A.4:** Over Time Changes in the Share of Sentences Addressing Right-wing vs Left-wing Economic Policies - Germany -



Source: The Manifesto Data Collection, (Volkens et al. 2013).

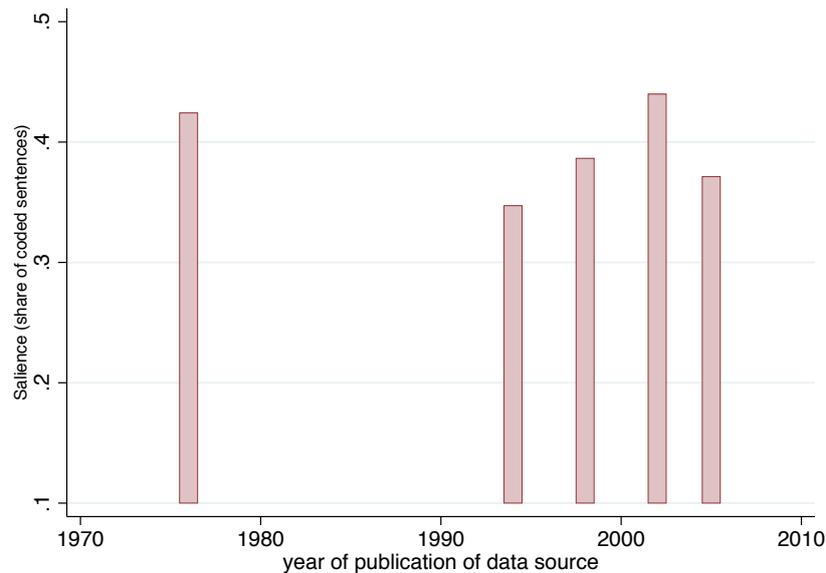
Each observation in the dataset is a sentence coded to measure what the issue mentioned in the sentence is (e.g. redistribution) and the “direction” of the statement, i.e. whether it can be understood as left or right-wing. Among the issues coded, three stand out for our endeavor. One is the issue area called “economic liberalism” that covers topics related to market regulation, economic protectionism, de-regulation, competition and privatization. The second issue is called “welfare” and covers welfare state expansion, positive mentions of its redistributive character and what the authors of the dataset have called “calls for employment and health-care programs”. A third captures support for austerity policies (“budget”). We have re-coded the direction variable such that 1 captures a more right-wing position and  $-1$  a more left-wing position on these three issue areas. The higher the mean of this direction variable in a given year, the higher the share of conservative statements.

**Table A.5:** Issue Areas Used in the Newspaper Dataset by Kriesi, Grande, Donezald, Helbling, Hoeglinger, Hutter and Wueest (2012b)

Welfare	Support for expansion of the welfare state; objection to welfare state retrenchment , support for tax reform with a redistributive character, calls for employment and more generous health-care programs
Economic liberalism	Opposition to market regulation, opposition to economic protectionism, support for deregulation, more competition and privatization
Budget	Support for rigid budgetary policy, reduction of the state deficit, cuts in expenditures, reduction of taxes without direct effect on redistribution
Other major issues covered	Anti-immigration, Europe, Cultural liberalism, Culture, Army , Security, Environment, Institutional reform, Infrastructure

Figure A.5 plots the share of all coded article sentences that allude to one of the three economic and social policy categories, namely welfare, economic liberalism and budget. Separately, we examined change over time in the salience of these three categories: we did not find any major differences between these three issue areas and thus plot them jointly as an overall measure of the salience of economic and social policy issues.

**Figure A.5:** Over Time Changes in the Share of Sentences Addressing Economic Policies - Germany - (both Left and Right-wing)



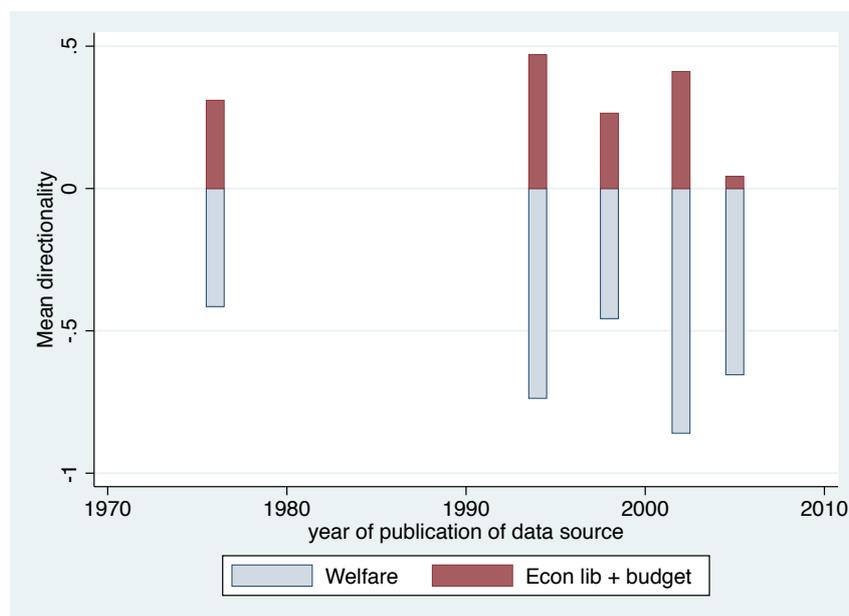
Source: Source: Kriesi et al (2012b)..

Figure A.6 plots the average left-right directions of the newspaper sentences sampled that address either of the three issue areas. Most of the change in direction concerns the economic liberalism and budget issue areas, which have experienced a sharp left-wing shift in 2005. We could not document any variation over time in the average direction of sentences that apply to welfare/social policies. A closer analysis indicates that this might be a coding issue. All political actors indicate support for the welfare state and nobody expresses outright support for retrenchment. However, qualitative account of the period indicate a clear qualitative change in the discourse of actors such as the SPD, which increases its emphasis on conditional access to benefits and the need to decrease the generosity of passively granted unemployment benefits (the same is true for Great Britain, see Appendix 3.2).

Fortunately, we have access to a different dataset to better assess changes in the discursive context before and after the 2005 elections. Kriesi and his team also gathered three years worth of newspaper articles all taken from the *Süddeutsche Zeitung*, one of the largest German national subscription daily newspaper in Germany, a center-left newspaper with a little less of 500 000 copies sold each day.<sup>1</sup> This dataset (Kriesi et al, 2012a) is different in that it is not limited to the two months pre-election period but covers the whole year. In addition, the researcher team only focused on the economic liberalism issue area. Within this issue area,

<sup>1</sup> It is called the “New York Times of Munich” in an online profile available on the Goethe Institute website: <http://www.goethe.de/wis/med/pnt/zuz/en556318.htm>, retrieved on July 10th 2014.

**Figure A.6:** Over Time Changes in the Share of Sentences Addressing Right-wing vs Left-wing Economic Policies - Germany -



Source: Source: Kriesi et al (2012b).

coders have further distinguished between domestic economic liberalization and international liberalization, allowing us to better examine whether this change in discourse is related to domestic conflict over labor market reforms introduced by the SPD, known as the Hartz IV reforms.

The dataset of core-sentences used to compute the figures below relies on 1200 articles sampled from the full universe of articles that mention issues relating to economic liberalization in their title or lead. The researchers first searched for the whole universe of articles pertaining to this issue that were published in the national and international politics and economics (except stock market, markets, finance) sections of the selected newspaper. To do so, they not only used general key words pertaining to this issue but also used year books to generate list of key words associated with specific events that had to do with these issues. See Kriesi et al. (2012) for a detailed overview of this dataset.

Using this data, we can document an increase in the number of sampled sentences that allude to economic liberalism. While researchers coded 520 such sentences in 2004, the number jumped to 842 in 2005 and 965 in 2006. In contrast, the number of sentences that alludes to the other two issues also considered in this analysis (i.e. Europe and Immigration) remained around a thousand (not shown).

Given an increase in the number of sentences that allude to economic liberalism: does the average direction taken in these sentences also change over time? Table A.6 provides the mean for the domestic liberalism sub-topic. This documents a sharp increase, in 2006, in “left-wing” (equal to -1) core-sentences on the issue of domestic economic liberalism. This shift to the left does not seem to have taken the shape of an opposition to international liberalism, i.e. an increase in protectionism (not shown). This is to be expected given the importance of exports and free-trade for the German economy.

In contrast to the election newspaper data, we find no evidence of a shift starting in 2005.

**Table A.6:** Average Direction in Statements on Domestic Economic Liberalism - Germany -

Variable	Obs	Mean	Confidence Interval	
2004	208	.25	.12	.38
2005	302	.252	.15	.36
2006	382	<b>.054</b>	-.04	.15

**Table A.7:** Average Direction of Statement on Domestic Economic Liberalism - Germany -

Year	Nber Obs	Mean	Confidence Interval	
<b>Parties</b>				
2004	75	0.39	0.17	0.60
2005	135	0.09	-0.08	0.25
2006	136	-0.10	-0.27	0.05
<b>Unions</b>				
2004	55	-0.62	-0.82	-0.41
2005	50	-0.48	-0.72	-0.24
2006	73	-0.71	-0.87	-0.55
<b>Business actors</b>				
2004	111	0.46	0.30	0.62
2005	202	0.36	0.24	0.49
2006	143	0.32	0.16	0.47
<b>The executive</b>				
2004	26	0.46	0.11	0.81
2005	89	0.34	0.14	0.54
2006	105	0.44	0.28	0.60

The actors above represent over 75 percent of all the core-sentences coded as relating to domestic economic liberalism. Source: Source: Kriesi et al (2012a).

This can be traced back to the difference between the two datasets in the data collection process. Indeed, in the year-long data, half of the sentences in 2005 come from a pre-election sample (elections in 2005 were held in late September). The election data thus has an over-representation of political actors in full campaign mode while this new dataset has more diverse actors. Once we break the core-sentences down as a function of the source of the statement (political actor competing for power versus others), we find a similar left-wing shift in 2005 among sentences generated by political actors (and unions) but no such shift in sentences coming from the Executive in power or Business leaders.

In this section of the Appendix, we have documented changes in German citizens' discursive context with the following time line: policy changes implemented in 2002 and 2003 have resulted in a left-wing shift in the discursive context starting in 2005, which further continued in 2006. We document a general increase in the share of left-wing considerations, more specifically opposition to the de-regulation of the German labor market in reaction to the SPD's reform agenda. We interpret the late 2000s in Germany has an instance of asymmetrical polarization, coming mainly from the left of the political spectrum. In Germany, the conditions

are ideal for helping individuals experiencing hardship connect their material conditions and preferences for redistribution.

### **3 Great Britain: A Case of Decreased Polarization on Economic Issues**

In this section we extensively document using both qualitative and quantitative evidence, the change in elite-behavior in Great Britain and its effect on the discursive context. We first describe the Labour Party’s policy shift. We then document its impact on the discursive context. The data used is the same as the one in the German case: i.e. manifesto and newspaper data collected by Volkens et al. (2013) and Kriesi et al. (2012, 2012a, 2012b).

#### **3.1 Changes in Electoral Dynamics in Great Britain**

Figure A.7 plots the share of sentences in the Labour and the Conservative parties’ electoral manifestos that allude to economic and social policy issues with both parties’ manifestos considered jointly. For comparison, we have also plotted the overall share of sentences that allude to moral and cultural issues. This measure proxies for the overall salience of these issues areas. Table A.4 gives an overview of the categories used to compute this latter index. Finally, “political authority” is an issue category defined as follow “References to the manifesto party’s competence to govern and/or other party’s lack of such competence. Also includes favorable mentions of the desirability of a strong and/or stable government in general.” As the salience of economic issues decreases, the salience of moral and cultural issues increases. The sharp increase in the salience of the political authority issue area captures the increase in a-ideological statements under Blair’s leadership.

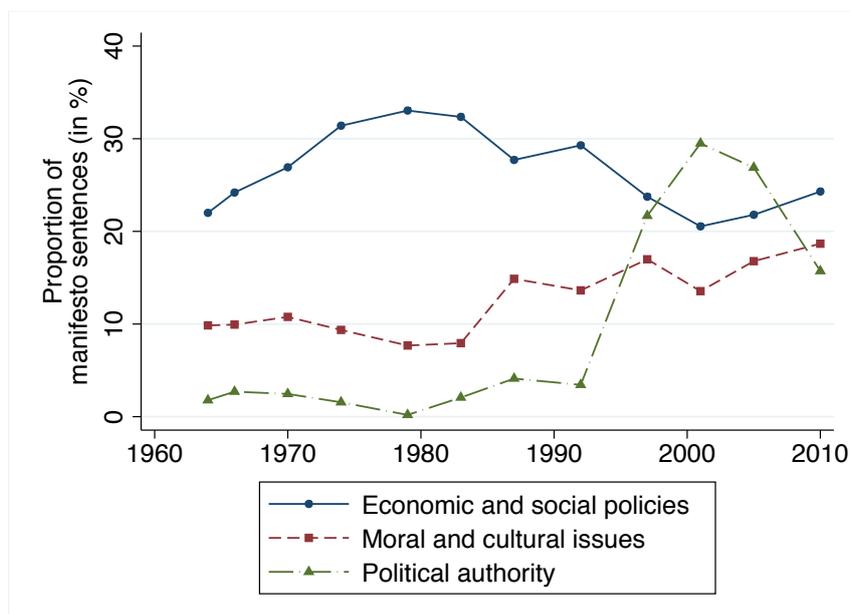
Figure A.8 plots the share of sentences in the Labour and the Conservative parties’ electoral manifestos that allude to left-wing and right-wing economic and social policies. In the early 1980s, close to a third of the two parties’ manifestos was dedicated to socio-economic issues. From the mid-1980s onward, both parties start moderating their positions, especially the Labour party, which over time has dropped traditional left-wing economic policies as an explicit policy option.

#### **3.2 Measuring Changes in the British Discursive Context using Newspaper Data**

We now turn to the newspaper data. Figure A.9 presents changes in salience and average position on issues related to economic and social policies, covering all years available in the dataset. To measure salience, we have plotted the economic liberalism and budget categories jointly as they both capture left-right differences over economic policy-making more generally. The welfare category is examined separately as it does not exhibit the same trend as the other two issue areas.

Using the left y-axis, one can track changes in salience. An obvious trend is the secular decline in the share of core sentences that allude to economic policies as captured by the economic

**Figure A.7:** Share of Manifesto Sentences Addressing Economic versus Other Policy Issues. - Great Britain - 1960-2011



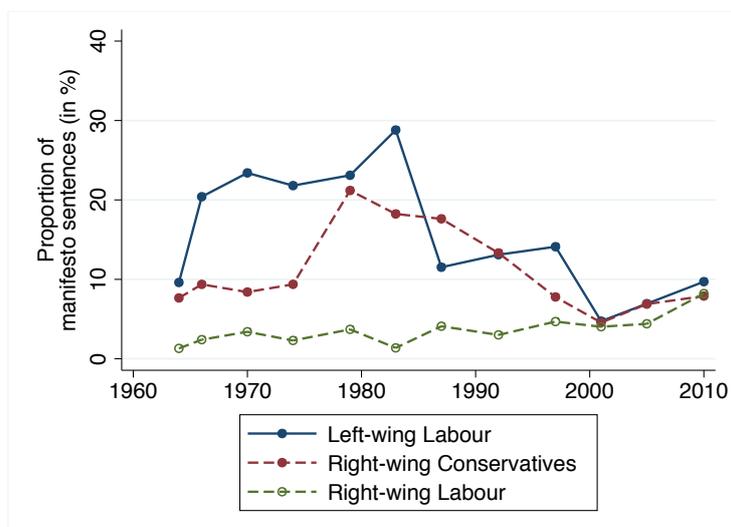
Source: The Manifesto Data Collection, (Volkens et al. 2013).

liberalism and budget categories (the thinner red bars): while 18 percent of core sentences mentioned these issues in 1974, this share declines to 12 percent in 1991 and to less than 7 percent in 1997.

The welfare issue (the thicker blue bars) does not match any of the observed trends for the economic liberalism and budget issue areas. If anything, its salience is increasing over time and the average claims available in newspapers are mainly favorable to welfare state expansion. This increase in salience can be traced back to Tony Blair's two main policy moves in the area of social policies: a) the reform of the National Health Service (NHS) to improve services and tackle its structural deficit, b) the continuous reform over the period of transfer programs to the non-working poor (i.e. the young, the disabled and the long-term unemployed). The NHS is a valence issue in Great Britain that does not really differentiate the parties and both parties campaign on increased spending. However, the reform of targeted transfers is an instance of a shift to the right on redistributive issues: the New Labour joined the Conservative Party in choosing to focus on welfare abuse and on increasing conditionality in access to benefits. A closer look at coding procedures indicates that this conservative shift is most likely not captured by the Kriesi et al. (2012) newspaper data.

The year 2005 also stands out as a year with many left-wing statement about welfare and redistribution. Among the New Labour's campaign promises that year was an increase in spending for education and health, the bulk of it through the extension of private/public partnership and financial support for the British equivalent of charter schools. The coding for this dataset is unfortunately too coarse to capture this distinction between an increase in public investment and a retreat from traditional left-wing forms of government involvement. We thus interpret the welfare index with caution.

**Figure A.8:** Share of Manifesto Sentences Addressing Economic and Social Policy Issues - Great Britain -



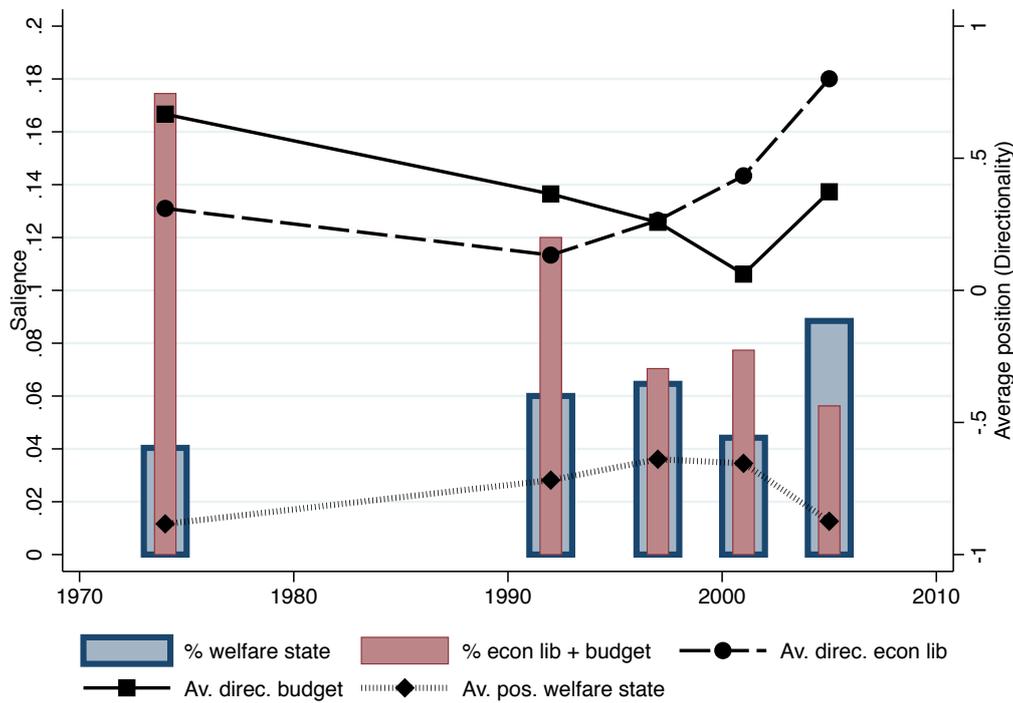
*Note:* Figure plots share of sentences addressing left-wing and right-wing economic and social policy issues in the Labour and Conservative parties’ manifestos. *Source:* The Manifesto Data Collection (Volkens et al. 2013).

### 3.3 Perceptions of the Dynamics of Electoral Competition by Voters

Table A.8 reports the mean positions that British Election Survey respondents assigned to the Labour and Conservative parties along four policy scales relating to preferences for providing social services versus cutting taxes; support for income redistribution; preferences for fighting inflation versus lowering unemployment; and support for nationalization of industry. Unfortunately, the items are only comparable across these 1987, 91, 97 and 2001 elections (see Milazzo, Adams and Green (2012)). The scale runs from 1 to 11 with higher values indicating more right-wing positions on these policy issues. For all items, except for the one on privatization, the biggest changes in perceived differences are around the time of the 1997 and 2001 elections.

In this section of the Appendix, we have documented changes in British citizens’ discursive context with the following time line: in contrast to Germany, policy changes implemented in 1997 have *not* resulted in a left-wing shift in the discursive context. We document a general decrease in the share of left-wing considerations. We interpret the post-1997 decade in Great Britain has an instance of asymmetrical de-polarization, coming mainly from the omission of redistributive issues on the left of the political spectrum. In Great Britain, the contextual conditions make it harder for individuals experiencing hardship to connect their material conditions to the “correct” policy position on economic and social policy issues.

**Figure A.9:** Salience of Economic Issues (left y-axis) - Average Position for Each Issue (right y-axis) - Great Britain -



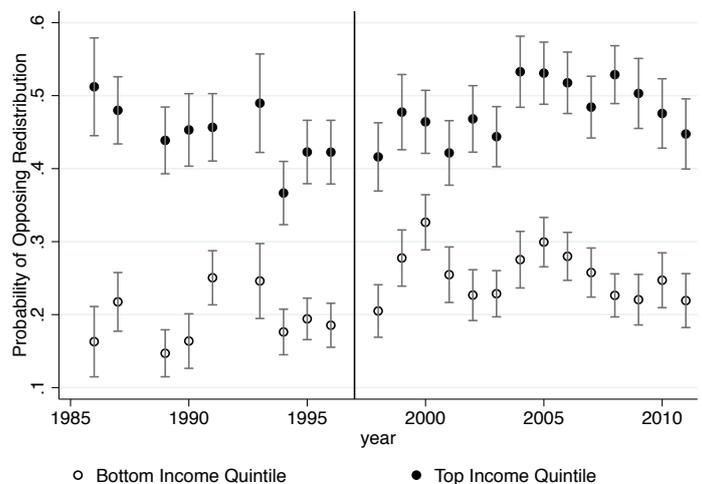
Source: Kriesi et al (2012b). On the y-axis, values superior to zero indicate that conservative statements outweigh liberal statement.

**Table A.8:** British Election Study Respondents’ Mean Placements of the Labour and Conservative Parties, 1987–2001

policy		1987	1991	1997	2001
Social Services	Labour	3.03	2.83	<b>3.59</b>	4.17
	Conservative	7.16	7.06	6.94	<b>6.21</b>
	Difference	4.13	4.23	3.35	2.04
Nationalization	Labour	2.92	3.59	<b>4.66</b>	5.45
	Conservative	9.14	8.38	8.00	7.50
	Difference	6.22	4.79	3.34	2.05
Inflation/unemployment	Labour	2.33	<b>2.98</b>	3.14	3.73
	Conservative	6.38	6.44	6.16	5.88
	Difference	4.05	3.46	3.02	2.15
Redistribution	Labour	2.95	3.08	<b>3.49</b>	4.65
	Conservative	8.43	7.90	8.21	<b>7.47</b>
	Difference	5.48	4.82	4.72	2.82
Average Lab-Con gap		4.97	4.33	3.61	2.27

“Difference” report the difference between the mean placements of the Conservative Party and the mean placement of the Labour Party. All four scales are from 1 to 11, with higher numbers denoting more right-wing responses. Source: British Election Survey, reproduced from Milazzo, Adams and Green (2012).

**Figure A.10:** Average Opposition to Redistribution by Income Quintile in Great Britain



Source: British Social Attitude Survey 1986-2012.

## 4 Great Britain: Changes in Economic Policy Preferences

### 4.1 The British Social Attitude Survey

Figure A.10 plots the share of respondents who disagree with income redistribution by the government, breaking the sample down by income quintiles. The share is, on average, stable over time. The decline in support for redistribution documented in the paper in Figure 3 is thus mainly due to an increase in the share of respondents who choose the “neither agree nor disagree” response category.

### 4.2 The British Household Panel Survey

#### 4.2.1 Latent Class Model: Model Fit Comparison

We estimated the optimum number of latent classes that provides the best fit to our data. Table A.9 provides a comparison of fit between models with 1 up to 5 classes. Model fit greatly improves if we hypothesize the existence of 3 different classes. The rate at which the BIC changes clearly decreases above three classes. Increasing the number of latent classes beyond three only results in the break down of the non-ideologue residual category, while the proportion of the sample composed of left and right-wingers stays the same.

#### 4.2.2 Estimates from the Latent Class Measurement Model

The estimates from the Latent Class measurement model are shown in Table A.10 below. The entries are the estimated response probabilities for each categorical answer of the survey items for people in that class.

**Table A.9:** Model Fit comparison: Measurement Model

# Latent Classes	LogLik	BIC	AIC	Npar
1	-327,148	654,511	654,344	24
2	-309,464	619,447	619,045	58
3	-303,215	607,360	606,639	104
4	-299,631	600,710	599,586	162
5	-297,338	596,748	595,140	232

Individuals in class 1 and 3 have mirroring response patterns. For instance, individuals in class 1 have a probability of 0.67 of agreeing or agreeing strongly with the claim that public services should be state owned. Individuals in class 3, have a probability of disagreeing or disagreeing strongly of 0.62. This is the same patterns for all questions except for questions A and B, which show a strong bias in favor of a left-wing answer. These two questions were the only one where disagreeing was associated not with an economically conservative but an economically liberal position, potentially explaining this bias. However, overall, individuals in class 3, are still much less likely to take on a ‘liberal’ position on these two questions (0.38 vs 0.95 for individuals in class 1 for item A). We consequently identify individuals in class 1 as holding left-wing economic preferences and individuals in class 3 as holding right-wing economic preferences. Of interest is the very low probability of the left-wingers to ever take a ‘neither-nor’ position (response 3).

Latent class 2 stands out for its low probability of taking ‘extreme’ positions (answer 1 or 5) on any of the six items. These individuals have a higher propensity of rejecting both extreme liberal and conservative positions. There is a left bias in this category, confirming here the claim that, on average, the British population is in favor of government intervention and is aware of social inequality. We call this class non-ideologue centrists.

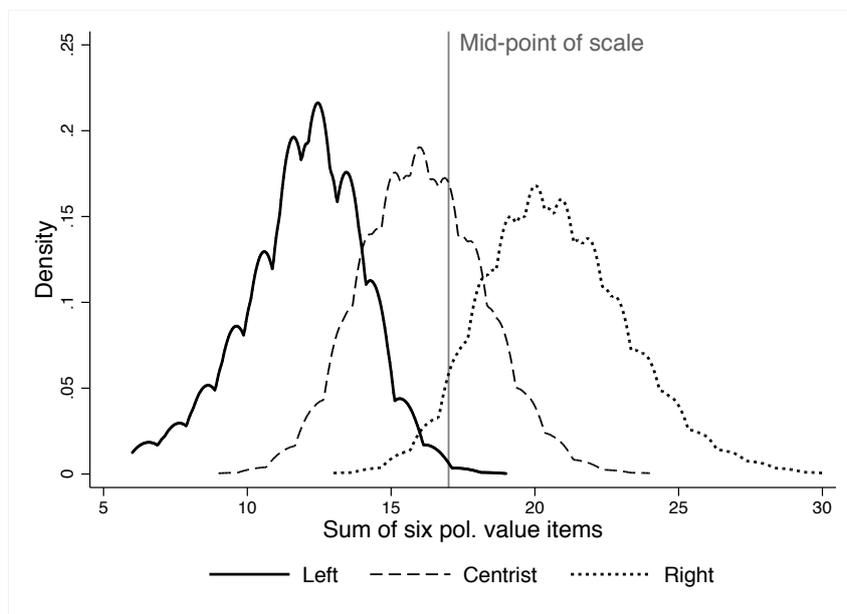
### 4.2.3 Are the Three Latent Classes Meaningful?

Figure A.11 plots the distribution of our three latent classes - left-wing, centrist and right-wing - on the additive index of the six single items that were utilized here. The additive index is a commonly adopted approach when using these Likert scale items. As Figure A.11 shows, the latent class model distinguishes very well between three types of respondents. The overlap between the left and right-wing distributions is very small. As expected the centrist class also expresses mid-range scores. Hardly anybody in this classification is below 12 or above 20 on the 6-30 scale. Based on this result, we feel confident that the classifications estimated using latent class modeling make a meaningful distinction between different economic policy preferences.

**Table A.10:** Estimates from the Latent Class measurement model

	<b>Ideology: Classification</b>			Overall
	Lef-wing	Centrist	Righ-wing	
<i>Proportion</i>	<i>0.20</i>	<i>0.58</i>	<i>0.22</i>	
Item A				
1	0.40	0.06	0.03	0.12
2	0.55	0.54	0.40	0.51
3	0.04	0.26	0.31	0.23
4	0.00	0.13	0.25	0.13
5	0.00	0.01	0.01	0.01
Mean	1.65	2.48	2.81	2.38
Item B				
1	0.12	0.03	0.00	0.04
2	0.51	0.30	0.06	0.29
3	0.32	0.47	0.34	0.41
4	0.05	0.19	0.50	0.23
5	0.00	0.01	0.10	0.03
Mean	2.30	2.87	3.64	2.93
Item C				
1	0.46	0.09	0.04	0.15
2	0.51	0.55	0.39	0.51
3	0.03	0.21	0.25	0.18
4	0.00	0.14	0.28	0.15
5	0.00	0.01	0.04	0.02
Mean	1.58	2.44	2.90	2.37
Item D				
1	0.16	0.05	0.01	0.06
2	0.51	0.33	0.11	0.32
3	0.25	0.35	0.28	0.31
4	0.08	0.25	0.50	0.27
5	0.00	0.02	0.10	0.04
Mean	2.26	2.87	3.59	2.91
Item E				
1	0.13	0.06	0.00	0.06
2	0.53	0.40	0.08	0.36
3	0.17	0.21	0.13	0.19
4	0.16	0.30	0.62	0.35
5	0.01	0.02	0.16	0.05
Mean	2.39	2.83	3.85	2.97
Item F				
1	0.23	0.08	0.01	0.09
2	0.60	0.48	0.14	0.43
3	0.13	0.26	0.24	0.23
4	0.03	0.17	0.48	0.21
5	0.00	0.02	0.14	0.04
Mean	1.97	2.56	3.61	2.68

**Figure A.11:** Distribution of Three classes of Economic Policy Preferences on Additive Index of Observed Survey Items



Source : BHPS, 1991-2007

## 5 Great Britain: The Effect of Material Hardship

### 5.1 Measuring Material Hardship

#### 1. *Income change*

- Based on annual income variable.
- Drop of income by at last 25% (7.8%):  $\text{Inc}(t) / \text{Inc}(t-1) < 0.751$
- Increase of income by at last 25% (21.2%):  $\text{Inc}(t) / \text{Inc}(t-1) > 1.250$

#### 2. *Employment*

- Based on labour force status.
- Employed in t-1 and t (93.8%)
- Unemployed in t-1 and t (1.7%)
- Became unemployed in t (2.3%)
- Found job in t (2.2%)

#### 3. *Subjective financial situation*

- Using question about self-identified change in their personal financial situation.
- Situation the same (75.2%)
- Situation got better (12.7%)
- Situation got worse (12.1%)

#### 4. *Subjective job security*

- Using question about subjective job security, which was dichotomized to those responding that job is not secure (response cat 1 to 3)
- Job security got worse (6.6%):  $\text{Jobinsec}(t-1) = 0 \rightarrow \text{Jobinsec}(t) = 1$
- Job security got better (7.6%):  $\text{Jobinsec}(t-1) = 1 \rightarrow \text{Jobinsec}(t) = 0$

### 5.2 Covariates on Initial State

Table A.11 reports the coefficients of the factors affecting the initial economic preferences, when respondents entered the panel. 77.5% of people were interviewed for the first time in 1991. Including these factors into the model accounts for observed heterogeneity in economic policy preferences.

**Table A.11: Covariates on initial state**

	LEFT-WING		CENTRIST		RIGHT-WING	
	<i>coef.</i>	<i>s.e.</i>	<i>coef.</i>	<i>s.e.</i>	<i>coef.</i>	<i>s.e.</i>
Intercept	-0.61*	0.25	2.85***	0.21	-2.24***	0.29
Age	0.01***	0.00	-0.03***	0.00	0.02***	0.00
Female	0.08**	0.03	0.13***	0.02	-0.21***	0.03
Education: Primary educ	0.26***	0.06	0.24***	0.05	-0.49***	0.07
Low sec-voc	-0.10*	0.05	0.14***	0.04	-0.04	0.05
High sec, mid voc	-0.16*	0.07	-0.13*	0.06	0.28***	0.06
Higher voc	-0.05	0.06	-0.07	0.05	0.11*	0.05
Degree	0.05	0.07	-0.19**	0.06	0.14*	0.06
Class: Service	-0.22***	0.06	-0.11*	0.05	0.33***	0.06
Intermediate	-0.10	0.06	-0.04	0.06	0.13*	0.06
Self-employed	-0.47***	0.09	-0.14	0.07	0.61***	0.08
Lower sales services	-0.04	0.07	0.08	0.06	-0.04	0.09
Technicians	0.42***	0.09	0.14	0.08	-0.56***	0.11
Manual workers	0.40***	0.07	0.08	0.07	-0.48***	0.10
Housing: Own	-0.41***	0.07	0.11	0.06	0.30***	0.07
Mortgage	-0.28***	0.04	-0.05	0.04	0.33***	0.05
Social	0.54***	0.07	0.14*	0.07	-0.68***	0.11
Rented	0.14*	0.06	-0.20**	0.06	0.05	0.08
Logged income	0.03	0.03	-0.13***	0.02	0.10**	0.03

*Significance levels: \* $p < .05$ , \*\* $p < .01$  \*\*\* $p < .001$ . Note: Effect coding! All variables are measured at the time when respondents entered the panel. N obs.: 7,582. Source: BHPS (1901-2007).*

### 5.3 Over Time Proportion of Latent Classes

Table A.12 reports the proportion of left-wing, right-wing and centrist respondents as classified by the latent class model for each survey year. As the results clearly show, except the big right-wing dealignment between 1991 and 1993, there is no evidence of an increase in the share of individuals in the panel classified as right-wing ideologues.

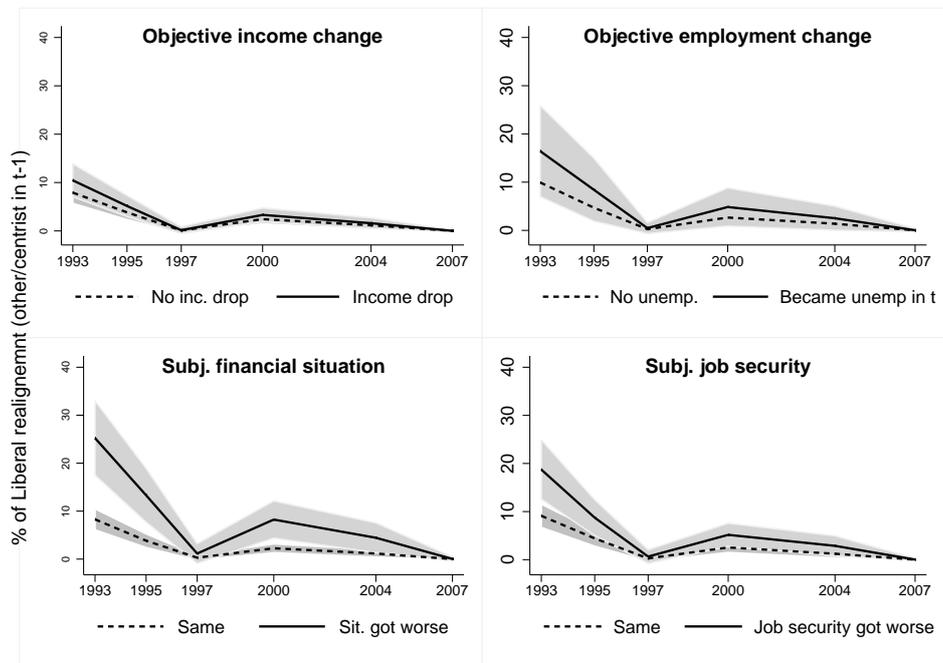
**Table A.12:** Over Time Proportion of Latent Classes

	Liberal	Other	Conservative
Overall	0.20	0.57	0.23
By Year:			
1991	0.23	0.48	0.29
1993	0.24	0.54	0.22
1995	0.25	0.53	0.22
1997	0.18	0.59	0.22
2000	0.17	0.61	0.21
2004	0.16	0.63	0.22
2007	0.14	0.65	0.21

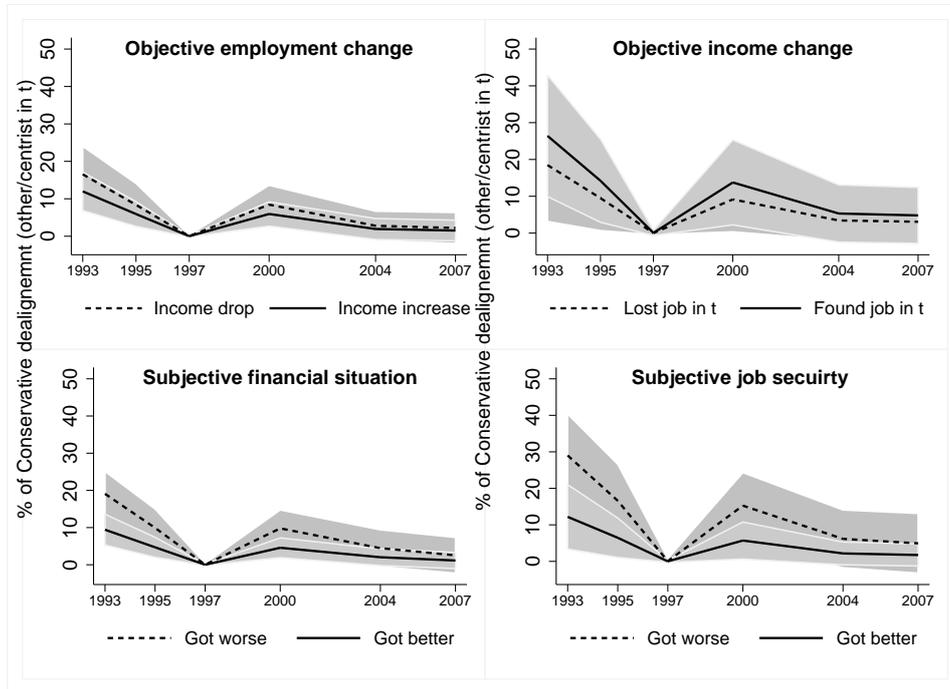
### 5.4 Transition Probabilities over Time

Figure A.12 plots the proportion of respondents that were classified as centrist in t-1 and became left-wing in t. This left-wing realignment is divided into those that experienced hardship (solid lines) and for those who had no change in their objective or subjective circumstances (dashed lines). As the plots show, those that experienced hardship are significantly more likely to move to the left.

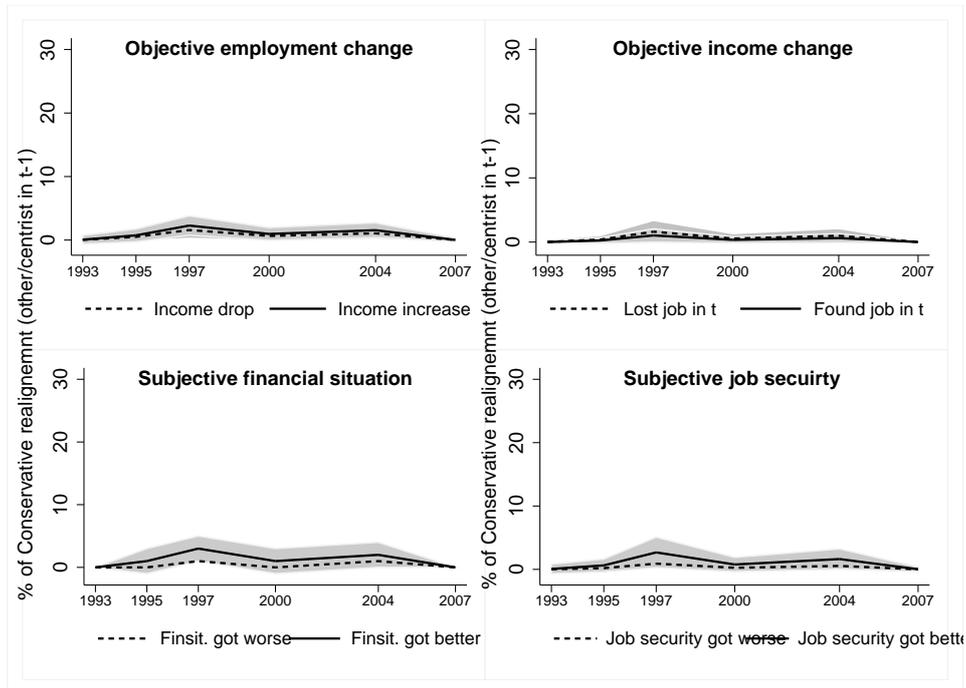
**Figure A.12:** Left-wing Realignment (Centrist in  $t - 1$ ; Left-wing in  $t$ ) (95% C.I.)



**Figure A.13: Changes in Right-wing Economic Preferences**



(a) Right-wing Dealignment (Right-wing in t-1; Centrist in t)



(b) Right-wing Realignment (Centrist in t; Right-wing in t)

**Figure A.14: Predicted Probabilities of Movement out of and into Conservative Ideology Over Time Based on Changes in Material Interest (incl. 95% C.I.)**

## 6 Great Britain: Additional Robustness Checks

### 6.1 Predicting Transition Probabilities: Conditioning on Political Interest

Tables A.13 and A.14 report the results on the main models, but conditional on political interest.

**Table A.13:** Results – objective material circumstances: Conditional on political interest

	Pol. int.	LEFT-WING		CENTRIST		RIGHT-WING	
		<i>coef.</i>	<i>s.e.</i>	<i>coef.</i>	<i>s.e.</i>	<i>coef.</i>	<i>s.e.</i>
<b>Unemployment</b>							
Employed in t and t-1	1=not int.	-0.157	0.481	1.078*	0.491	-0.921	0.888
	2	-1.023*	0.512	0.617	0.519	0.405	0.955
	3	-1.084*	0.467	-0.400	0.459	1.484	0.854
	4=very int.	-0.309	0.538	-1.688***	0.464	1.997*	0.893
Unemp in T and T-1	1=not int.	-0.169	1.120	-0.228	0.970	0.397	1.772
	2	0.954	1.040	-0.960	1.091	0.007	2.036
	3	-1.426	0.884	1.242	0.845	0.184	1.511
	4=very int.	1.798	1.354	-1.907	1.459	0.109	2.523
Became unemp in T	1=not int.	-0.383	1.082	-0.007	0.915	0.390	1.631
	2	1.131	1.111	-0.265	1.698	-0.866	2.665
	3	0.939	0.596	-0.713	0.632	-0.226	1.058
	4=very int.	-3.485***	0.940	-0.657	0.819	4.142**	1.437
Found job in T	1=not int.	0.708	0.728	-0.842	0.686	0.134	1.225
	2	-1.062	2.137	0.608	2.784	0.454	4.744
	3	1.571**	0.563	-0.130	0.632	-1.441	1.040
	4=very int.	1.996	1.775	4.252*	1.806	-6.248	3.350
<b>Income</b>							
No significant changes	1=not int.	0.680*	0.307	1.135**	0.351	-1.814***	0.549
	2	-0.117	0.274	0.680*	0.301	-0.563	0.481
	3	0.002	0.275	-0.334	0.308	0.332	0.488
	4=very int.	-0.077	0.444	-0.566	0.394	0.642	0.639
Drop by at last 25%	1=not int.	-0.005	0.452	-1.058**	0.369	1.063	0.622
	2	0.617	0.395	0.264	0.420	-0.881	0.600
	3	0.181	0.423	0.501	0.498	-0.681	0.717
	4=very int.	-0.513	0.587	2.186***	0.469	-1.673*	0.828
Increase by at last 25%	1=not int.	-0.675	0.425	-0.076	0.373	0.751	0.591
	2	-0.500	0.369	-0.944**	0.333	1.444**	0.524
	3	-0.183	0.401	-0.167	0.440	0.349	0.652
	4=very int.	0.589	0.492	-1.620***	0.414	1.031	0.664

*Significance levels:* \* $p < .05$ , \*\* $p < .01$  \*\*\* $p < .001$ . *Note:* Effect coding! All variables are measured as the time difference between two surveys that included the redistribution items. N obs.: 5,745. *Source:* BHPS (1991-2007)

**Table A.14:** Results – subjective material circumstances: Conditional on political interest

	Pol. int.	LEFT-WING		CENTRIST		RIGHT-WING	
		<i>coef.</i>	<i>s.e.</i>	<i>coef.</i>	<i>s.e.</i>	<i>coef.</i>	<i>s.e.</i>
<b>Job security</b>							
Unchanged	1=not int.	0.094	0.325	1.317***	0.338	-1.412**	0.517
	2	-0.862**	0.305	0.698*	0.301	0.164	0.505
	3	-0.522*	0.265	0.304	0.275	0.218	0.436
	4=very int.	0.503	0.335	-1.211***	0.308	0.709	0.497
Got worse	1=not int.	0.270	0.510	-0.555	0.404	0.285	0.644
	2	-0.101	0.448	-0.583	0.432	0.684	0.700
	3	-0.037	0.388	1.254**	0.385	-1.217	0.593
	4=very int.	0.831	0.533	1.761**	0.539	-2.592***	0.655
Got better	1=not int.	-0.364	0.520	-0.763*	0.393	1.126	0.603
	2	0.963*	0.447	-0.116	0.512	-0.848	0.817
	3	0.559	0.375	-1.558***	0.339	0.999	0.572
	4=very int.	-1.334*	0.532	-0.550	0.505	1.883**	0.584
<b>Financial situation</b>							
About same	1=not int.	0.061	0.180	0.382*	0.165	-0.442	0.256
	2	-0.185	0.127	0.134	0.124	0.052	0.184
	3	-0.131	0.112	-0.040	0.110	0.170	0.150
	4=very int.	0.417	0.238	0.134	0.249	-0.551	0.345
Worse off	1=not int.	0.433**	0.161	-0.365*	0.153	-0.068	0.220
	2	0.407**	0.134	-0.063	0.141	-0.345	0.213
	3	0.440***	0.129	0.234	0.139	-0.673***	0.206
	4=very int.	0.426	0.252	0.050	0.258	-0.476	0.357
Better off	1=not int.	-0.494**	0.174	-0.017	0.141	0.510**	0.192
	2	-0.222	0.135	-0.071	0.128	0.293	0.181
	3	-0.309*	0.127	-0.194	0.119	0.503**	0.157
	4=very int.	-0.843***	0.240	-0.184	0.213	1.027***	0.278

*Significance levels:* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . *Note:* Effect coding! All variables are measured as the time difference between two surveys that included the redistribution items. N obs.: 5,745. *Source:* BHPS (1991-2007)

## 6.2 Alternative Method: Fixed Effects Model

We run a model with fixed effects as an alternative estimation process (see Table A.15). To capture the effects of a change in the discursive context, our analysis pays close attention to time heterogeneity. As a result, we cannot use individual fixed effects as our main modeling strategy. However, we can use fixed effects to check whether the relationship between a change in material conditions and a change in attitudes is most likely causal.

**Table A.15:** Dynamic fixed effects model

	<i>Coef.</i>	<i>P &gt; t</i>	<i>[95% C.I.]</i>	
Econ. Ideology Scale (lag)	-0.037	0.000	-0.058	-0.016
Income (log)	0.109	0.024	0.014	0.204
Unemployment	0.025	0.842	-0.217	0.266
Financial situation (1=comfortably; 5=finding it difficult)	-0.092	0.000	-0.142	-0.043
Job security (1=insecure; 7=secure)	0.066	0.000	0.033	0.100
<b>Control Variables:</b>				
Age	0.043	0.000	0.031	0.054
Soc. Class (ref: service)				
Intermediate	-0.125	0.045	-0.248	-0.003
Lower sales service	-0.119	0.154	-0.283	0.045
Lower tech.	-0.283	0.014	-0.511	-0.056
Routine worker	-0.266	0.001	-0.417	-0.115
Housing (ref: owned)				
Mortgage	0.106	0.235	-0.069	0.280
Social	-0.070	0.628	-0.352	0.212
Rented	0.076	0.533	-0.162	0.314
Intercept	13.848	0.000	12.908	14.788

*Note:* The dependent variable is a sum index of 6 items tapping at economic preferences. The model was estimated using bootstrapped standard errors. N obs.: 4,864. Average observation per respondent: 3.3. Only working age population. *Source:* BHPS (1991-2007).

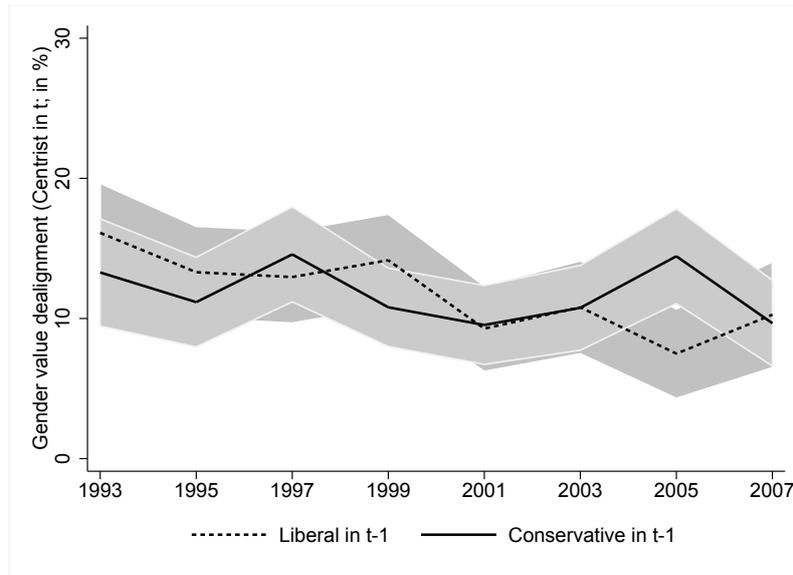
### 6.3 Placebo Test: Over Time Changes in Gender Attitudes

In order to test whether 1997 was an exceptional year, as people generally moved away from left-wing values, we rerun our analysis using a different dependent variable – gender values. Respondents of the BHPS were asked in nine waves whether they 1=strongly disagree or 5=strongly agree with the following items:

- Pre-school child suffers if mother works
- Family suffers if mother works full-time
- Woman and family happier if she works
- Husband and wife should both contribute
- Full time job makes woman independent
- Husband should earn, wife stay at home
- Children need father as much as mother
- Employers should help with childcare
- Single parents are as good as couples

These nine items load very strongly on one underlying factor. Parallel to our main analysis, we estimated a three-class latent class Markov Chain model. Figure A.15 plots the proportion of respondents that in each wave change their gender values from either conservative or liberal on gender issues to being neither. This is the same plot as presented in Figure 3 of the manuscript. As Figure A.15 clearly shows, there are no trends in gender values that are comparable to the one exhibited for economic policy preferences. We argue here that this should not be the case, as political elites did not address the issue of gender equality as a particular important political issue in the time period analyzed here.

**Figure A.15:** Value Dealignment (Centrist in  $t$ ; Liberal or Conservative in  $t - 1$ )



## References

- Beramendi, Pablo and Philipp Rehm. 2011. Redistribution and preference formation. In *Prepared for presentation at the MPSA Meetings*.
- Kriesi, Hanspeter, Edgar Grande, Martin Dolezal, Marc Helbling, Dominic Hoeglinger, Swen Hutter and Bruno Wuest. 2012. "Political Conflict in Western Europe."
- Kriesi, Hanspeter, Edgar Grande, Martin Donezald, Marc Helbling, Dominic Hoeglinger, Swen Hutter and Bruno Wueest. 2012a. "National Political Change in a Globalizing World. Public debates data." University of Zurich and Ludwig-Maximilians-University of Munich.
- Kriesi, Hanspeter, Edgar Grande, Martin Donezald, Marc Helbling, Dominic Hoeglinger, Swen Hutter and Bruno Wueest. 2012b. "National political change in a globalizing world. Supply side data on national election campaigns." University of Zurich and Ludwig-Maximilians-University of Munich.
- Lowe, Will, Kenneth Benoit, Slava Mikhaylov and Michael Laver. 2011. "Scaling policy preferences from coded political texts." *Legislative Studies Quarterly* 36(1):123–155.
- Milazzo, Caitlin, James Adams and Jane Green. 2012. "Are voter decision rules endogenous to parties' policy strategies? A model with applications to elite depolarization in post-Thatcher Britain." *Journal of Politics* 74(1):262–276.
- Volkens, Andrea, Pola Lehmann, Nicolas Merz, Sven Regel, Annika Werner, Onawa Lacewell and Henrike Schultze. 2013. "The Manifesto Data Collection. Manifesto Project." Available online : <https://manifesto-project.wzb.eu>.