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POLITICAL PARTIES AND CLIMATE CHANGE POLICY:

WHY DO PARTIES SOMETIMES TALK ABOUT IT, BUT SOMETIMES KEEP SILENT

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Abstract

The paper studies the factors that shape party issue competition on climate change and environmentalism. It covers the quantitative study on political parties' positions in 22 European countries during electoral campaigns, as well as two case studies: Poland and Germany. The paper concludes that more favourable public opinion towards environment, lower socio-economic inequality and weaker trade unions are associated with high party competition on climate change and environmentalism.

Keywords: party competition, issue salience, climate change, environmentalism, elections

JEL: Q50, Q58, C33

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1. Introduction

Political parties' preferences on climate policy are important for at least two reasons. Firstly, political parties and, in particular, party leaders, are the key actors shaping public policies both at national and international level. Hence, they can either hinder or propose climate change mitigation policies (e.g. Birchall, 2014; Harrison, 2010 and 2012; Jensen and Spoon, 2011). Secondly, political parties play an important role in shaping peoples' attitudes by either trying to justify unpopular climate mitigation policies or arguing the opposite (e.g. Brulle *et al*, 2012; Steenbergen *et al.*, 2007). Why political parties tend to compete over some and keep silent on other issues has been addressed by a number of theories (e.g. issue ownership, median voter). Although they are helpful in explaining parties' policy preferences along the traditional left-right issue axis, they are of lesser use in explaining party competition (particularly that of major parties) on the so called new issues such as climate mitigation policy. Therefore, one needs to look beyond the general theories to find specific factors that would explain the patterns of party competition on particular issues.

By proposing a research question on what conditions political parties tend to compete on climate mitigation policies, I argue the following. Firstly, the more favourable the socio-economic conditions are, the more pro-environmental public opinion is and the less polarised the party system is, the more political parties tend to compete on climate mitigation policies. Secondly, political parties tend to avoid competing on climate mitigation policies in the presence of strong business interest groups (especially in coal industry) and trade unions. And, vice versa, the parties are still likely to pick up the issue of climate mitigation in case of absence of strong business groups and public opinion.

To test both sets of hypothesis, I apply a times-series cross sectional data of political parties' positions on climate policy and environmental protection during electoral campaigns in a possibly large set of European countries (Chapter 7), as well as conduct two case studies (party competition during pre-electoral campaigns) of Poland and Germany (Chapters 8 and 9). The results of the study are expected to shed more light on what extent the key culprits (economic conditions, public opinion, electoral system, as well as the strength of business interest groups and trade unions) play a role in party competition on climate mitigation policy.

2. Politics and Climate Change: State of the Art

While party environmental politics has been in the realm of academic attention for a couple of decades already, party climate politics has received little attention. Indeed, given the relative novelty of the awareness of climate change and policy action aimed at mitigation it is not surprising. However, as Javeline (2014) has observed, '[t]here is tremendous dialogue among climate scientists, [...] legal scholars, [...] economists [...]. [But T]he field of political science has contributed virtually nothing' (Javeline, 2014: 424). Below, I shortly present an overview and key findings in the field of politics and climate policy.

Studying politics (and, especially, party politics) and climate policy, indeed, has been rare (see e.g. Bernauer, 2013). So far, a few studies have focused on the role of party politics and ideology in adopting green policies and attaining green-house emission targets (Batstrand, 2015; Jensen and Spoon, 2011), as well as studying a range of politico-institutional and other factors driving variations in climate change policies at national level (Lachapelle and Paterson, 2013). Several researchers have favoured conducting country case studies. De Blasio and Sorice (2013) studied the importance of the issue of climate change in Italian politics between 2008 and 2012. Batstrand (2014) explored, *inter alia*, climate policies of Norwegian political parties. Carter (2014), Carter and Jacobs (2013) and Carter, Ladrech and Little (2014) focused on climate politics in the United Kingdom, as well as (for the latter) on Italy and Denmark. Ladrech (2011) studied the conditions that constrain social democratic parties to develop climate policies in the United Kingdom, Sweden, Greece, Spain and Germany; Carter, Ladrech and Little (2014) - in Italy, Denmark and the United Kingdom. Although the account of party politics and environment is much larger (see e.g. Carter, Ladrech and Little, 2014), a list of studies dealing with political institutions, more generally, or party politics, more specifically, *and* climate policy seems to be exhaustive.

According to the key findings pointing to the role of **institutional factors**, the type of government (presidential vs. parliamentary) and electoral system (majoritarian vs. proportional) can explain the extent and type of climate policies adopted in a given country. Parliamentary systems are more likely to implement certain (more costly) climate policies than presidential ones (Lachapelle, 2013). It is argued that a relatively greater number of veto points (typical in presidential systems) is a hindering factor, especially for more costly climate policies. Therefore, in parliamentary systems, where power is more concentrated, it is easier for political leaders to persuade (costly) climate policies (Lachapelle, 2013). As for the type of electoral system, Lachapelle (2013) concludes that some policies (especially carbon pricing) tend to be more prevalent in countries with proportional representation, whereas in other policy types there are no notable differences. However, in general, proportional representation systems are associated with stricter climate policies.

Another factor, claimed to have some explanatory power for parties' or government policies on climate change, is **party ideology**. As both De Blasio and Sorice (2013) and Batstrand (2015) have, *inter alia*, pointed out, left wing parties tend to emphasize climate change more than their right wing counterparts. They also tend to go for bigger changes to sustain the climate. Green parties, once in the governing coalition, lead to more convergence with such climate policy goals as green-house gas emissions (Jensen and Spoon, 2011). The same applies not only for the Green parties, but other parties – the more they prioritise environmental issues, the more likely a country will reach the target of green-house emissions. However, the wider the ideological gap between parties, the less likely a country will reach the targets of green-house gas emissions (Jensen and Spoon, 2011).

The **patterns of inter-party competition/dynamics** seems to play an even greater role, but appears to be a vaguely defined factor. As Carter and Jacobs (2013) argue, “[p]arty politics, especially where party competition generates a ‘competitive consensus’, can be important for both initiating and prolonging policy change in parliamentary systems (Carter and Jacobs, 2013: 125)”. Hence, weak competition, as well as certain patterns of coalition incentives can explain why climate policy does not appear on the agenda of political parties (Carter, Ladrech and Little, 2014). Here, the role of the party leadership is crucial.

As Ladrech (2011) and Carter, Ladrech and Little (2014) argue, the role of such actors as **business associations** and **trade unions** are also noteworthy, especially, if they have long-standing ties with political parties. They tend to constrain political parties. Interestingly, as Jensen and Spoon (2011) have observed, **public opinion** does not have significant impact on convergence with the targets of green-house emissions.

Not surprisingly, the two key other factors, which appear to influence countries’ commitment to achieve climate policies, are **fuel dependency** and **economic crisis**. The countries with substantial exports of mineral fuels are less likely to implement any type of climate policy (Lachapelle, 2013). Similarly, such events as economic crisis can also negatively impact countries’ incentives to implement various climate policies (Carter, Ladrech and Little, 2014).

Although no study was focused particularly on party issue competition – and it remains the contribution of this paper –, the conclusions from the literature on politics and climate change would suggest a number of factors accounting for cross-country or cross-party variations in climate change policies. In the next sections, I will present justification for selecting the key factors, which potentially could explain party issue competition, as well as define the key concepts of the dynamics of party competition on climate change in European countries.

3. Party Issue Competition on Climate Change: Key Concepts

The key concepts to be clarified are *climate policy* (and how it differs from environmental policy) and *party issue competition*.

A climate policy is ‘a human intervention to reduce the sources or enhance the sinks of greenhouse gases’ (IPCC, 2014: 4). Compston and Bailey (2013) define anti-climate policy as ‘change that has the effect of increasing net green-house gas emissions (Compston and Bailey, 2013: 146). As they argue, policy changes that increase greenhouse emissions can be divided between ‘reverse climate policies’ (i.e. policies that weaken climate policies such as cancelling a carbon tax) and ‘side-effect climate policies’ (i.e. policies that create emissions as a side-effect) (Compston and Bailey, 147).

One of the key questions to address when studying party competition on climate policy is why to distinguish between environmental and climate policies. There are at least two reasons for doing so. Firstly, climate policy is a multi-sectoral issue (e.g. Carter et al., 2017). Although it overlaps to a large extent with environmental policy (Carter et al., 2013), it covers also aspects of other policy areas such as, for example, energy policy. Therefore, environmental policy and climate policy are two distinct phenomenon. Secondly, while environment has been considered as a valence issue, that of climate change is clearly not as it contains both valence and positional aspects (Carter et al., 2017).

Regarding *issue salience*, which in the literature of political behaviour has been defined as the *importance* of a given issue for political actors – usually voters, but increasingly also political parties – it is worth mentioning the conceptual (and methodological) problem raised by Wlezien (2005). He argues it is necessary to be aware of two different characteristics of issue salience – the *importance* of the issue and the degree to which an issue is a *problem* for the electorate or for a political party. Not only can this awareness lead to a different choice of methodological tools, it can also mean that these characteristics embody two different concepts. As the theories of issue salience imply, the bigger the *strategic importance* (i.e. it has a high likelihood of getting strong electoral support) of a given issue for a political party, the more the party will choose to articulate it during the electoral campaign. The political actor may (explicitly or implicitly) be aware that the articulated issue is not necessarily a *problem* for the electorate to the same degree. The theory of issue salience is built by integrating the dimension of the issue *importance* and omitting that of how big a *problem* the issue is for the electorate.

Having clarified the key concepts of the study, it is worth to have a look at the dynamics of party issue competition on climate change in European countries.

4. Party Issue Competition on Climate Change and Environmentalism in European Countries

To analyse the dynamics of party electoral competition on climate change, ideally, one should look exactly at how the political parties compete on this issue at electoral arena. However, the data for this specific indicator is available for a small number of countries and time-span. Therefore, here and further in the quantitative part of the paper, I will use both the direct measure of climate change salience and its closest proxy – party issue competition on environmentalism, for which one can obtain abundant data from Comparative Manifesto Project Dataset.

Hence, the data, available specifically for party electoral issue competition on climate change, covers six European countries – Denmark, France, Germany, Ireland, Italy and the United Kingdom - in election years of national legislatures between 2002 and 2016 and includes two major parties from each country (see the Table No. A.1 in the Annex).¹ As the data reveals, there are some variations across countries, parties and time. More specifically, there are three trends worth mentioning.

First of all, as expected, left wing parties tend to compete on climate change slightly more than their right wing counterparts. On average, around 7% of all the policy references in centre-left wing parties' election manifestos were devoted to climate change, whereas centre-right wing parties mentioned this issue in around 5% of all the policy references (see the Table No. A.1 in Annex for generic data). This is in line with the findings of the literature on party issue competition on environment.

Secondly, in the peak elections (i.e. in the elections with the highest scores of salience), both right and left-wing parties often tend to compete on climate change. For example, in Danish 2007 national elections, the climate

¹ The indexes are obtained by calculating parties' stances on a number of climate change policies as defined and performed by Carter et al. (2017).

change score of centre-left parties was 18%, whereas that of centre-right – 15%. That was much higher than in all other years for both party groups. Similarly, In Italian 2008 national elections, the salience level of climate change was 7% and 10% for the right-wing and left-wing parties, accordingly. Again, higher than usual, especially for the right-wing counterparts. Finally, the same trend could be observed also in Germany, where in 1994 national elections both parties scored highest scores – 13% for left-wing parties and 9% for right wing parties (see the Table No. A.1 in Annex). This trend, in turn, might suggest that either (i) climate change issues are not strongly owned by left/right wing parties or (ii) parties tend to trespass each other's issue arena or (iii) there are strong external factors present that drive party competition on climate change.

Thirdly, overall, the salience of climate change policies, except for a few elections, tends to be rather low. In comparison, such most salient issues as economy and welfare state score, on average, between 10%-25% and education - between 5-10% for the same time period and sample of countries (see the Comparative Manifesto Project Data at www.manifesto-project.wzb.eu) for generic data).

The data, available for party electoral issue competition on environmentalism, covers a wide range of countries from 1945 onwards² (see the Table No.A.2 in Annex). There are two main findings important in the context of this study.

Firstly, several elections from various countries and time periods are characterised by a single peak election during which the salience of environmentalism is high. For example, in Austrian 1994 national elections the score environmentalism was 14%, in Finnish 1991 national elections – 14%, in Greek 2009 national elections – 11%, in Swiss 2007 national elections – 12% , in Icelandic 1999 national elections – 10%, in Danish 2005 and 2007 national elections – 10% (see the Table No. A.2 in Annex).

Secondly, one may observe both cross-country and cross-time variation of the salience of environmentalism. For example, in Norway and Sweden, in which the levels of the climate change salience are rather similar across years, the average score of environmentalism salience is 7-8%, whereas in Hungary and Poland – 2-3%. In other countries, there is a significant within-country variation across time. In Austria the salience level of environmentalism fluctuates between 2% and 14%, in Denmark – between 3% and 10%, in Finland – between 4% and 14%, in Germany – between 3% and 5%, in Greece – between 3% and 11%, in Iceland – between 2% and 10% and in Switzerland – between 3% and 12% (see the Table No. A.1 in Annex).

This significant variation motivates a question on **what conditions political parties tend to compete on climate change or environmental protection policies**. This research question will be examined in the following chapters.

² The indexes are obtained by calculating parties' stances on environmentalism per country per election year weighted by the fraction of votes that the parties obtained in the elections.

5. Explaining Issue Competition on Climate Change

By proposing a research question on what conditions political parties tend to compete on climate mitigation policies, I suggest two key sets of hypothesis with the following causal explanations derived from the literature on climate change politics or political behaviour.

H1 The more favourable the socio-economic conditions are, the more pro-environmental the public opinion is and the less polarised the party system is, the more political parties tend to compete on climate mitigation policies.

As mentioned already earlier in the paper, one of the two factors, which has appeared to influence country's commitment to achieve climate policies, is economic performance (Lachapelle, 2013; Carter, Ladrech and Little, 2014). While economic crisis has proved to have negative impact on countries' incentives to achieve climate mitigation goals, one could expect that during the times of economic prosperity, in particular, and in the countries with higher **socio-economic wealth**, in general, citizens are more committed to achieve the goals of post-material policies (including those of climate mitigation and environmental protection) as they are less concerned about the key issue - the state of economy. As a result, political parties are also more prone to pick up the issue of climate change or environmentalism in political debate. On the other hand, economic difficulties and the accumulation of economic issues such as raising inequality can imply that climate and environmental concerns are crowded out by the issues related to socio-economic welfare.

Although public opinion has appeared not to be associated with country's commitment to climate mitigation policy goals (Jensen and Spoon, 2011), still the literature on political behaviour suggests that voters' opinion is one of the key factors, which determine parties' electoral behaviour (see, for example, Kluver and Sagarzazu, 2015) and policy actions when in government (see, for example, Burstein, 2003; Erikson, MacKuen and Stimson, 2002; Erikson, Wright and McIver, 1993; Page and Shapiro, 1983). Therefore, one may assume that more favourable **public opinion** towards climate change policies/environmental protection would also imply higher salience of the respective issue in party competition. Whether parties adjust their electoral policies in response to the public opinion or not has been a matter of recent debate. As Adams et al (2004) argue that, indeed, political parties respond to shifts in public opinion, but only in cases, where it is clearly shifting away from party's policy positions. However, the causal relationship between party policy stances and public opinion is more complex - political parties not only respond to public opinion but also shape it. Some research suggests that public support to a policy depends on the stance of their preferred political party (e.g. Bullock, 2014). If a policy stance is proposed by a party supported by an individual, it is more likely to be accepted by that individual. If, on the other hand, the same policy stance is proposed by a political party "hostile" to an individual, it is less likely to be accepted by the individual (see, for example, Mullinix, 2015). The nature of reverse causality between public opinion and party issue stance should be kept in mind when interpreting the test results. It might present a mere association and not a causal relationship.

As already discussed above, a number of institutional factors such as the type of government and electoral system can predict the range and type of climate mitigation policies adopted in a country (see Lachapelle, 2013). Regarding party issue competition, the impact of one of the key characteristics of the party system – **polarisation** - is worth investigating. As higher party system polarisation implies more confrontational nature of politics, one might expect that the issues, which are more salient for voters and more adversarial in nature, appear at the

forefront of the party issue agenda. Although it depends on time and country-specific factors, such issues as economics, migration, ethno-politics, terrorism, guns control, health care, crime and foreign policy are, overall, far more salient for voters and confrontational in nature than environmentalism and climate change (see, for example, Eurobarometer, IPSOS Mori or Gallup for the data about the most important issues/problem for voters). Therefore, the smaller the ideological distance among the parties, the less likely political parties will pick up adversarial issues. Consequently, there will be more space for other issues, among them also those of climate change and environmentalism.

H2 The stronger the trade unions are and the stronger the business groups (especially in coal industry) are, the less political parties tend to compete on climate mitigation policies.

Strong **business groups**, especially, if they have close ties with political parties, are one of the key actors, which constrain political parties behaviour (Ladrech, 2011; Carter et al, 2014). Since the pro-climate or pro-environmental policies usually involve costs for the coal industry, one may expect that the size of this industry can influence the salience of climate change or environmental policies at the pre-election campaign. Namely, the stronger the business groups in the coal industry, the less likely that political parties will pay attention to climate change or environmentalism, and vice versa.

Another actor constraining political parties are **trade unions** (Ladrech, 2011; Carter et al, 2014). Trade unions are considered to be particularly concerned about reduction of jobs and the changing of jobs, which may come along with changes of production and consumption and implementation of climate change policies (Rathzel and Uzzell, 2011). Although some previous case studies have proved that trade unions are actually in favour of climate mitigation policies (as in Denmark according to Carter et al, 2014), still this might be considered as an exception. Therefore, the stronger the trade unions, the less likely it is that political parties will talk about climate change or environmentalism, and vice versa.

To test the proposed hypothesis, I have chosen to conduct a cross-sectional times-series analysis discussed in the next chapter.

6. Research Design

The mixed method research strategy is chosen in order to compensate for the most commonly noted weaknesses of both large-n quantitative analysis and small-n qualitative studies and, hence, to provide a more in-depth and credible account about the nature of party competition on climate change and environmentalism in European countries. More specifically, while the quantitative analysis gives opportunity to test the statistical significance of the defined explanatory factors across a wide range of countries, the case studies contribute by *creating an illustrative story* about how the party issue competition evolved before the respective elections, by providing *contextual understanding* about what role the factors play in shaping party issue competition during particular election campaigns in two selected countries, and, by *revealing other factors* of influence.

6.1. Quantitative Study

The quantitative study covers 25 European countries - Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Switzerland, United Kingdom - between 1990 and 2015.

For the quantitative part, I apply the fixed effect model to panel-data ($pts_{it} = c_i + \sum b_k x_{kit} + v_{it}$). This model has been chosen in order to avoid the problem that the results might have been driven by unexplained (unobserved) country-specific factor. The disadvantage of the fixed effect model is that it ignores cross-country variation thus decreasing the explanatory power of the test. As a result, it might not identify factors which explain cross-country differences while are not important for changes over time. However, since this model gives the most robust evidence for causal impact, I have opted to use it.

Dependent Variables

To measure *party electoral issue competition on climate change*, I have chosen two indicators: **Climate Change Index** and **Environmentalism Index**.

As mentioned earlier, due to the lack of extensive quantitative data of party competition on climate change, I have included also its closest proxy – the Environmentalism Index. It is obtained by calculating parties' stances on environmentalism per country per election year weighted by the fraction of votes that the parties obtained in the elections (generic data taken from the Comparative Manifesto Project (CMP) as party references to environmentalism (per501). Although researchers have identified a number of methodological problems of CMP such as, for example, a lack of empirically validated coding scheme, unreliable hand-coding process (Gemenis, 2013), still it appears to be one of the best available sources for parties' positioning on different policy dimensions across time and countries.

The Climate Change Index, borrowed from Carter et al. (2017) and calculated as the average of left-wing and right-wing parties' stances on climate change, is, probably, the only quantitative indicator available, which captures party issue competition on climate change. The main difference between the two indicators is as follows. Firstly, the Climate Change Index is positional while the Environmental Index is of valence type. Secondly, the Climate Change Indicator excludes party positioning on several sub-issues relevant to environment but irrelevant to climate change (e.g. protecting biodiversity). And, thirdly, the Climate Change Index includes party positioning on energy policy – a crucial policy domain in climate change. Therefore, the Climate Change Index remains superior for measuring party competition on climate change. However, as Carter et al (2017) have tested and concluded, the closest proxy is party references on environmentalism obtained from the Comparative Manifesto Project (i.e. Environmentalism Index).

Independent Variables

To test *the level of socioeconomic conditions*, I have included the level of **GDP per capita** (World Bank data) and **GINI Index** (World Bank data). While GDP per capita is the key measure for economic wellbeing for a representative household, GINI Index is included to take into account the distribution of income. Increasing value of the GINI index signals economic difficulties for the poorer part of the society, which might not necessarily be reflected in the GDP data.

To measure *public opinion on environmentalism*, I have chosen to include a self-computed **Public Opinion Index**, which is a total percentage of respondents who “strongly agree” or “agree” with the following statement: “I would give part of my income if I were certain that the money would be used to prevent environmental pollution” (data from the European Value Study (EVS) the 3rd and 4th wave, Question Q.3A). As one of the largest available data source of values, the EVS is widely used for cultural studies. It is mainly criticised for measuring marginal preferences rather than values. To partly control for that, I have chosen the statement, which includes monetary costs by assuming that the more important the value is, the more people would be ready to devote money to achieve/maintain it.

For *the polarisation of party system*, I have calculated **Polarisation Index**, which is a standard deviation of RILE Index (measuring left-right ideological spectrum, Comparative Manifesto Project data). This Polarisation Index captures ideological distances between any pair of parties. Although measuring of party system polarisation has been contested, still standard deviation of parties’ policy stances on left-right ideological dimension remains one of the most applied measures.

To measure the *strength of coal industry business groups*, I have used **Total Coal Production Index** and **Total Coal Consumption Index** (International Energy Association data) as proxies assuming that the higher the share of coal in energy sector, the stronger (more powerful) the respective business groups are. To test the *strength of labour unions*, I have included the **Collective Bargaining Index** (generic data from OECD). I assume that in the countries, in which the collective bargaining predominantly takes place at central and industry level are weaker (less powerful) compared to those, in which bargaining predominantly takes place at sectoral level or altering between sectoral and industry or company level. The Collective Bargaining dummy variable (Collective Bargaining Index) takes the value of one if collective bargaining with trade union takes place both at sectoral and national level, as opposed to the collective bargaining that predominantly takes place only at national, sectoral or company level. The bargaining at sectoral and national level indicates a potentially strong effect that trade unions may have on defining the development of the sector.

As **control variable** I have included **RILE Index** (parties’ stances on left-right ideological spectrum) The RILE Index is included to control for parties’ ideological positioning. The more left-leaning the parties are, the more they are likely to pick up the issues of climate change and environmentalism.

6.2. Case Studies

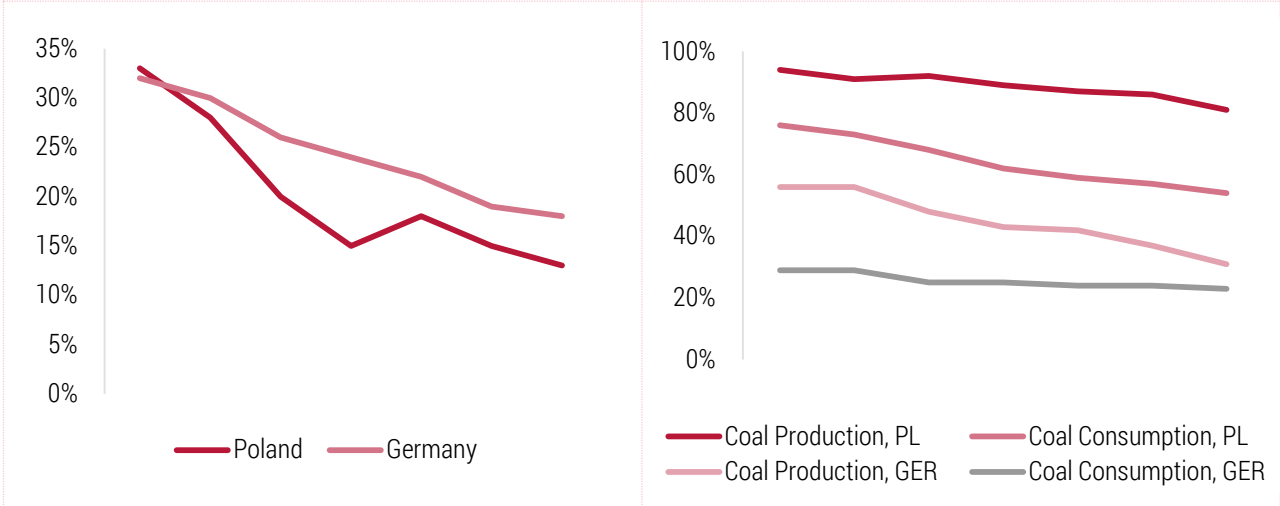
As case studies, I have selected Poland and Germany. The difference between the Environmentalism indexes of two countries are almost five-fold (see Table 1). Indeed, higher GDP, as well as lower coal production and consumption should imply, as hypothesised, higher party issue competition on environmentalism/climate change. However, the levels of party system polarisation, labour and public opinion on environmentalism is not in line with the hypothesis (see Table 1). As noted before, the two case studies are expected to shed more light on the context and the role various factors played in shaping party competition on environmentalism and climate change in Poland and Germany.

Table 1. Key Variables in Poland and Germany

Country	GDP per capita (current US\$)	Public Opinion	Party System Polarisation Index*	Environmental Index/ Climate Change Index**
Poland	1,731 (1990) - 12 415 (2016)	49%	12	1.7/na
Germany	22, 219 (1990) - 41, 936 (2016)	37%	17	6.7/6.2

Notes: values (or their averages between 1990 and 2015) in Poland and Germany. *Polarisation Index range between 0 and 100
 ** Environmental Index and Climate Change Index range between 0 and 100.
 Source: World Bank, European Values Survey, Comparative Manifesto Project.

Figure 1. Labour Union Density (left*) and Coal Production and Consumption (right) in Germany and Poland between 1990 and 2015**



[* the values present % of the total workforce ** the values present % of the total energy production/consumption]
 Source: Left panel: OECD, right panel: International Energy Association.

In the following chapter, I present the results of the quantitative study.

7. Party Competition on Climate Change and Environmentalism: Quantitative Study

The results of the quantitative study reveal several interesting findings. I present the key findings structured according to the hypothesis and at the end provide a short summary.

H1 The more favourable the socio-economic conditions are, the more pro-environmental the public opinion is and the more polarised the party system is, the more political parties tend to compete on climate change policies.

Socioeconomic Conditions

Opposite to the prediction of the hypothesis, the regression results of the fixed effect model suggest that there is no effect of average income (real GDP per capita) on party issue competition on climate change (here and further see Table 2). However, as the results of the tests with the Environmental Index as the dependent variable suggest,

there is a negative effect of income inequality (GINI Index). It remains significant even in the full specification, in which a number of controls are included (both with a full sample of 22 countries and that including only EU15). The full regression (column 7 in Table 2) suggests also that in the new EU countries the effect of inequality on the salience of environmentalism is significantly smaller than in the old EU. The test with the Climate Change as the independent variable does not point at any interesting findings. The loss of significance could have resulted from the small sample size.

The impact of socioeconomic inequality (measured by GINI Index) is the most novel discovery of the paper. One can mention at least two explanations for this finding. Firstly, when the inequality increases, political parties might avoid competing on environmentalism as potential increase in energy prices associated with environmental protection could disproportionately affect citizens at the bottom of income distribution. Another potential explanation - social concerns associated with the growth of inequality in a given country crowd out the other issues (such as environmentalism or climate change) from political parties' agendas.

Public Opinion

Regarding the impact of public opinion, it is significant in almost all the regressions with the Environmentalism Index as the dependent variable (see the Table 2. and Table 4). One may assume that, indeed, the more concerned the voters are about climate change or environmentalism, the more political parties choose to compete on climate change or environmentalism. However, given what has been argued before about the nature of strong dual causality between public opinion and parties' policy stances, these results are not sufficient to establish a causality. It can mean either that political parties shift towards more competition on climate change or environmentalism as a response to the changing public opinion or that public opinion shifts following policy stances of political parties.

As in the case of the Gini Index, the full regression (column 7 in the Table 2) suggests that in the new EU countries the effect of public opinion on environmental salience is significantly smaller than in the old EU.

Table 2. Effect of Socioeconomic Conditions, Public Opinion, Party System Polarisation and Strength of Trade Unions and Business Groups on Environmentalism Index

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Environmentalism Index	Environmentalism Index	Environmentalism Index	Environmentalism Index	Environmentalism Index	Environmentalism Index	Environmentalism Index
Real GDP per capita	1.45e-05	2.14e-05					-4.43e-05
	[5.90e-05]	[6.33e-05]					[5.89e-05]
Real GDP per capita X new EU		3.22e-05					
		[0.000155]					
Gini Index	-0.390**	-0.538**					-0.521**
	[0.183]	[0.225]					[0.210]
Gini Index X new EU		0.356					0.576*
		[0.364]					[0.334]
Public Opinion Index	0.0360	0.139**					0.161***
	[0.0454]	[0.0583]					[0.0565]
Public Opinion Index X new EU		-0.186*					-0.193**
		[0.0972]					[0.0761]
Polarization Index			0.0170	0.0309			0.0542
			[0.0483]	[0.0535]			[0.0462]
Polarization Index X new EU				-0.0779			
				[0.126]			
Total Coal Production Index					-0.513	-0.472	-0.338
					[0.749]	[0.756]	[0.667]
Total Coal Consumption Index					0.0639	6.393	-0.464
					[1.476]	[7.552]	[1.284]
Collective Bargaining Index					-1.180	-1.169	-2.117*
					[1.206]	[1.208]	[1.087]
Total Coal Consumption Index X New EU						-6.486	
						[7.702]	
Total Coal Production Index X new EU						-7.027	
						[7.295]	
Rile Index							-0.111***
							[0.0298]
Constant	12.78**	10.63*	4.605***	4.634***	5.872***	6.577***	7.780
	[6.055]	[5.981]	[0.830]	[0.835]	[0.867]	[1.530]	[5.890]
Observations	110	110	110	110	110	110	110
R-squared	0.074	0.171	0.001	0.006	0.017	0.036	0.332
Number of countries	22	22	22	22	22	22	22

Notes: Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own Estimations Based on the data from the Comparative Manifesto Project, World Bank, European Value Study, Organisation for Economic Cooperation in Europe and International Energy Association.

Table 3. Effect of Socioeconomic Conditions, Public Opinion, Party System Polarisation and Strength of Trade Unions and Business Groups on Environmentalism Index (EU15)

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Environmentalism Index	Environmentalism Index	Environmentalism Index	Environmentalism Index	Environmentalism Index
Real GDP per capita	2.14e-05			4.40e-05	-5.54e-05
	[7.16e-05]			[7.36e-05]	[7.28e-05]
Gini Index	-0.538**			-0.582**	-0.521**
	[0.254]			[0.262]	[0.239]
Public Opinion Index	0.139**			0.170**	0.155**
	[0.0659]			[0.0697]	[0.0638]
Polarization Index		0.0309		0.0146	0.0782
		[0.0608]		[0.0609]	[0.0584]
Total Coal Production X Total Coal Consumption			-0.436	-0.0562	-0.316
			[0.858]	[0.818]	[0.751]
Collective Bargaining dummy			-1.184	-2.404*	-2.073*
			[1.373]	[1.331]	[1.219]
Rile Index					-0.126***
					[0.0356]
Constant	11.09	5.020***	5.749***	9.474	11.38
	[8.158]	[1.146]	[0.349]	[8.236]	[7.540]
Observations	80	80	80	80	80
R-squared	0.165	0.004	0.001	0.210	0.353
Number of countries	16	16	16	16	16

Notes: standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own Estimations Based on the Data from the Comparative Manifesto Project, World Bank, European Value Study, Organisation for Economic Cooperation in Europe and International Energy Association.

Party System Polarisation

As hypothesised, the effect of party system polarisation appears to be negative and significant with the Climate Index as the dependant variable (see Table 4). However, the tests of the Environmental Index as the independent variable do not confirm this finding (see Table 2).

H2 The stronger the trade unions are and the stronger the coal industry business groups are, the less political parties tend to compete in favour of climate mitigation policies. Moreover, it is the case even in the presence of favourable conditions indicated in the first set of hypothesis.

Coal Industry Business Groups

Neither the tests with the Climate Change as the dependent nor those with the Environmentalism as the independent variable indicate significant impact of the strength of business groups (measured either by the Total Coal Production Index or Total Coal Consumption Index) (see Table 2 - Table 4).

Table 4. Effect of Socioeconomic Conditions, Public Opinion, Party System Polarisation and Strength of Trade Unions and Business Groups on Climate Change Index

	(1)	(2)	(3)	(4)
VARIABLES	Climate Change Index	Climate Change Index	Climate Change Index	Climate Change Index
Real GDP per capita	0.000271			0.000174
	[0.000191]			[0.000266]
Gini Index	0.348			1.570
	[0.779]			[0.912]
Public Opinion Index	0.140			0.156
	[0.134]			[0.119]
Polarization Index		-0.314***		-0.364***
		[0.0946]		[0.120]
Total Coal Production Index			0.285	-1.201
			[1.061]	[1.234]
Total Coal Consumption Index			-8.001	11.74
			[16.83]	[22.71]
Collective Bargaining Index			-	-
Rile Index				-0.0207
				[0.0821]
Constant	-21.07	12.71***	7.795**	-46.68
	[26.58]	[1.943]	[3.030]	[36.04]
Observations	28	28	28	28
R-squared	0.104	0.344	0.014	0.485
Number of countries	6	6	6	6

Notes: standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: Own Estimations Based on the Data from the Comparative Manifesto Project, World Bank, European Value Study, Organisation for Economic Cooperation in Europe and International Energy Association and Carter et al (2017).

Trade Unions

The regression results of the fixed effect model with the Environmentalism Index as the dependent variable suggest that collective bargaining both at sectoral and national level is associated with lower party competition on environmentalism (see Table 2). To the extent that the bargaining at that level reflects the strong position of trade unions, one may conclude that stronger trade unions disincentivise the raise of environmental issues, in line with the hypothesis. The effect is significant in full specification. However, with the Climate Change Index as the dependant variable or in the sample with the EU15 the Collective Bargaining Index is not significant.

8. Party Competition on Climate Change: Polish Case Study

The results of the Polish case study point at a few key findings. As in the quantitative part, I first structure the key findings according to the hypothesis. Later I present the key reasons of why party competition on climate change in Poland is almost non-existent and summarise the findings.

H1 The more favourable the socio-economic conditions are, the more pro-environmental the public opinion is and the more polarised the party system is, the more political parties tend to compete in favour of climate mitigation policies.

The GDP per capita in Poland has been raising since 1991. In 2015, it reached the point of being almost three times higher than in 1991. Regarding the public opinion on the importance of protecting environment, it has become less favourable towards environmental protection. In 2000s, only 40% agreed to give part of their income to prevent environmental pollution. Earlier in 1990s, more than 50% were ready to do so. The party system polarisation, on its turn, has been fluctuating with changing patterns of high and low polarisation (see Table 5).

Hence, with GDP per capita raising steadily, the public opinion becoming less favourable and the party polarisation fluctuating, one should see a mixed picture regarding the salience of environmentalism in party pre-electoral competition. However, it has remained stable low with a very slightly increase before 2011 elections (see the Table 5).

Table 5. GDP per Capita, Public Opinion on Environmental Protection and Party System Polarisation in Poland in Parliamentary Election Years between 1990 and 2017

Year	GDP per capita (US \$)	Public Opinion	Party System Polarisation (0-100)	Environmentalism Salience Index
1991	2235	57.3%	19	2%
1993	2497	57.3%	9	2%
1997	4116	57.3%	14	1%
2001	4981	40%	19	1%
2005	8021	40%	4	1%
2007	11255	40%	4	2%
2011	13893	40%	15	3%
2015	12566	n/a	n/a	n/a

Source: World Bank, European Value Survey, Comparative Manifesto Project..

H2 The stronger the trade unions are and the stronger the coal industry business groups are, the less political parties tend to compete in favour of climate mitigation policies. Moreover, it is the case even in the presence of favourable conditions indicated in the first set of hypothesis.

The strength of coal industry has declined over time, especially as measured by coal consumption. Similarly, also trade unions have weakened (see Table 6).

According to the hypothesis, one should see an increase in the salience of environmentalism and climate change in party competition. However, as already noted before, it has stayed low over the course of time with a negligible increase in 2011 (see Table 6).

Table 6. Strength of Coal Industry Business Groups and Trade Unions in Poland in Parliamentary Election Years between 1990 and 2017

Year	Total Coal Production Index	Total Coal Consumption Index	Labour Union Density Index	Environmentalism Salience Index
1991	94%	76%	33%	2%
1993	91%	73%	28%	2%
1997	92%	68%	20%	1%
2001	89%	62%	15%	1%
2005	87%	59%	18%	1%
2007	86%	57%	15%	2%
2011	81%	54%	13%	3%
2015	n/a	n/a	n/a	n/a

Source: *International Energy Association, OECD.*

Why, despite the changing patterns of factors hypothesised as important for shaping party issue competition on climate change and environmentalism, it has remained stable low in Poland? Why did it not appear on party issue competition even before 2011 elections – the year, in which Poland was steering the EU Council with climate change policy as one of the key topics?

In order to answer this question, I have studied at detail party leaders' debates during the 2011 electoral campaign. I have performed a discourse analysis of news between August 1 and October 9, 2011 (onet.pl, gazeta.pl., thenews.pl), TV debates and party electoral programs.

In 2011 Polish parliamentary elections, five parties passed the electoral threshold and got representation in the parliament: Civic Platform (Platforma Obywatelska, PO) got 39.2%, Law and Justice (Prawo i Sprawiedliwosc, PiS) - 29.9%, Palikot's Movement (Ruch Palikota, RP) - 10.0%, Democratic Left Alliance (Sojusz Lewicy Demokratycznej, SLD) - 8.4% and Polish People's Party (Polskie Stronnictwo Ludowe, PSL) - 8.2%. Only these parties are covered by the study.

From the narrative of party leaders as reflected in the interviews with the mass media, TV debates and election programs, one can firmly assure that the debate about environmentalism and climate policies were non-existent in the electoral campaign before the 2011 elections. Almost in no event political parties talked about these issues. The only place, in which the issues of environmentalism and climate change were addressed, were political parties' programs. Some of the parties had even devoted the entire section and been very detailed, especially about alternative energy sources (see Table 7).

Table 7. Environmentalism and Climate Change in Party Pre-electoral Programs in Poland before 2011 Elections

Political Party	Key Theme
Civic Platform (PO)	<p>Suggests to balance between the EU requirements for clean energy and Polish national interests in obtaining energy from coal.</p> <p>Supports nuclear energy.</p> <p>Supports extraction of shale gas.</p> <p>Supports diversification of energy sources (including shale gas and other gas suppliers).</p> <p>Supports transition to low carbon energy.</p> <p>Supports reforming of energy sector in three ways: (i) increase energy efficiency; (ii) diversification of energy sources; (iii) development of energy efficient and low-emission.</p> <p>Commits to comply with the EU requirements regarding environmental protection and clean energy.</p> <p>Commits to look for funding for renewable energy (e.g. wind).</p>
Law and Justice (PiS)	<p>Emphasises damaging effects of the EU climate and energy package on Polish economy.</p> <p>Associates the EU climate and energy package with increased unemployment, energy prices in Poland.</p> <p>Criticises Tusk's government for not respecting Polish interests in negotiating the EU energy deal.</p> <p>Supports carbon-based energy-efficiency technologies.</p> <p>Supports rational approach to renewable energy sources.</p> <p>Suggests to renegotiate EU energy and climate policy package as it is harmful for Polish economy.</p> <p>Supports Poland's withdrawal from the EU energy and climate policy deal.</p> <p>Suggests to develop nuclear energy.</p> <p>Emphasises the importance of coal also in the future.</p>
Palikot's Movement (RP)	<p>Supports renewable and alternative energy.</p> <p>Supports diversification of gas suppliers.</p> <p>Supports shale gas.</p> <p>Supports reduction of coal-based energy.</p> <p>Cautious about nuclear energy.</p>
Democratic Left Alliance (SLD)	<p>Supports renewable and alternative energy.</p> <p>Suggests to establish Environmental Protection Agency to promote environmental protection.</p>
Polish People's Party (PSL)	<p>Supports development of renewable energy sources and reaching the commitments to the EU climate and energy policies.</p>

Source: Own Analysis Based on Party Election Manifestos before 2013 Elections.

One can point at several reasons for the lack of party *debate* about environmentalism and climate change.

Firstly, political parties tried to *respond* to the issues, which are important to voters and, to a much lesser extent, *shaped* the public opinion. In this respect, the economy, education and welfare were among the most important ones for voters, whereas environmental protection and climate change mitigation policies did not rank at the top. And, indeed, the discourse analysis of news in onet.pl, gazeta.pl and the news.pl between August 1 and October 9, 2011 suggests that the most salient issues in the 2011 party electoral competition were education and pro-family policies, economy and finances, as well as acquiring of the EU funds (which has implication on the country's economy). Moreover, when deciding about the five themes to be covered during the TV debates (considered to be the key pre-electoral event), PO, PLS, SLD and PJN agreed on such topics as health and social policy, infrastructure and regional policy, economy and public finances, foreign policy and rural affairs. Hence, there was

no climate or environmental policy in the electoral debate as no party wanted to bring it up to the electoral debate.

Table 8. Main Themes in Party Pre-election Debates before 2011 Parliamentary Elections in Poland

Political Party	Key Theme
Civic Platform (PO)	Economy, innovation and development, small and medium enterprises, infrastructure, retirement policy, health policy, pro-family policies, education, tax, foreign affairs, freedom of citizens and effective state, social policy.
Law and Justice (PiS)	Smolensk tragedy, education, pro-family policies, small and medium enterprises, security, economy and finances, agriculture, foreign policy and military, social policy, anti-abortion policy, unemployment, EU money, agricultural policy
Palikot's Movement (RP)	Education, bureaucracy, social policy, economy, pro-family policies, separation of religion from state (religion at schools), legalisation of partnerships, refund of in-vitro fertilisation, contraception, marijuana
Democratic Left Alliance (SLD)	Withdrawal of Polish troops in Afghanistan, liberalisation of abortion law, refund of in-vitro fertilisation, pro-family policies, [retirement], in vitro, education, separation of religion from the state
Polish People's Party (PSL)	Economy, education, pro-family policy, agricultural policy, environmentalism

Source: Own Analysis Based on the Articles from the Archives of *onet.pl*, *gazeta.pl*, *thenews.pl*.

Secondly, to some extent, political parties tried to *trespass* each other policy area. Most obvious it was in education and pro-family policies. For example, all the key parties were engaged in the discussion about provision of free kindergarten although the profile of some parties - such as Ruch Palikota – did not “require” participation in such a debate. It was obvious that when any party referred to these issues, the other parties were often responding to it. Since no party had picked up the issue of climate change and environmentalism, there was no incentive of any political party to follow and talk about it.

Thirdly, in a number of issue areas, political parties also tried to *own* the issue. PiS was emphasising Smolensk tragedy, PO – its achievements in infrastructure development (acquiring of the EU funds) and the economy, Ruch Palikota – its liberal stance on moral issues (e.g. in vitro fertilisation, legalisation of soft drugs), SLD – the separation of church from the state. Indeed, one can argue that environmental protection and climate change – as the issues, which are becoming increasingly more important in global public agenda – are good “candidates” for establishing an issue ownership. But no political party tried to own any of them. As argued already before, to a great extent it was because neither environmentalism nor climate change was a salient issue among voters.

Fourthly, one could have expected that Poland's EU presidency, whose one of the key topics in the agenda was negotiating the climate and energy deal, had to act as a powerful external factor increasing the salience of environmentalism and climate change in Poland. However, it did not happen. PO and PSL – the power parties of that time – tried not to raise or enter any debate regarding the climate change. PiS, on their turn, followed the rhetoric of accusing PO for betraying Polish national interests, including Polish stance on the EU climate and energy deal.

Lastly and, probably, most importantly, following the narrative of climate change and energy policy in political parties' programs, it appears that the underlying reason for not competing on the issues of environmentalism, climate change and energy policy is Poland's heavy coal-dependency and popular belief that steering Poland

away from the coal-based energy would create unemployment, slowdown of the economy and, thus, is against Polish national interests. As already mentioned before, such a narrative was keenly supported by then opposition party PiS in its pre-election program (see Table 7). Given the low share of people ready to sacrifice economic growth for environmental protection and the low public salience of environmentalism, no political party dared to compete loudly with the position favouring environmentally friendly climate change policies, although one can find such positions in all but PiS party programs (see Table 7). And, given the pressure of other European countries for Poland to go greener, no party dared to compete openly with the policies strongly advocating support to coal-based energy production and blunt opposition to alternative energy sources. Even PiS, whose program was clearly against climate change mitigation policies (see Table 7), tried to follow a milder discourse in those rare occasions, when confronted by environmental NGOs such as Greenpeace. (For example, when Jaroslaw Kaczynski, leader of PiS, was provoked by Greenpeace demonstration before the PiS conference in autumn 2011, he agreed for a conversation during which he emphasised how important clean and renewable energy is for Poland. If PiS were elected, they would appoint a representative for clean energy. His words were in contradiction to the electoral pledges presented in the party program.) In addition, there is a lack of domestic business groups of alternative energy sources, which could challenge the coal industry in Poland.

9. Party Competition on Climate Change: German Case Study

The results of the German case study point at several interesting findings. As in the previous parts, I first structure the key findings according to the hypothesis. Later I present the key reasons of why party competition on climate change in Germany is not very salient and summarize the findings.

H1 The more favourable the socio-economic conditions are, the more pro-environmental the public opinion is and the more polarised the party system is, the more political parties tend to compete in favour of climate mitigation policies.

The GDP per capita in Germany was raising from 1990 until 1995. In 1995, the country entered into a recession, which lasted until 2001. Afterwards the GDP per capita was steadily increasing until 2008. Since then, it has been fluctuating. In 2014, it reached the point of being around twice as high as that in 1991. Regarding the public opinion on the importance of protecting environment, it was very high in the 90ties (more than half of the population agreed to give part of their income to prevent environmental pollution), but became much less favourable around 2000s (during the economic stagnation). Later, it slightly raised but had not reached the level of 90ties. The party system polarisation, on its turn, has been moderately fluctuating with changing patterns of medium-high and medium-low (see Table 9).

Hence, during the time of economic recession and less favourable public opinion towards environmental protection, which in German case coincided around 2000s, one should see parties competing less on environmentalism and climate change. And, indeed, it is partly the case. As the statistics of the issue salience indexes reflect, parties competed less both on environment and climate change (see Table 9). Similarly, when the public opinion was most favourable on environmental protection (in the first half of 90ties), the salience of environmentalism and climate change was highest. However, despite the improving economic conditions in the second half of 2000s and 2010s, the parties tended to compete on these issues less than in 90ties. Regarding party system polarisation, one cannot observe any pattern (see Table 9).

Table 9. GDP per Capita, Public Opinion on Environmental Protection and Party System Polarisation in German Parliamentary Election Years between 1990 and 2017

Year	GDP per capita (US \$)	Public Opinion	Party System Polarisation (0-100)	Environmentalism Saliency Index	Climate Change Saliency Index
1990	22219	53%	14	15%	n/a
1994	27097	53%	22	11%	11%
1998	27340	29%	21	3%	6%
2002	25205	29%	16	3%	5%
2005	34696	32%	22	4%	6%
2009	41732	32%	14	6%	8%
2013	46530	32%	16	5%	8%
2017	n/a	n/a	n/a	n/a	n/a

Source: World Bank, European Value Survey, Comparative Manifesto Project.

H2 The stronger the trade unions are and the stronger the coal industry business groups are, the less political parties tend to compete in favour of climate mitigation policies. Moreover, it is the case even in the presence of favourable conditions indicated in the first set of hypothesis.

The strength of coal industry has declined over time. Similarly, also trade unions have weakened (see Table 10). According to the hypothesis, one should see an increase in the saliency of environmentalism and climate change in party competition. However, almost the opposite has happened with the saliency indexes of environmentalism and climate change being highest in the first half of 90ties, then sharply dropping and slightly increasing in 2000s (see Table 10).

Table 10. Strength of Coal Industry Business Groups and Trade Unions in Germany in Parliamentary Election Years between 1990 and 2017

Year	Total Coal Production Index	Total Coal Consumption Index	Labour Union Density Index	Environmentalism Saliency Index	Climate Change Saliency Index
1990	n/a	n/a	32%	15%	n/a
1994	56%	29%	30%	11%	11%
1998	48%	25%	26%	3%	6%
2002	43%	25%	24%	3%	5%
2005	42%	24%	22%	4%	6%
2009	37%	24%	19%	6%	8%
2013	31%	23%	18%	5%	8%
2017	n/a	n/a	n/a	n/a	n/a

Source: International Energy Association, OECD.

Why does party issue saliency on environmentalism and climate change in Germany not vary according to the dynamics of the factors hypothesised as important in shaping it? Why has not the party issue saliency on environmentalism and climate change even in the last electoral campaign before 2013 reached the saliency levels of 90ties despite of nearly all the factors being more favourable?

In order to answer this question, I have studied at detail party leaders' debates during the 2013 electoral campaign. I have performed a discourse analysis of news between June 1 and September 22, 2013 (Spiegel.de), TV debates and party electoral programs.

In 2013 German parliamentary elections, four electoral alliances/parties passed the electoral threshold and got representation in the parliament and, consequently, are included in the study: Christian Democratic Union/Christian Social Union in Bavaria (CDU/CSU) got 45.3%, Social Democratic Party (SPD) – 29.4%, the Left (Die Linke) – 8.2%, Alliance 90/the Greens - 7.3%. Free Democratic Party (FDP) got 2.4% and no representation in the parliament. However, since FDP has played an important role in German politics, in general, and in the 2013 electoral campaign, in particular, it has also been included.

Table 11. Environmentalism and Climate Change in Party Pre-electoral Programs in Germany before 2013 Elections

Political Party	Key Theme
Christian Democratic Union of Germany/ Christian Social Union in Bavaria (CDU/CSU)	<ul style="list-style-type: none"> Supports expanding renewable energy Supports increasing energy efficiency Supports diversifying the sources of renewable energy Emphasises the need for promoting affordable energy Wants to discontinue production of nuclear energy by 2022 Acknowledges climate change as one of the biggest challenges Emphasises Germany's leading role in climate protection globally Stands for reduction of greenhouse gas emissions by 30% (entire EU) until 2020 (baseline year – 1990) Stands for reduction of greenhouse gas emissions by 40% (Germany) until 2020 (baseline year - 1990) Stands for achieving of 20% share of renewable energy in total energy consumption (EU level) Stands for improving the current emissions trading system.
Social Democratic Party of Germany (SPD)	<ul style="list-style-type: none"> Supports expanding renewable energy Supports increasing energy efficiency and saving Emphasises the need for promoting affordable energy Stands for achieving 45% of electricity through renewable energy by 2020 and 75% by 2030 Stands for reduction of greenhouse gas emissions by 95% until 2050 (baseline year – 1990) (40% until 2020, 60% until 2030 and 80% until 2040)
Free Democratic Party (FDP)	<ul style="list-style-type: none"> Supports clean, secure and affordable energy Stands for reduction of greenhouse gas emissions by 80-95% until 2050 (baseline year – 1990) (40% until 2020) Rejects emissions trading system through CO2 tax, but stands for expanding emissions trading across the entire transport and heating sector Stands for financing climate protection in developing countries Stands for setting "demanding recycling quotas" for industrial and household waste Supports animal welfare Supports climate policy as the central element in German foreign affairs

Alliance 90/the Greens (Grüne)	Defines climate protection as the priority Stands for total abolition of coal energy Stands for achievement of 100% renewable energy until 2030 Promotes gas as “bridging energy” on the way to achievement of total renewable energy Stands for reduction of greenhouse gas emissions by 95% until 2050 (baseline year – 1990) (40% until 2020, 60% until 2030 and 80% until 2040) Stands for reduction of greenhouse gas emission by 30% until 2020 at the EU level (baseline year - 1990) Stands for discontinuing production of nuclear energy
The Left (Linke)	Supports financial transaction tax to tackle climate change problems in developing countries Stands for reduction of greenhouse gas emissions by 90% until 2050 (baseline year – 1990) (50% until 2020) Stands for abolition of coal energy by 2040.

Source: Own Analysis Based on Party Election Manifestos before 2013 Elections.

From the narrative of party leaders as reflected in the interviews in the mass media, TV debates and election programs, one can argue that the debate about environmentalism and climate policies were not very salient in the electoral campaign before the 2013 elections.

The place, in which the issues of environmentalism and climate change got mostly addressed, were political parties' programs. All political parties except for the Left had been quite elaborate about the energy policy and the future targets of renewable energy (see Table). However, in party leaders' *debates*, the issue of climate change and/or environmentalism was scarcely touched upon.

One can point at several reasons for the lack of *active debate* about environmentalism and climate change.

Firstly, the public opinion before the 2013 elections was favourable towards the party-in-power and, in particular, its leader Angela Merkel. Hence, CDU/CSU chose to have an electoral strategy, which *responded* to voters' mood and expectations. It talked very little about any substantive policy issues but rather emphasised its leader Angela Merkel as the guarantor for *status quo*, that, according to most voters, was important to sustain. The challenge of other parties was to compete with CDU/CSU and provide a clear alternative vision. Since CDU/CSU was not eager to enter any debate, it was difficult for other parties, especially SPD and FDP, to bring any policy issue on the electoral agenda. Moreover, in most important issues, voters considered CDU/CSU as most competent (see, for example, Infratest dimap DeutschlandTREND September 2013 quoted in Hoff and Hough, 2017), which apparently made other parties even more cautious in picking up such key issues as economics, employment and finances. Hence, there was a substantial lack of any issue appearing in the electoral campaign, not only the climate policy.

Secondly, although Germans are among the most “climate change concerned” nations in Europe (NatCen, 2017), still energy policy ranks only as the fourth most important issue in determining their voting behaviour, at least not for the 2013 elections (see Infratest dimap 2013 DeutschlandTREND September). Put it differently, only 40% of Germans consider future energy policies as important in influencing their votes far behind such issues as appropriate wages, reliable pensions and securing an appropriate standard of living). Therefore, the parties did not have particularly big incentives to compete on climate change mitigation policies. By emphasising, if at all, the “bread and butter issues”, they again tried to *respond* to voters' concerns.

Thirdly, according to Dawson and Thielborger (2013), many voters in Germany seem to consider party positions on climate change very similar. Indeed, all the key parties have acknowledged climate change as a problem and have agreed to tackle it. Although there are important differences about the urgency of the matter (i.e. the time span of transition to clean energy), still parties might have found it difficult to compete on the issue about which there is a broad agreement and the difference lies on technicalities. As Dawson and Thielborger (2013) put it, “[t]he more technical the disagreement, the more difficult it is for voters to understand the relevant issues and for opposition parties to voice these differences on the campaign”. Hence, from the perspective of voters at least, the issue of climate change was not *owned* by any political party. Although one could have expected that the Greens had a clear ownership on climate change mitigation policies, the key aspects of the climate mitigation policy (transition to clean energy) was well addressed by other political parties such as SPD and FDP.

Lastly, as the previous years before the 2013 elections were overshadowed by the financial and economic crisis in Europe and Germany’s role in stabilising the situation, it was of utmost importance for voters to be certain how Germany would continue to be involved in solving the crisis and how it would affect Germans. Hence, this external factor could have driven voters’ attention away from other issues, including the climate policy.

Table 12. Main Themes in Party Pre-election Debates before 2013 Parliamentary Elections in Germany

Political Party	Key Theme
Christian Democratic Union of Germany/ Christian Social Union in Bavaria (CDU/CSU)	Economy, employment, public finances, energy policy, war in Syria, xenophobic attitudes towards refugees
Social Democratic Party of Germany (SPD)	Economy, fiscal policy, health policy, minimum wage, pro-family policies, retirement policies, euro crisis management, tax fraud
Free Democratic Party (FDP)	Economy and fiscal policy
Alliance 90/the Greens (Grüne)	Social/welfare policies, education
The Left (Linke)	Euro crisis management, social policies, pacifist policies

Source: Own Analysis Based on the Articles from the Archive of Der Spiegel.

10. Conclusion

Regarding the first hypothesis, three key findings should be highlighted.

Firstly, the most interesting discovery relates to the impact of socioeconomic inequality. Political parties tend to talk about environmentalism less when inequality is higher. It might be either due to other issues becoming more important for voters or due to associated costs of environmental protection and climate change policies, which disproportionately affect the poorest citizens. Interestingly and somewhat unexpectedly, the economic conditions as measured by real GDP per capita do not seem to determine party issue competition on environmentalism.

The strong and positive effect of socio-economic inequality on environmentalism and the strong correlation between the salience of environmental issues and climate change issues suggest that this socio-economic factor is crucial in determining the latter. However, due to a small sample size, the direct empirical evidence on this

cannot be established - the regression results, indeed, show the positive effect of the factors, however, these effects are not statistically significant in some specifications.

Secondly, the quantitative study also confirms the association between public opinion and party issue competition – more environmentally favourable public opinion is associated with higher party issue salience on environmentalism. Given the strong reverse causality between public opinion and party issue salience, as discussed in the literature, the results of the performed tests are not sufficient to determine the direction of causality. However, the findings of both case studies point towards the direction of public opinion shaping party issue competition. One of the key reasons why political parties did not talk about environmentalism or climate change neither in Poland 2011 nor in Germany 2013 was the relatively low salience of these issues among voters. No key political party tried to highlight climate change or environmentalism as one of the key campaign issues (i.e. increase its salience among voters) despite the fact that, for example, in Poland there was a window of opportunity due to its EU presidency.

Thirdly, while some results of the quantitative study confirm the effect of party system polarisation on the salience of climate change, there is no robust evidence for its impact on the salience of environmentalism. Similarly, the selected case studies do not lead to consider that either higher (Poland 2011) or lower (Germany 2013) party system polarisation was an important factor in party issue competition.

As concerns the second hypothesis, one can point at two key findings.

Firstly, although the quantitative study does not show any effect of the coal industry business groups on the salience of environmentalism or climate change in party issue competition, the Polish 2011 case study clearly points to the “fuel-dependency narrative”. Voters believe that refusing from coal and introducing alternative sources of energy would create economic downturn and unemployment and, at least partly, such a narrative is sustained by the involved coal industry companies. In Germany, where production of coal is much lower, further transition towards clean energy is supported by all political parties and the opposition from coal industry does not seem so strong.

Secondly, the effect of trade unions is in line with the hypothesis. Indeed, as predicted, in the countries, in which there are stronger trade unions, party competition on environmentalism is lower. As already argued in the literature and demonstrated by a few case studies, trade unions seem to be particularly concerned about losing jobs, which may come along with changes of production and consumption and implementation of climate change policies. The Polish 2011 case study approves this. As already mentioned, transition to coal-free energy is regarded as threat to the national economy by trade unions.

To summarize, while the study supports the impact of socioeconomic inequality, public opinion and the strength of trade unions, it does not give conclusive results about the potential role of party system polarisation and shows no effect of the coal industry business groups and the level of real GDP per capita.

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Appendix

In the following two tables, I present the data about the salience levels of climate change (Table No.A.1) and environmentalism (Table No.A.2). The figures show a share of references to either climate change or environmentalism in party election manifestos (per year, per country, per party family). For example, in Danish 2005 national elections, 6% of all policy references of right wing parties and 7% of all policy references of left wing parties were related to climate change (See the Table No. A.1). Or, in Estonian 2003 national elections, 3% of all policy references of the political parties, which had passed the electoral threshold, were related to environmentalism.

Table A1. Party Issue Competition on Climate Change

Country/ Year	Party	'92	'94	'96	'97	'98	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
DNK	c-left		6			3	6				7		18				3				6
	c-right		1			1	6				6		15				1				2
FRA	c-left	8			8			15					8					11			
	c-right	7			4			5					8					5			
DEU	c-left		13			5		5			7				8				11		
	c-right		9			7		5			5				8				5		
IRL	c-left				7			5					8				5				
	c-right				8			4					7				4				
ITA	c-left			7			4					3		7					5		
	c-right			6			5					5		10					3		
GBR	c-left				5		4				5					5					4
	c-right				5		5				5					10					5

Notes: Climate Change Salience Indexes (between 0 and 100) in Six European Countries between 1992 and 2016.

Source: Carter et al, 2017.

Table A.2 Party Issue Competition on Environmentalism

Country	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15
AUT	14			8	2				4			4				6		4								
BEL		4			4				5				3				3			1						
CZE	3		6				4		3				3				5				5					
DNK	6			3				7			3					10		10				3				
EST			3			2			1				3					5				5				4
FIN		14				9			5				8					7				4				
FRA				4				5					3					4					3			
DEU	15				11				3				3			4				6				5		
GRC	3			4			8				4				6			7		11			4			3
HUN	4				3				3				2				3				2				2	
ISL		5				5				10				2					6	4				3		
IRL			2					6					4						3				2			
ITA			3		3		3					4					2		3						9	
LUX					7					6					4					7					4	
NLD					7				7				4	4			5				4		4			
NOR				9				7				6				7				8						
POL		2		2				1				1					1		2				3			
PRT		7				4				3			5			8				6		3				
SVK	8		1		3				3				2				2				3		2			
SVN	6		4				3				3				3				3			5				
ESP				4			4				4				4				8			3				3
SWE		11			7				7				7				7					8				
CHE		7				5				3				6				12				9				
GBR			7					4				4				4						5				5

Notes: Environmentalism Salience Indexes (between 0 and 100) in European Countries between 1990 and 2016.

Source: Comparative Manifesto Project.



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