

The costs of no – a two-dimensional issue-voting model of voter behavior in EU referendums

Derek Beach

Associate Professor

Department of Political Science

University of Aarhus, Denmark

Email: derek@ps.au.dk

Paper prepared for the European Union Studies Association Biennial Conference, Los Angeles, April 23-25 2009.

EARLY DRAFT – PLEASE DO NOT QUOTE

1. Introduction

What determines voter choice in EU referendums? Do voters treat referendums as 'second order elections' due to the complexity of the question posed to them; turning them in effect to a referendum on whether the voter trusts the government to represent his/her best interests, where the standard of evaluation is voter satisfaction with the economic and political performance of the incumbent government (Franklin, Marsh, and Wlezien 1994; Franklin 2002). Or do voters undertake a utility calculation of the costs and benefits of the issue before them (whether the country should ratify an EU treaty) (Svensson 1994, 2002)?

The argument in this paper is that issue-voting is increasingly becoming the prevalent dynamic in EU referendums as voters become increasingly knowledgeable about EU affairs and believe that referendums are important questions worthy of the investment of significant time and effort in understanding the issues. However, in contrast to existing issue-voting arguments, I argue that the calculation of the utility of voting yes/no by voters has two distinct dimensions. Existing models are based upon the idea that voters undertake a utility calculation of the benefits of ratifying an EU treaty (or removing an opt-out), but this does not capture the separate reasoning of voters regarding what happens in the event that the country votes no. One can easily imagine situations where voters are not convinced that the benefits of a given treaty do not outweigh their conservative bias towards preserving the status quo, but that they are convinced that they have no other choice but voting yes when a no vote is perceived as resulting in a costly exit of the country from the EU.

This paper develops a two-dimensional issue-voting model that theorizes that voter utility calculations take place on two separate dimensions: the benefits of the treaty and the costs of a no vote. After a brief discussion of the state of the art on voting behavior in EU referendums, the two-dimensional issue-voting model is developed in section three. The model is operationalized in section four, including tests of whether there are in fact two empirically distinct dimensions. Competing explanatory variables drawn from the second-order thesis are also operationalized. The explanatory power of the competing explanatory variables are tested on survey data from four Danish EU referendums in section five. The Danish cases are chosen both to avoid measuring instrument induced bias if surveys from other countries are utilized, but more importantly in order to more accurately reflect the

conditions under which EU referendums are increasingly being held under. In other words, both the political knowledge of voters and the political salience of the question are relatively high.

The results show that both dimensions do matter, although voter calculations regarding the benefits of the treaty have twice the explanatory power as voter calculations of the costs of no. It is also found that partisan cues do matter as a mediating variable between issue-specific calculations and voting behavior.

2. State of the art

How do voters determine whether to vote yes or no in an EU referendum? Many commentators and pro-EU politicians believe that the average voter is not competent to evaluate the costs and benefits of a treaty sent to ratification in a referendum, and therefore treat them as a popularity contest of the sitting government. In situations where voters are satisfied with the performance of the government they will endorse the proposal and vice versa. In the scholarly literature on voting behavior in referendums this is termed the '*second-order election thesis*' (Franklin 2002; Franklin, Marsh, and Wlezien 1994; Reif and Schmitt 1980; Ivaldi 2006). The argument that underlines this view is that voters lack the necessary cognitive skills to undertake a utility evaluation of a specific proposal, and therefore follow the government's recommendation and endorse the proposal therefore in situations where they are satisfied with the government's performance and trust the government.

Other scholars contend that voter behavior in referendums on important EU matters is similar to normal elections, where voters decide based upon the issues (Merrill and Grofman 1999). Early versions of the *issue-voting model* as regards EU referendums argues that they are decided by voters' *general attitudes* towards European integration (Svensson 1994, 2002), whereas more recent formulations focus more explicitly on voter attitudes towards the specific question they are posed (e.g. Hobolt 2006a; 2007). While it is usually not made explicit in issue-voting models, it is assumed that these issue-related attitudes are based upon

voter evaluations of their utility gains in relation to EU integration based upon the socio-economic predispositions of the individual voter.

A series of intervening and mediating variables have also been suggested between the second-order and issue-voting schools. For instance, Simon Hug has argued that the *institutional context* of a referendum matters (Hug 2002). When a referendum is constitutionally required we should expect that voters will decide based upon the issue, whereas when a government chooses to hold a referendum, voters are more likely to treat it as a plebiscite on the performance of the government. Franklin has suggested that the *level of salience* of a referendum matters, in that when a question has high political salience we should expect voting based upon the issue, whereas in less salient referendums we should expect second-order dynamics (Franklin 2002). As referendums across Europe have become politically contentious (with one notable exception being the Spanish 2005 referendum on the Constitutional Treaty), a consensus has begun to develop around the issue-voting thesis.

However, while most scholars agree that EU referendums are increasingly the subject of issue-voting, there is still a considerable debate about how voters evaluate the utility of a proposal and the nature and impact of campaign effects (e.g. framing). It is naturally unrealistic to expect that the average voter is a form of human computer that is able to evaluate systematically whether a proposal is in his/her own interests. Instead the debate on voter behavior has centered around the question of what form of cognitive short-cuts are utilized, and the degree to which they enable voters to act 'as if' they had full information.

Lupia has suggested that voters are able to utilize political cues from multiple competing sources during a campaign as a tool to evaluate a treaty (Lupia 1994). Voters evaluate the sender's identity and their potential agenda along with the content of the message itself. Voters therefore reason along the lines, 'if business group X supports the treaty, then a public sector worker such as myself should be opposed to it'. By using the '*who is behind it*' heuristic short-cut, Lupia has provided evidence that voters can act 'as if' they had full information about the costs and benefits of a specific proposal (see also Lupia and McCubbins 1998; Lau and Redlawsk 2006). This implies that campaign effects and endorsements matter little for the final result.

An alternative argument that makes less heroic demands upon the cognitive abilities of the average voter is that they utilize cues from the political parties that they identify with. Drawing upon arguments from the Michigan school, the *partisan identification thesis* views

voters as cognitive misers, and therefore they tend to not shop around as much in the political cue market as Lupia and others have argued. If a voter is satisfied enough with a political party's positions to entrust it with representing their interests in a general election, the voter will also listen to the recommendations of the party they support in the referendum campaign. Hobolt has tested the partisan identification thesis and found quite strong support in the 1992 and 1993 Danish referendums for the argument that parties can present a proposal in such a way that it appears more beneficial to their voters, or alternatively that the consequences of voting no (reversion point) are very negative (Hobolt 2006a). The key difference between this view and the second-order thesis is that while voters in a second-order election are merely expressing satisfaction/dissatisfaction with the incumbent government, in the partisan identification thesis partisan cues are filters through which information about the issue pass through, and therefore have important mediating effects between issue-voting calculations and vote intentions.

The next section discusses certain problems with the existing issue-voting model and develops an alternative, two-dimensional issue-voting model that takes into account the choice context faced by voters in referendums. After describing the research design in section four, the explanatory power of the new cost/benefit model is then tested in section five, controlling for competing independent variables such as partisan identification and second-order factors.

3. A two-dimensional issue-voting model of voter behavior

A new two-dimensional issue-voting model of voter behavior is developed in this section. It improves upon existing issue-voting models by making explicit the choice context relating to what happens in the event that a proposal is rejected (i.e. the costs of no). In an attempt to explicitly theorize the importance of the reversion point, I have developed a revised model of issue-voting in order to explicitly measure both voter attitudes towards the issue in question, but also crucially voter evaluations of what the consequences are of voting no.

Existing issue-voting models draw upon median voter theory (Downs 1957; Merrill and Grofman 1999). The problem with utilizing proximity models is that the choice faced by

voters in normal elections differs substantially from a referendum. In a normal election, a voter with an ideal point on a single policy dimension (e.g. a L-R politics continuum) chooses the candidate whose program is most closely matched with the voter's ideal point. In contrast, voters in a referendum face only a binary yes/no choice.¹ If voters reject the proposal this results in either a continuation of the status quo (in situations where an EU treaty is rejected by a large country like France, or when it involves an attempt to eliminate an opt-out clause as in the euro-referendums in Denmark and Sweden), or in a new reversion point where a country is either forced to exit the EU or is forced to muddle through and secure ratification in a subsequent referendum (as in Denmark in 1992 and Ireland in 2001 and 2008). Therefore, voters in EU referendums not only have to calculate their ideal position on the issue in question, but also have to evaluate the utility of the expected reversion point in the event of a no-vote.

In order to capture this dynamic I argue that issue-voting in referendums should be conceptualized as *two separate dimensions*, where voters evaluate the costs/benefits of the issue in question but also evaluate the costs/benefits of the reversion point in the event of a no vote. Hobolt does incorporate what voter calculations of the consequences of a no vote into her issue-voting model, but these are still conceptualized as being part of a single issue dimension.² I argue however that the two should be treated separately as these two dimensions of utility calculation are not always correlated. For instance, in the Euro referendum in 2000 in Denmark, I show below that while voters were positive regarding the issue in question (adopting the euro), they did not believe that there were significant costs associated with voting no.

In my issue-voting model, voter utility calculations therefore have two separate dimensions that determine the utility of voting Yes for the individual voter. First, voters evaluate the *benefits of the treaty* under consideration (B_t). In comparison to many of the existing formulations of the issue-voting thesis in EU referendums that use general voter

¹ - Naturally voters in both elections and referendums face the choice of whether to vote. While this has been examined by Szczerbiak and Taggart (2004), voter turnout will not be investigated in this paper.

² - Hobolt's arguments are similar to those of Bowler and Donovan (1998), who argue that voters use the reversion point as a default reference in determining the utility of the proposal.

attitudes towards integration, I theorize that voters also undertake an evaluation of the perceived economic and political benefits of the actual treaty under consideration.

The issue-specific calculation of the utility of potential policy streams with a new treaty or removal of an opt-out is based upon voter evaluations of the tradeoff between fears of surrendering national sovereignty in key issue-areas and the perceived benefits that can be gained by strengthening the EU's ability to deal effectively with key voter priorities such as foreign policy and developmental aid, unemployment, or the environment. In other words, voters are actually calculating the utility of the issue they have been asked to vote on – the treaty itself. These factors can be measured operationally by looking at polls on what factors motivated voters to vote yes/no, along with specific measures of perceptions of the benefits and disadvantages of a given treaty.

Given the complexity of predicting policy streams, voters do utilize other simpler forms of heuristics in calculating utility. Drawing upon advances in behavioral decision theory (Sniderman, Brody, and Tetlock 1991; Rau and Ledlawsk 2006), I argue that voters also utilize affective heuristics to simplify the cognitive demands of their choice, using their general views towards the EU as a starting point for a utility calculation, echoing Svensson and others. These heuristics are reflected in questions such as how the voter views the EU (benefit for the country or not), and do they desire more or less integration (desired speed of integration), along with economic-oriented questions such as whether the EU benefits their country, and whether it benefits 'people like me'. The impact of this affective heuristic depends upon the strength of voter attitudes towards the EU. When a large majority of voters have either very strong negative or positive images of EU integration, we should expect that their evaluation of a particular treaty is dominated by this affective heuristic. This was arguably the case in the Spanish referendum on the Constitutional Treaty, where the very positive views of Spanish EU membership dominated voter calculations.³ However, in most circumstances this affective heuristic acts only as a *filter* for information, with voter calculations of the *utility of the treaty itself* based upon information and cues from campaigns constituting the most important factor.

The second dimension of voter calculations relates to their beliefs regarding the *costs of voting no*. In my model voters are seen as being risk-averse, preferring what they know to the

³. See Eurobarometer 2005.

uncertainty of change. This is based upon findings from prospect theory in social psychology (Kahneman and Tversky 1979, 1984; Jervis 2004; also Bowler and Donovan 1998:33f). If a no merely results in the reversion to a stable and known status quo, given this conservative bias of voters we would expect that they have few incentives to vote yes (low utility of yes vote).

The costs of no (C_n) are based upon calculations of the perceived consequences of voting no and the attractiveness of the reversion point, and are inversely related to the utility of voting yes. The costs of no are perceived as low when voters believe that a no is 'costless', resulting therefore in a low utility of voting Yes as they prefer to keep what they know (the status quo). In contrast, if voters believe that a no vote would equal a very costly exit from the EU, this would result in a high utility for voting yes, and therefore would most likely overrule voter predispositions towards preserving the status quo. Key to these calculations are voter perceptions about the certainty of high negative costs of no. While it would be difficult to convince French voters that the EU could continue without them, this proposition has been far easier to sell to Danish or Irish voters as a plausible possibility. An indicator of the size of the perceived C_n are questions in opinion polls that ask what voters believe will happen if the country votes no, i.e. is exit believed to be a probable outcome?

At the individual level we should expect that voter evaluations of both high levels of B_t and C_n are positively associated with the probability of voting Yes in a referendum. When a voter is strongly convinced of the benefits of the treaty, they are more prone to vote Yes and vice versa. Additionally, when a voter is convinced that voting No would have substantial negative costs, we should also that the probability of voting Yes would be greater.

- H1 The higher the perceived benefits of a treaty, the greater the probability that the voter says yes
- H2 The higher the costs of voting no, the greater the probability that the voter says yes

At the aggregate electorate level we should expect that the placement of the median voter can be used for heuristic reasons as a means to understand aggregate referendum results when voter scores on the two dimensions are normally distributed. We should expect a Yes outcome when the overall sum of B_t and C_n is greater than zero for the median voter, or

when both B_t and C_n have positive levels. These predictions are depicted in table 1. When the median voter's valuation of both the benefits of the treaty and the costs of no are positive, we should expect a Yes vote. The opposite situation is when both B_t and C_n are negative; here a No vote is expected. Two mixed situations occur when either B_t or C_n are negative and the other is positive. A Yes vote should be expected when the overall summation of utility on the two dimensions is positive and vice versa. It is important to note here that the argument is that neither B_t nor C_n stand alone. It is not enough to convince a majority of voters of the benefits of a treaty if they at the same time believe that voting no is costless, as given that voters tend to be risk-averse we should expect that unless a large majority believes that B_t are *very* high, a majority would prefer to keep the status quo that they know by voting no.

		Bt	
		High (>0)	Low (<0)
Cn	High (>0)	YES	YES if $B_t + C_n > 0$
	Low (<0)	YES if $B_t + C_n > 0$	NO

Table 1 – Referendum outcome predictions of the two-dimensional issue-voting model.

This aggregate model is intended will be only used for *heuristic purposes* for two reasons. First, as the quality of survey data prevents us from utilizing it as an accurate predictor. While survey data allows us to detect patterns in the data, the quality of measurement does not enable us to have so finely calibrated measures that we can with any accuracy state that a slightly positive sum of the utility of B_t and C_n will result in a slender Yes victory. Second, given that a normal distribution of voters is not always to be expected the median voter will not always be the predictor in an empirical test of the two-dimensional model. Underlying the model is an understanding of voting behavior in probabilistic terms, where as I discussed above I hypothesize that as the utility of voting yes increases due to perceived large benefits of the treaty and high costs of voting no, the probability that the voter says yes also increases. If the distribution is not normal, there can be situations where the distribution is skewed towards one extreme, where the probability of voting yes are either

extremely low or high – meaning that what becomes of interest is the distribution and not the placement of the median voter.⁴ For instance, if the median is negative we can still expect to see a yes vote if the distribution of voters is positively skewed and the mean is a positive value.

4. Research design

This paper investigates the explanatory power of the two-dimensional model and other competing independent variables in a comparative analysis of four different Danish EU referendums. The Danish case is utilized for two reasons. First, the methodology of the surveys is roughly similar; in particular the type and phrasing of questions is similar across the different surveys. This reduces the risk of the introduction of serious bias due to the measuring instrument. Second, utilizing the Danish case enables us to hold certain contextual factors such as the level of knowledge of EU affairs and the political salience of the campaign constant.

While there have been six Danish referendums on EU affairs,⁵ I analyze only the four following referendums: the Single European Act (1986), the two Maastricht referendums (1992, 1993) and the Euro (2000). In the 1972 Accession Referendum the issue under consideration was whether to accede to the EU, and as voters had little previous knowledge and experience with the EU it can be argued that the context of the referendum was not the same as subsequent referendums. The 1998 referendum on the Treaty of Amsterdam is also not included in the analysis as the poor methodology used in the survey hinders the operationalizing of any of the explanatory variables, even if we choose to utilize very indirect proxies. There is a large degree of variation across the four cases in the levels of the explanatory variables, making it possible to examine the impact of high and low values of the explanatory variables upon the dependent variable.

⁴ - This part of my analysis is still very tentative, and I am very open to suggestions on how I can improve this reasoning.

⁵ - Throughout this paper I use the term EU as a generic term referring the EU instead of using the more correct legal terms EEC, EC and EU depending upon the time period and area of cooperation being referred to.

Before I turn to a discussion of the operationalization of the competing explanatory variables, it is first necessary to discuss whether the theoretical arguments about two separate dimensions of voter utility calculations are also evident when we look at the empirical data. I have utilized a principal component analysis of the different issue-related items in the surveys in order to detect whether there were multiple underlying dimensions within the data sets.⁶ Eigenvalues represent the correlation of different combinations of the variables with underlying dimensions in the data. As the first few dimensions detected express most of the variation in the variables, a general rule is that additional dimensions (or component factors) can be discarded. While there is considerable debate about how many principal components (or dimensions) should be retained, here I utilize a robust and conservative cut-off defined as eigenvalues that are significantly greater than one and that contribute substantially to the explanation of variation.⁷ In all four cases two dimensions have eigenvalues greater than one, but in two of the cases (1992 and 2000) there are three or more dimensions that have eigenvalues greater than one. However, when we utilize the cut-off suggested by Cattell (described in Dunteman 1989:22-23), where the use of 'scree' graphs is suggested in order to evaluate the additional variation explained by more dimensions, only two dimensions would be also retained in the four cases. In all of the cases, the variables that load highest onto the two separate dimensions are those that were conceptually predicted to correlate with B_t and C_n respectively, suggesting that the two theoretical dimensions also have an empirical representation in the two underlying dimensions detected using the principal component analysis.

Turning to the question of how the different explanatory variables were operationalized, both B_t and C_n are indices that were operationalized by compiling questions drawn from surveys undertaken after the referendum. Care was taken in the selection of questions in order to create a substantively valid measurement of each theorized dimension, and in particular questions that captured elements that would reflect the utility calculation of voters in each dimension. For example, for the 1992 referendum, three questions were chosen to measure voter evaluations of the costs of no C_n : 1) 'will a no result in a Danish exit from the

⁶ - For more on principal component analysis see Dunteman 1989.

⁷ - More lenient cut-offs have been suggested. Jolliffe suggests a cut-off of 0.7, which would have resulted in retaining three to four different dimensions in most of the cases.

EU'; 2) 'will a no result in a loss of jobs'; and 3) 'will a no result in large economic losses for Denmark'. In contrast, questions relating to respondent views of the benefits of voting yes and the general benefits of continued EU membership were utilized to measure voter evaluations of the benefits of the treaty. Examples include questions that asked whether voters supported continued steps towards political union, and whether voter valued Danish sovereignty over the economic benefits of EU membership. After items were selected based upon how highly they loaded onto the two different dimensions in the principal component analysis, the inter-item reliability of each index was then evaluated.⁸

The 'second-order election' hypothesis was operationalized by investigating questions relating to voter satisfaction with the sitting government. Two proxies were utilized. The first proxy (governmental satisfaction) relates to respondent answers in three of the surveys to the question of whether they would vote for a governmental party 'if there was an election held tomorrow'. In one survey a more valid question for measuring governmental satisfaction was employed, with asked the question 'do we need a change of government as quick as possible?'. The second proxy measures voter trust of politicians; a question that was utilized in three of the four surveys.

The partisan identification thesis is measured using a categorization utilized by Garry, Marsh and Sinnott (2005). Voters are split into three different categories; whether they supported a governmental party, or whether they supported either an opposition party advocating a yes or a no vote.

⁸ - Cronbach's alpha values were greater than 0.7 for most of the indices, although in the case of the 1986 SEA the C_n index was 0.61.

5. Analysis and findings

The comparative empirical tests in the following are conducted in two stages. First, the relative explanatory power of the competing independent variables drawn from the two dimensional issue-voting model and the second-order election thesis are assessed in a comparative analysis. The analysis then controls for the possibility that partisan identification is an important mediating variable between issue-voting and vote intentions. In the next subsection the analysis investigates whether we can predict the aggregate outcome of the four referendums based upon the median voter with the two-dimensional issue-voting model.

5.a. Assessing the explanatory power of the issue-voting and second-order theories

Did voters decide based upon the issues, or can referendums in the four cases better be seen as 'second-order' elections? If voters decided based upon the issues, were concerns about the costs of voting no also manifest? In other words, did both of the two dimensions have substantial explanatory power? Finally, to what extent did partisan cues matter? Does the evidence suggest that partisan identification is an important mediating variable between attitudes and voter choice, as suggested by Hobolt (2006a)?

In order to test the issue-voting versus second-order theses I conducted logistic regressions of the three explanatory variables with the dependent variable of whether voters said Yes or No. Table 2 depicts the results for each of the four cases. Logit coefficients are reproduced, but marginal effects are also simulated in order to demonstrate how much the Yes vote is predicted to change depending upon an increase of the explanatory variables of a half standard deviation below to above the mean, holding other variables constant at their mean. As the governmental vote variable is binary, marginal effects can only be simulated going from its minimum value (0) to maximum value (1).

SEA 1986				
	Model I	% impact		
Bt index	0.587*** (.075)	61.4%		
Cn index	0.221*** (.042)	34.9%		
Gov. vote	0.143*** (.034)	43.2%		
Constant	-3.769*** (.458)			
	N = 370	LR chi ² = 425.26		
	Pseudo R ² = 0.84			
TEU 1992				
	Model I	% impact	Model II	% impact
Bt index	0.414*** (.036)	44.9%	0.405*** (.035)	44.4%
Cn index	0.161*** (.029)	18.9%	0.164*** (.029)	19.6%
Gov. vote	0.053** (.016)	20.9%		
Trust in politicians			0.076* (.030)	7.6%
Constant	-3.02*** (.203)		-3.081*** (.222)	
	N = 666	LR chi ² = 518.46	N = 670	
	Pseudo R ² = 0.56		Pseudo R ² = 0.55	
EA 1993				
	Model I	% impact	Model II	% impact
Bt index	0.613*** (.070)	43.8%	0.514*** (.046)	39.1%
Cn index	0.254*** (.042)	26.4%	0.238*** (.028)	27.1%
Gov. vote	0.001 (.020)	n/a		
Trust in politicians			0.109*** (.301)	9.9%
Constant	-4.06*** (.409)		-4.02*** (.282)	
	N = 424	LR chi ² = 344.97	N = 773	LR chi ² = 629.34
	Pseudo R ² = 0.62		Pseudo R ² = 0.61	
Euro 2000				
	Model I	% impact	Model II	% impact
Bt index	0.542*** (.043)	52.3%	0.539*** (.038)	52.5%
Cn index	0.284*** (.031)	33.8%	0.279*** (.027)	33.1%
Gov. vote	0.045** (.016)	17.3%		
Trust in politicians			0.022 (.025)	n/a
Constant	-4.35*** (.309)		-4.28*** (.268)	
	N = 717	LR chi ² = 612.67	N = 913	LR chi ² = 774.25
	Pseudo R ² = 0.62		Pseudo R ² = 0.612	

Table 2 – Predicting the yes-vote in the 1986, 1992, 1993 and 2000 EU referendums.

Sources: DDA 1192, 1743, 1784, 4013.

note: *** $p < .001$, ** $p < .01$, * $p < .05$ ** significant at 0.01; * significant at 0.05

note: All tests run using logit in Stata 10. Marginal effects computed based on King et al (2000).

CLARIFY: Software for Interpreting and Presenting Statistical Results. Version 2.0, Cambridge MA: Harvard University, (gking.harvard.edu).

Two alternative models are used in order to test the robustness of the second-order elections thesis across different operationalizations. Model one investigates whether intentions to vote for a governmental party are correlated with voting yes or no, where based upon the theory we should expect to see that voters that intend to vote for the government will also vote yes and vice versa. Intentions to vote for the government were statistically correlated with the dependent variable in three of the four cases, but the substantive impact varied from increasing the probability of voting yes by 43.2% in 1986 to 17.3% in 2000. While the governmental vote variable had its strongest substantive impact in the 1986 case, it can also be argued that the political context of the referendum was unique. The major yes parties were all in government whereas the major opposition parties advocated a no vote; meaning that the strong substantive correlation detected can also be an expression of voters merely following the partisan cues of their respective parties, and not just them expressing their satisfaction/dissatisfaction with the sitting government.

A second measure of second-order factors is used in model two that measures 'trust in politicians'. In the three cases in which the question was asked, it is statistically significant in only two cases (1992 and 1993), but has a low level of explanatory power in both of these.

Both of the two dimensions of issue-voting were statistically significant and substantively important, providing strong evidence that voters in the four cases were motivated more by issue-related concerns, but also that there were two distinct dimensions of their utility evaluations. The overall picture was however one where voter evaluations of the benefits of the treaty were double as important in predicting the yes vote as were concerns about the costs of no.

However, it could be argued that while issue-voting appears to matter much more than second-order effects, the models employed do not enable us to detect the degree to which voters are voting based upon their satisfaction with the sitting government or the degree to which they are merely following cues based upon their partisan identification. The need to control for partisan identification becomes clear when we look at the 1992 and 1993 referendums. In 1992 voters for the two governmental parties *Venstre* and *Konservative*

overwhelmingly followed the yes recommendation of their parties. After the change of government in January 1993, the second-order school would predict that *Venstre* and *Konservative* voters would trend towards voting no in protest against the new Social Democrat-led government, but this was not the case as there no significant change in yes percent amongst *Venstre* and *Konservative* voters in 1992 and 1993.

The degree to which party identification plays a role is tested by calculating the predicted probability of voting yes along different values of both the B_t and C_n indices controlled for three different categories of party: governmental yes party, opposition yes party, and opposition no party. Figures 1 to 8 depict the predicted probabilities across the three party categories in the four cases (see appendix 1). Substantively we should interpret the figures as illustrating the probability of a yes-vote across different values of the two indices. For instance, in figure 3 for the 1992 TEU referendum, a voter who supports a governmental party who has a value on the B_t index of five has a predicted probability of 63.8% of voting yes.

The results suggest that partisan identification matters as a mediating variable between issue-voting and voting intention in most circumstances. While partisan cues did not matter at extreme valuations of either the B_t or C_n indices, its impact becomes apparent at scores in between extremes. This substantiates the findings of Hobolt (2006a). In the 1986 referendum a voter with a neutral placement of five on the B_t index that supported the government had a 93.7 percent probability of voting yes, whereas for an opposition no party the same placement on the index resulted in a predicted probability of voting yes of 53.6 percent. In other words, voters followed the recommendations of their parties to a certain extent irrespective of their issue attitudes.

The same picture holds in the 1992 TEU referendum, where a voter with a placement on both the B_t and C_n indices of five is over forty percent more likely to vote yes depending upon whether they support a governmental party or an opposition no party. In the 2000 euro referendum a voter with a placement of five on the B_t scale had a predicted probability of voting yes of 44.1 percent, whereas for an opposition no party it was only 9.8 percent.

However partisan identification did not matter in the 1993 referendum. Comparing a governmental party voter with an opposition yes or opposition no voter results in differences across predicted probability of less than ten percent for both the B_t and C_n indices; differences that are not statistically different from each other. There are at least two different possible

interpretations of this result. The first is that as the 1993 referendum was in effect a re-run of the 1992 referendum, voters had a better understanding of the issues than they usually have, and therefore were better able to shop around for information, making them less reliant on partisan cues. An alternative explanation could be that the political context in the 1993 referendum was different than the other referendums, in that there was a higher degree of consensus across parties about supporting a yes due to domestic developments in late 1992/early 1993. Of particular importance was the shift in the views of the Socialist People's Party (SF) leadership to advocating a yes vote in 1993 for political gain; a move that was not reflected in changes in voter views. Therefore, by including SF as an opposition yes party, the importance of partisan cues is arguably masked by the large differences in the degree to which certain parties such as SF are out of step with their voters. However, even if this is the case, the argument can still be made that if partisan identification really mattered we should expect major shifts in voters depending upon what their party recommended in 1992 and 1993. This was not the case, providing evidence that 'pure' issue-voting motivations were more important than the direction of partisan cues in the 1993 referendum.

Concluding, these findings offer a mixed picture of the importance of partisan identification and party cues as a mediating variable. The 1993 case provided evidence that suggested that voters are competent enough to evaluate the utility of a proposal without the top-down cues from political parties, whereas in the other cases the findings suggested that partisan cues do have a substantial impact on voting intentions.

5.b. Aggregate level results – explaining the referendum outcomes

It was argued in section three that the two-dimensional model can also be utilized for heuristic purposes as a means to understand aggregate referendum outcomes. Assuming that the two issue-voting dimensions have a neutral mid-point, it was argued that when the median voter has an *overall* positive utility valuation across the two dimensions we should expect that a yes vote is more likely and vice versa. As operationalized in this paper, the two indices have a neutral value of five as the midpoint. Values less than five can be translated into meaning that the voter has a negative utility valuation of voting Yes on the issue dimension (either B_t or C_n), whereas values greater than five are equivalent to a voter believing that

there are positive utility gains attached with voting Yes. If for example a respondent scores high on the B_t index, this can be translated into meaning that the respondent believes that there are significant utility gains from voting yes to the treaty in question.

The values of the median voter in each of the cases are reproduced in table three. Unfortunately, as discussed above the median voter model cannot be utilized when the distribution of voter valuations is not normally distributed. In circumstances when voters are not normally distributed what becomes of interest is the *direction* in which the distribution is *skewed* along with the *mean* of voter scores. Roughly normal distributions existed in cases where I only reproduce the median scores.

	Bt	Cn	Predicted outcome	Actual outcome
SEA (1986)	Median = 4.6 and negatively skewed distribution (mean = 4.1) (negative utility)	Median = 5 and positively skewed (mean = 6) (positive utility)	Expect yes vote given high positive value of Cn and that Bt + Cn positive	Yes vote (56.2% yes)
TEU (1992)	Median = 4.98 (negative utility)	Median = 4.4 and negatively skewed (mean = 4.3) (negative utility)	Expect no vote given values < 5 for Bt and Cn	No vote (49.3% yes)
TEU + EA (1993)	Median = 5.3 (positive utility)	Median = 5 (neutral utility)	Expect yes vote given overall positive value of Bt + Cn	Yes vote (56.7% yes)
Euro (2000)	Median = 6.1 but slightly negatively skewed (mean = 5.6) (positive utility)	Median = 3.3 (negative utility)	Expect no vote given negative overall utility valuation due to low Cn value	No vote (46.8% yes)

Table 3 – Explaining the aggregate referendum outcomes with a median voter model.

Sources: DDA 1192, 1743, 1784, 4013.

When voters are not normally distributed, it was argued in section three that we can expect a yes vote if the distribution of voters is positively skewed and the mean is greater than five even if the median voter herself has a value of less than five. In cases where voters were normally distributed I only reproduce the value of the median voter, whereas in all other cases measures of the distribution are included. Looking at the results, our theoretical expectations were fulfilled in all four cases. In the 1986 referendum a majority of voters were not convinced of the benefits of the treaty (median of $B_t < 5$ and distribution skewed in a negative direction). What appears to have been decisive is that a majority of voters were convinced that a no vote in 1986 would have substantial negative consequences for Denmark, and therefore they believed they had no other choice than voting yes (C_n was positively skewed with a mean of six).

In the 1992 TEU referendum the picture was one where voters were neither convinced of the benefits of the treaty nor were they convinced that voting no would have significant costs. not surprisingly the outcome was a no vote, although the margin was very close (49.3% yes). After the attachment of the Edinburgh Agreement to the terms of Danish ratification of the Treaty of Maastricht, table three suggests the following interpretation of the referendum outcome. Danish voters were both convinced that the new 'Maastricht without thorns' was substantially better ($B_t = 5.3$) but a larger part of the electorate was convinced that voting no again would result in negative utility gains (C_n median in 1993 was 5, whereas in 1992 the distribution of voters was skewed towards low values of C_n).

The results for the euro referendum in 2000 suggest that while Danish voters were convinced that the introduction of the euro in Denmark was a good thing, they were not convinced that saying no would have significant costs. Therefore, while voters believed that the euro was a good thing, they were not convinced that it was such a good thing that it trumped their status quo bias. As the costs of no were perceived to be low, this resulted in an aggregate no vote. Concluding, at the aggregate level the two-dimensional model performs relatively well in explaining referendum outcomes.

6. Conclusions

The argument in this paper is that while issue-voting is the primary determinant of voter behavior in EU referendums, instead of thinking that voter utility calculations are solely based upon their valuation of 'the issue', I have provided evidence in this paper that suggests that there are two distinct dimensions that need to be differentiated from each other. Voters decide based both upon their valuation of the benefits of the issue they are posed and their expectations about the costs of voting no. As these two dimensions do not necessarily correlate, we need to incorporate two distinct dimensions into future issue-voting models in order to capture more fully voting behavior.

After reviewing the theoretical state of the art I developed a theoretical model where I argued that issue-voting in referendums should be conceptualized as *two separate dimensions* of utility space, where voters evaluate the costs/benefits of the issue in question but also evaluate the costs/benefits of the reversion point in the event of a no vote. The need to include two distinct dimensions was substantiated empirically using a principal component analysis where conservative cut-offs on the number of dimensions to include pointed to the need to include two dimensions.

First, voters evaluate the *benefits of the treaty* under consideration (B_t). The issue-specific calculation of the utility of potential policy streams with a new treaty or removal of an opt-out is based upon voter evaluations of the tradeoff between fears of surrendering national sovereignty in key issue-areas and the perceived benefits that can be gained by strengthening the EU's ability to deal effectively with key voter priorities such as foreign policy and developmental aid, unemployment, or the environment. In other words, voters are actually calculating the utility of the issue they have been asked to vote on – the treaty itself.

The second dimension of voter calculations relates to their beliefs regarding the *costs of voting no* (C_n). In my model voters are seen as being risk-averse, preferring what they know to the uncertainty of change. If a no merely results in the reversion to a stable and known status quo, given this conservative bias of voters we should expect that they would attach positive utility gains to a no vote – on the other hand, if a no vote is perceived by the voter as resulting in the costly exit of the country from the EU, we should expect that a no vote would have very negative utility.

The explanatory power of the two-dimensional issue-voting model was tested in a two stage comparative analysis of four Danish EU referendums. While keeping the national context constant had important benefits, it also limits the scope of generalization of the findings, as there are important contextual variables such as the level of knowledge of the EU, the institutional context of the referendums (Hug 2002) or the salience of EU referendums that are very different in other EU countries. Therefore the findings should be treated cautiously until future studies can investigate whether they can travel to other national contexts.

First I investigated whether the two dimensions of the issue-voting model were correlated with voting behavior, controlled for second-order factors and the possibility that partisan identification was an important mediating variable. The results showed, depending upon how the second-order thesis was operationalized, that it either had much weaker explanatory power than the two-dimensional issue-voting model, or even lacked statistical significance. The two dimensions of the issue-voting model were both statistically significant in all of the four cases and were substantively important. It was found that by increasing the value of B_t from $\frac{1}{2}$ standard deviation below its mean to $\frac{1}{2}$ above the mean resulted in an increase in the probability of a voter saying yes by between 44 percent in the 1993 referendum and even 61 percent in the 1986 case (see Table 2). The same marginal effects for C_n were in general about half the size of those for B_t , but were still substantial in all of the cases (varying from 18.9 percent in 1992 case to 34.9 percent in the 1986 case).

I also controlled for the possibility that while voters decided based upon the issues they were at the same time dependent upon cues from the parties they vote for in national elections. Therefore, the partisan identification thesis views partisan cues as filters through which information about the issue pass through, and therefore these cues have important mediating effects between issue-voting calculations and vote intentions. It was found that in most cases that partisan cues mattered for voters with non-extreme positions on the two issue indices. A supporter of an opposition party that advocated a No vote was forty percent less likely to vote yes than a voter with the same views on the benefits of the treaty (here a B_t score of five). Intriguingly, it was however found that partisan effects were not manifest in the 1993 case (the second Danish referendum on the Maastricht Treaty). Here I argued that as this case was in essence a re-run, voters were more familiar with the issues involved, and therefore they were better able to 'shop around' in the information market, making them less

dependent upon partisan cues. However this is a very tentative finding, and I am open to alternative explanations.

The second stage of the empirical test was to test the overall predictions of the referendum outcomes based upon the two-dimensional issue-voting model. Drawing upon median voter theory, it was argued that we should expect a Yes vote when sum of the utility valuations of B_t and C_n of the median voter were positive and vice versa. It was also argued that as median voter theory assumes a normal distribution of voters in order for the median voter to be a predictor of outcomes, in situations where distributions are skewed we need to focus instead on the direction that it is skewed and the mean. While the empirical operationalization of the two dimensions was not measured in utility terms, it was argued that as a score of five was the neutral mid-point in both indices, that we could translate these scores into positive and negative utility terms.

The results showed that the model performed quite well. In the 1992 Danish No vote a majority of voters had a negative overall valuation of the issue, as the median voter on the B_t was slightly below five, and a majority of voters did not believe that saying no would have significant negative costs (indeed many believed renegotiation was a possibility). The values in the 1993 case suggest that Danish voters were convinced by the government that they were now voting on a 'Maastricht without thorns' (B_t of the median voter was 5.3), and more voters were convinced that they had no alternative but no to vote (C_n of the median voter was 5). The 1986 and 2000 cases were both 'mixed' cases. In 1986, despite a majority of voters not being convinced that the Single European Act was a good thing, a Yes vote was secured as a clear majority of voters believed that they had no other choice. In the 2000 case, despite a majority believing that the euro was a good thing the result was a No as a large majority believed that voting no had no significant negative costs, and could even be beneficial (many Danish voters wanted to keep what they knew instead of embracing the unknown euro) (C_n of median voter was 3.3).

Concluding, I have provided evidence that issue-voting was important in the Danish case, but crucially that there are two separate elements of issue-specific utility calculation by voters. In order to capture the dynamics of voter behavior it is necessary to not only analyze voter beliefs about the benefits of the issue, but also their expectations about the costs of voting no. As these two dimensions are not logically nor empirically correlated, I argue that it

is therefore necessary to treat them as two distinct dimensions in future analysis of voter behavior in EU referendums.

These findings do have important practical implications if future comparative studies find that there also are two distinct dimensions in issue-voting in other countries than Denmark. The Irish electorate will most likely be voting for a second time on the Lisbon Treaty in the fall of 2009. While the different declarations adopted by the EU in the fall of 2008 might be able to convince Irish voters that they are voting on a 'Lisbon without thorns', it will be very interesting to see whether they are also convinced (as Danish voters were in 1993) that voting no a second time would have significant negative costs for Ireland. If they are not convinced of this, we should expect a No vote unless Irish voters can be convinced that the benefits of a 'Lisbon without thorns' are very great.

7. References

- Anderson, Christopher J. 1998. "When in Doubt, Use Proxies: Attitudes Toward Domestic Politics and Support for European Integration." *Comparative Political Studies* 31 (5):569-601.
- Bowler, Shaun and Todd Donovan. 1998. *Demanding Choices: opinion, voting, and direct democracy*. Ann Arbor : University of Michigan Press,
- DDA. Various. *Dansk Data Arkiv* [Danish Data Archive].
- De Vreese, Claes and Hajo Boomgaarden. 2005. "Projecting EU Referendums. Fear of Immigration and Support for European Integration." *European Union Politics* 6 (1): 59-82.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. New York: Addison-Wesley Publishing.
- Dunteman, George H.. 1989. *Principal Component Analysis*. Sage University Paper #69, series Quantitative Applications in the Social Sciences.
- Eurobarometer. 2005. *The European Constitution: post-referendum survey in Spain*. European Commission: Directorate General Press and Communication.
- Franklin, Mark N. 2002. "Learning From the Danish Case: A Comment on Palle Svensson's Critique on the Franklin Thesis". *European Journal of Political Research* 41(6): 751-757.
- Franklin, Mark. N., Michael Marsh, and Christopher Wlezien. 1994. "Attitude Towards Europe and Referendum Votes: A Response to Siune and Svensson." *Electoral Studies* 13(2): 117-121.
- Gabel, Matthew J. 1998. "Economic Integration and Mass Politics: Market Liberalization and Public Attitudes in the European Union." *American Journal of Political Science* 42 (3): 936-53.
- Garry, John, Michael Marsh, and Richard Sinnott. 2005. "'Second-order' versus 'Issue-Voting' Effects in EU Referendums: Evidence from the Irish Nice Treaty Referendums." *European Union Politics* 6 (2): 201-221.
- Hobolt, Sara Binzer. 2006a. "How Parties Affect Vote Choice in European Integration." *Party Politics* 12 (5): 623-647.
- Hobolt, Sara Binzer. 2006b. "Direct Democracy and European Integration." *Journal of European Public Policy* 13 (1): 153-166.
- Hobolt. 2007. ???
- Hooghe, Lisbeth and Gary Marks. 2005. "Calculation, Community and Cues: Public Opinion on European Integration." *European Union Politics* 6 (4): 419-444.
- Hug, Simon. 2002. *Voices of Europe: Citizens, Referendums, and European Integration*. Lanham: Rowman & Littlefield Publishers, Inc.

- Ivaldi, Gilles. 2006. "Beyond France's 2005 Referendum on the European Constitutional Treaty: Second-Order Model, Anti-Establishment Attitudes and the End of the Alternative European Utopia." *West European Politics* 29 (1): 47-69.
- Jervis, Robert. 2004. "The Implications of Prospect Theory for Human Nature and Values." *Political Psychology* 25(2): 163-176.
- Jupille, Joseph and David Leblang. 2007. "Voting for Change: Calculation, Community, and Euro Referendums." *International Organization* 61 (4): 763-782.
- Kahneman, Daniel and Amos Tversky. 1979. "Prospect Theory: An analysis of decision under risk." *Econometrica* 47 (2): 263-291.
- Kahneman, Daniel and Amos Tversky. 1984. Choices, values, and frames. *American Psychologist* 39: 341-350.
- King, Gary, Michael Tomz, and Jason Wittenberg. 2000. "Making the Most of Statistical Analyses: Improving Interpretation and Presentation." *American Journal of Political Science* 44(2):347-361.
- Lau, Richard R. and David P. Redlawsk. 2006. *How Voters Decide: Information Processing during Election Campaigns*. Cambridge: Cambridge University Press.
- Lupia, Arthur. 1992. "Busy Voters, Agenda Control, and the Power of Information." *American Political Science Review* 86(2): 390-403.
- Lupia, Arthur. 1994. "Shortcuts versus Encyclopedias: Information and Voting Behavior in Californian Insurance Reform Elections." *American Political Science Review* 88(1): 63-76.
- Lupia, Arthur and Mathew D. McCubbins. 1998. *The Democratic Dilemma. Can Citizens Learn What They Need to Know?* Cambridge: Cambridge University Press.
- Merrill, Samuel III and Bernard Grofman. 1999. *A Unified Theory of Voting*. Cambridge: Cambridge University Press.
- Moravcsik, Andrew. 2005. "The Politics of Plebiscites." *Newsweek*, online-edition, 9 May 2005.
- Moravcsik, Andrew 2007. "no Power to the People." *Newsweek*, online-edition, 5 February 2007.
- Reif, Karl Heinz and Hermann Schmitt. 1980. "Nine Second-Order National Elections: A Conceptual Framework for the Analysis of European Elections Results." *European Journal of Political Research* 8 (1): 3-44.
- Siune, Karen and Palle Svensson. 1993. "The Danes and the The Maastricht Treaty: The Danish EC Referendum of June 1992." *Electoral Studies* 12(2): 99-111.
- Siune, Karen, Palle Svensson and Ole Tonsgaard. 1993. *Det blev et nej*. Århus: Politica.
- Siune, Karen, Palle Svensson and Ole Tonsgaard. 1994. *Fra et nej til et ja*. Århus: Politica.
- Sniderman, Paul M., Richard A. Brody, and Philip E. Tetlock. 1991. *Reasoning and Choice: Explorations in Political Psychology*. Cambridge: Cambridge University Press.

- Svensson, Palle. 1994. "The Danish yes to Maastricht and Edinburgh. The EC Referendum of May 1993." *Scandinavia Political Studies* 17(1): 69-82.
- Svensson, Palle. 2002. "Five Danish Referendums on the European Community and European Union: A Critical Assessment of the Franklin Thesis." *European Journal of Political Research* 41(6): 733-750.
- Szczerbiak, Aleks and Paul Taggart. 2004. "The Politics of European Referendum Outcomes and Turnout: Two Models." *West European Politics* 27(4): 557-583.
- Taggart, Paul. 2006. "Keynote Article: Questions of Europe – The Domestic Politics of the 2005 French and Dutch Referendums and their Challenge for the Study of European Integration." *Journal of Common Market Studies* 44, Annual Review: 7-25.
- Worre, Toben. 1988. "Denmark at the Crossroads: The Danish Referendum of 28 February 1986 on the EC Reform Package." *Journal of Common Market Studies* 26(4): 366-388.

Appendix 1

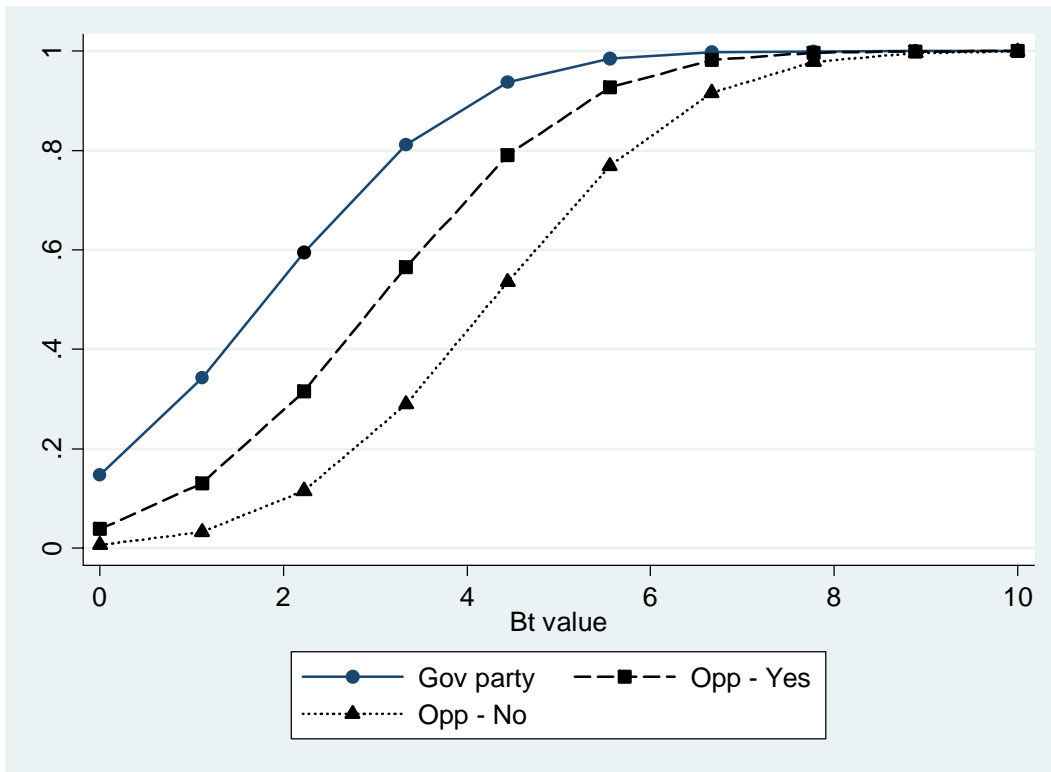


Figure 1 – Impact of Bt values controlled for partisan identification in the 1986 SEA referendum.

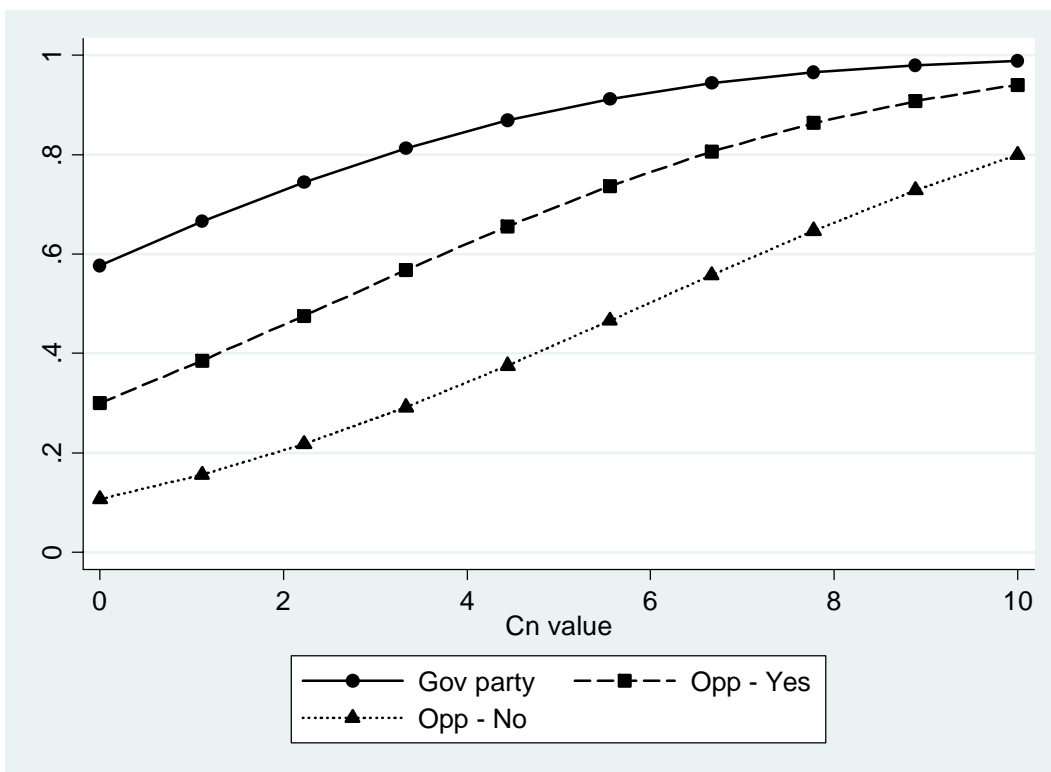


Figure 2 – Impact of Cn values controlled for partisan identification in the 1986 SEA referendum.

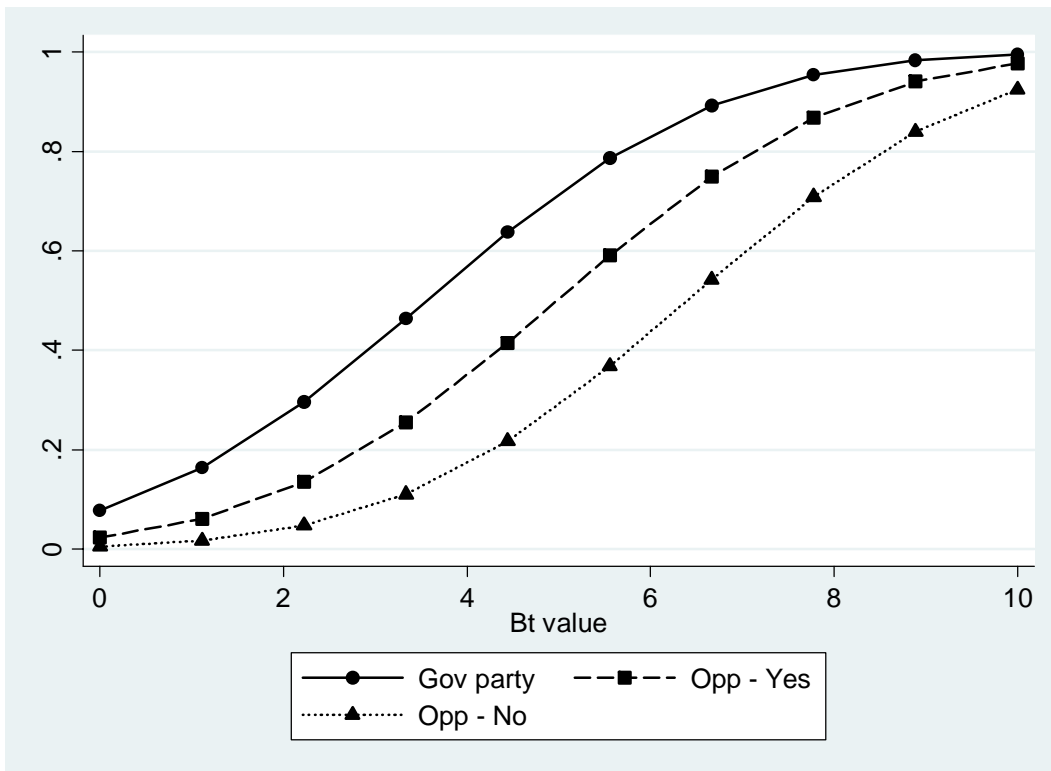


Figure 3 – Impact of Bt values controlled for partisan identification in the 1992 TEU referendum.

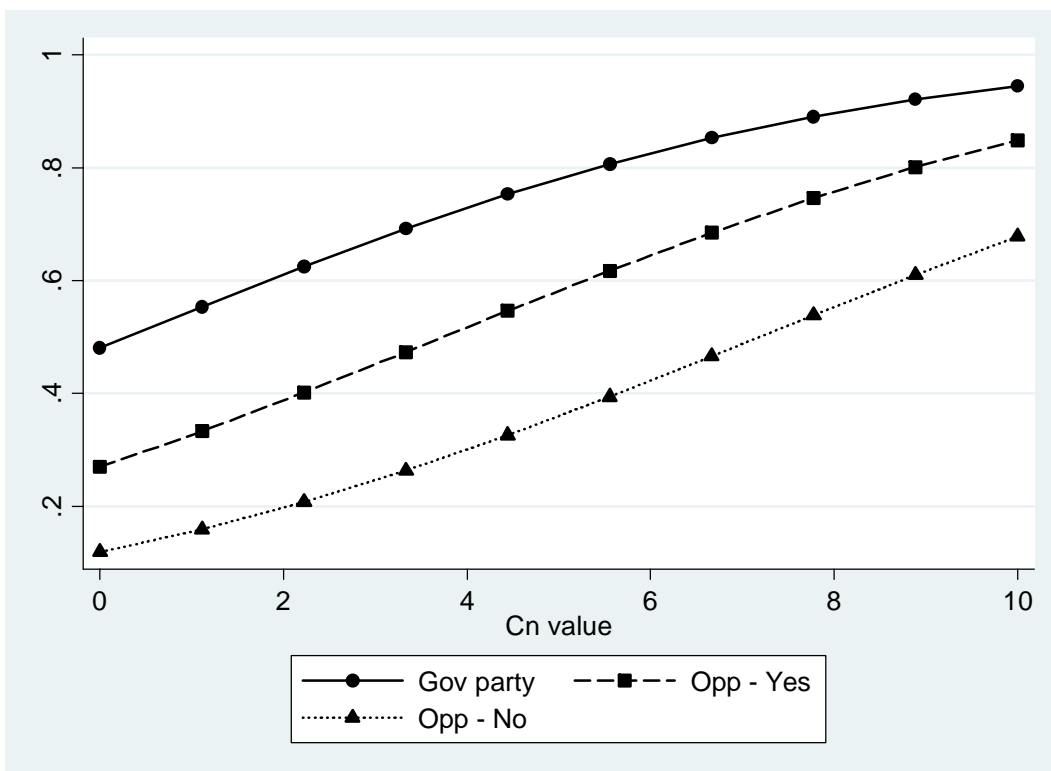


Figure 4 – Impact of Cn values controlled for partisan identification in the 1992 TEU referendum.

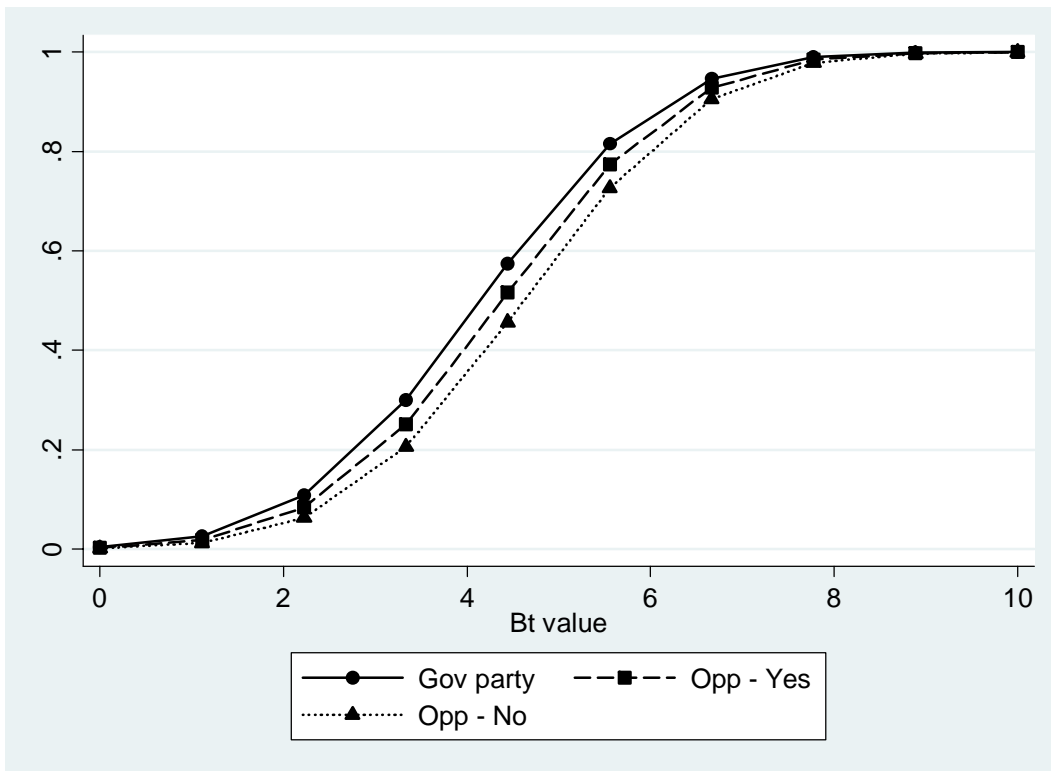


Figure 5 – Impact of Bt values controlled for partisan identification in the 1993 EA referendum.

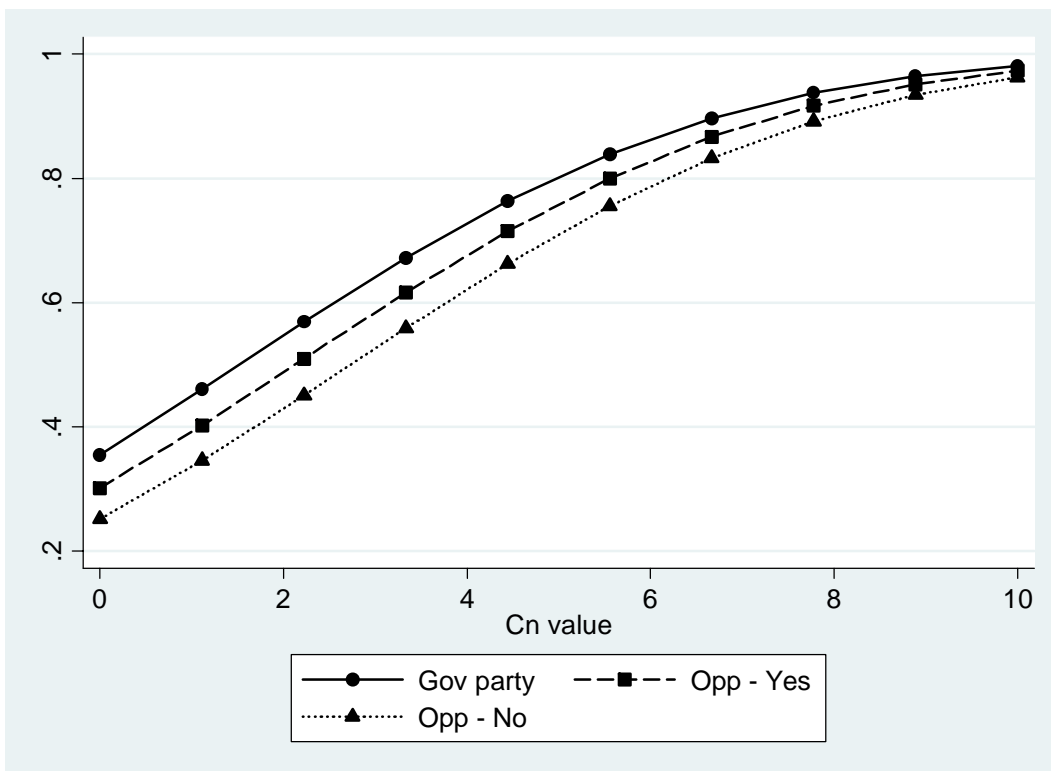


Figure 6 – Impact of Cn values controlled for partisan identification in the 1993 EA referendum.

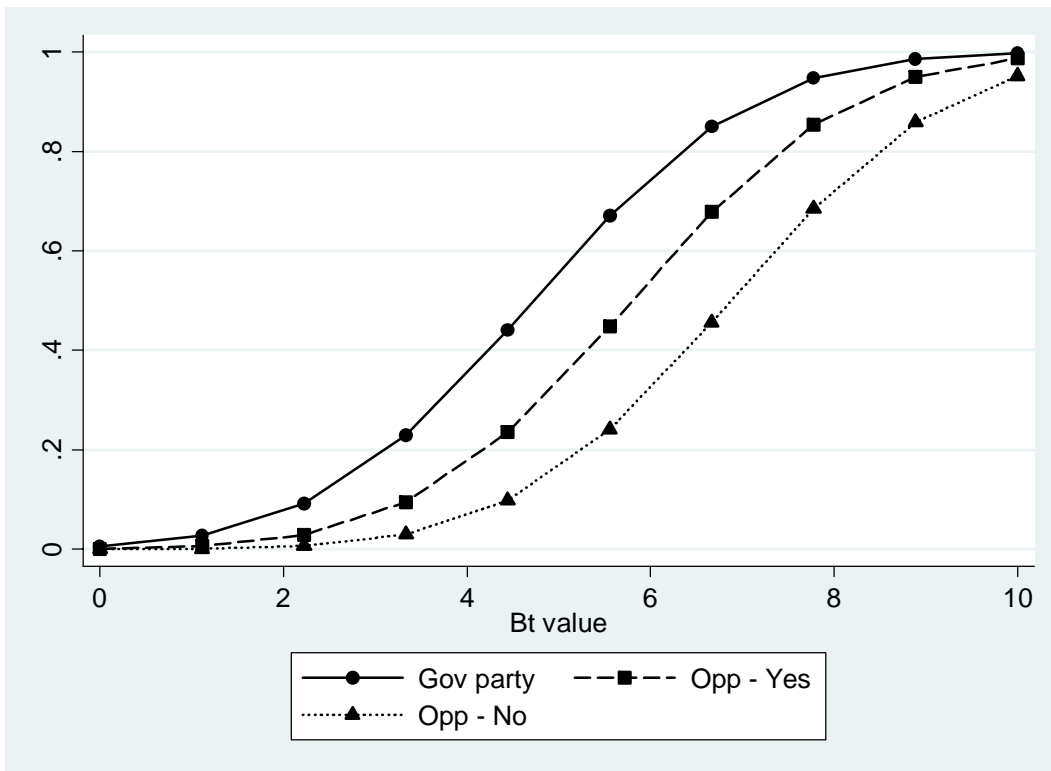


Figure 7 – Impact of Bt values controlled for partisan identification in the 2000 Euro referendum.

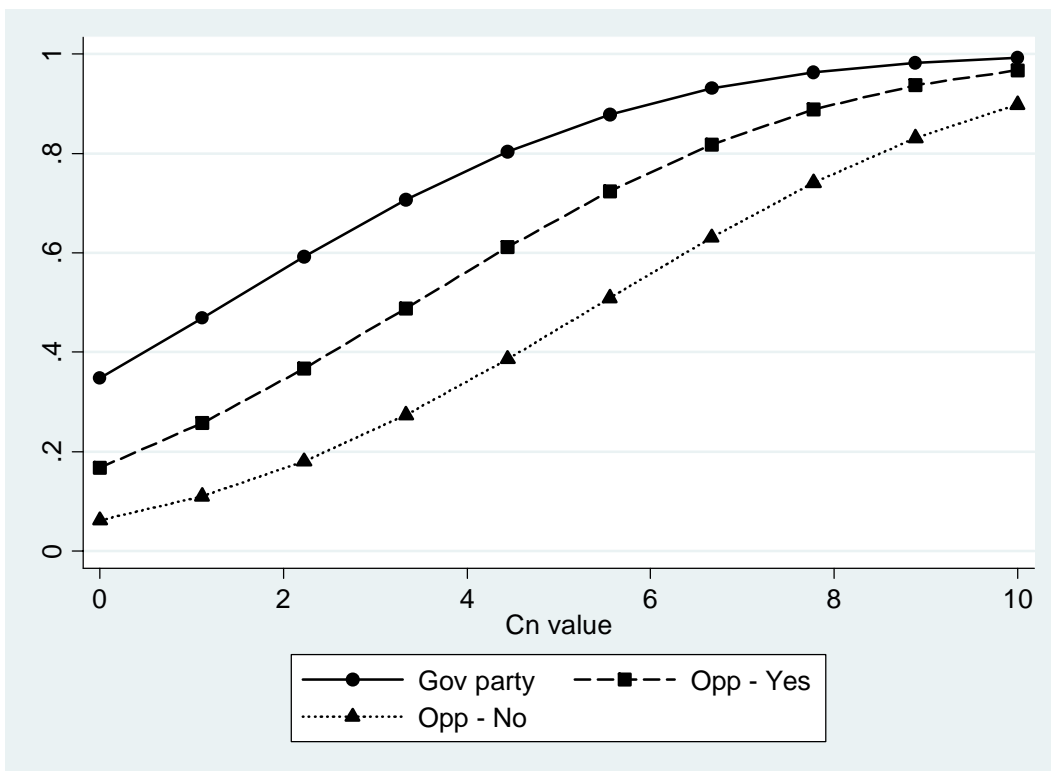


Figure 8 – Impact of Cn values controlled for partisan identification in the 2000 Euro referendum.