To Retrench or Not to Retrench. A Simulation of the Strategic Situation of Social Democratic Parties and the Emergence of Welfare State Retrenchment

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Abstract

Why do Social Democrats engage in welfare state retrenchment? They risk losing votes and implement policy far from Social Democratic utopia. Nevertheless, several (partly) Social Democratic cabinets introduced retrenchment measures. The literature fails to answer this question, because it lacks an explicit operationalization of party behavior: when do parties pursue office, votes or policy? We simulate a formal model that predicts when Social Democrats engage in retrenchment. It formalizes policy-seeking, vote-seeking and office-seeking behavior and shows how the variation in this behavior explains the sometimes puzzling behavior of Social Democrats. We find that office-seeking Social Democrats are the most likely candidates to pursue welfare state retrenchment with an unexpected effect of the economy. Vote-seeking Social Democrats are responsive to economic changes and only retrench if inflation pushes the mean voter to the right. Policy-seeking Social Democrats do not retrench, however, if faced with a left-wing competitor Social Democrats move towards the centre, increasing the likelihood that they pursue retrenchment. We conclude with proposing a strategy for an empirical test of the model.

Key words: Welfare state reform; political parties; cabinets; decision-making.

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1. Introduction

What motivates Social Democratic parties to pursue (unpopular) welfare state retrenchment measures? Notwithstanding the large body of literature that tries to explain the variation in welfare state retrenchment across governments (for a review see Starke, 2006), few studies consider in a systematic way the strategic situation parties find themselves in as an explanation of welfare state retrenchment.\(^1\) Specifically, Social Democrats engaged in welfare state retrenchment pose a paradox: why do they do it given that introducing retrenchment is associated with electoral defeat (Giger and Nelson, forthcoming, Schumacher et al., 2009) and reducing welfare state generosity does not exactly produce Social Democratic utopia?

Retrenchment takes place when cabinet parties find more utility in introducing the measure than in not introducing it. Parties find utility in obtaining policy\(^2\), vote\(^3\) or office\(^4\) pay-offs (Müller and Strøm, 1999) and it depends very much on the type of party competition and the type of party organization which pay-offs are more important and how easily the pay-offs can be obtained. For example, Social Democrats can lose votes if they pursue vote-seeking, mean-voter oriented strategies in a party system with a party to the left of Social Democrats, as some formerly Social Democratic voters may now become more proximate to the party to the left of the Social Democrats (Kitschelt, 1999, Kitschelt, 2001). Large-N studies of welfare state retrenchment (Allan and Scruggs, 2004, Cameron, 1978, Castles, 2004, Garrett, 1995, Garrett and Mitchell, 2001, Ha, 2008, Iversen and Cusack, 2000, Korpi and Palme, 2003, Rodrik, 1998, Swank, 2002) typically introduce a number of economic and ideological variables. Problematically, even under similar economic conditions across countries, the strategic situations of Social Democrats differ which affects the direct effect of Social Democratic government on the welfare state across countries. In some party systems Social Democrats face left-wing competition and can therefore not move easily to the political centre, or powerful party activists can prevent the party leadership from

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1 We define retrenchment as a reduction in state-financed income replacement rates in case of illness, unemployment or old age and a tightening in conditionality rules for these programs. We are aware that the welfare state is a broader concept and that many reforms are not strictly cases of retrenchment. We, however, focus on the core programs of the welfare state, because retrenchment of these programs is highly unpopular and therefore it is theoretically more puzzling why parties engage in them.

2 The closer implemented policies are to a party’s policy preference, the more policy pay-offs a party receives. Policy-seeking behavior is behavior directed at trying to implement policy as close as possible to the party’s preference (Müller and Strøm, 1999).

3 Parties win vote pay-offs if they increase their vote share. Vote-seeking behavior is behavior directed at increasing the party’s vote share (Müller and Strøm, 1999).

4 Office pay-offs are the power, prestige and the salary associated with gaining important governmental positions, like ministries. Behavior aimed at increasing the access to office is defined as office-seeking behavior (Müller and Strøm, 1999).
diverging from the original ideological mission. Hence, there is important intraparty and intraparty-
system variation that explains behavior of Social Democrats. Although some small-N studies (Green-
Pedersen, 2001, Zohlnhöfer, 2003, Zohlnhöfer, 2009) appreciate the strategic situation as an explanation
of why Social Democrats retrench, being case-studies they do not explore the entire variation in types of
party behavior and the strategic situation that emerge as a consequence of this.

We present a formal model that simulates elections, coalition formation and policy
implementation and predicts when Social Democratic parties implement retrenchment measures. In
order to create the strategic situation of parties we use empirically observed economic data and we let
parties choose policy positions using decision rules derived from the empirical party position change
These decision rules operationalize vote-seeking, policy-seeking and office-seeking behavior and in our
simulations we vary the type of decision rule used by Social Democrats in order to assess what strategic
situation and what kind of response to that situation emerges. We present two simulations. In one, we
consider a three-party system with a Liberal party, Christian Democratic party and Social Democratic
party. This type of party system resembles Austria, UK and Germany (before 1983). In the second
simulation we introduce a party to the left of the Social Democrats, the Democratic Socialists. This type
of party system resembles Germany (after 1983), the Netherlands and is comparable to party systems in
Scandinavia.

Drawing inspiration from recently published agent-based models (ABM) of multi-party
and Sergenti, forthcoming) we simulate our model rather than analytically solving it as is prescribed by
the game-theoretic tradition. The goal of ABM is to simulate the behavior of agents (here: parties) over a
number of sequences allows us to find emergent patterns (here: retrenchment) of agent behavior (de
Marchi, 2005, Epstein, 2006, Miller and Page, 2007). In contrast with game theory, ABM allows the
researcher to introduce more complex decision-making rules, releasing researcher from using overly
restrictive assumptions of agent rationality. Also by imputing real-life data we construct a realistic
assessment of the strategic situation of Social Democratic parties.

The paper is structured as follows. First, we discuss how the literature fails to explore the full
potential of the variance in party behavior. Next, we develop a model that operationalizes the variety in
party behavior and we perform simulations to study the implications of the model’s assumptions for
welfare state retrenchment.
2. The Implicit Treatment of Party Behavior in the Welfare State Literature

The power resources tradition identifies cabinet ideology as the main causal factor of welfare state development. The main finding of this tradition is that a government of Social Democratic composition is associated with welfare state expansion, whereas a government consisting of one or more right-wing parties depresses the development of the welfare state (Allan and Scruggs, 2004, Amable et al., 2006, Castles, 1982, Esping-Andersen, 1990, Huber et al., 1993, Korpi and Palme, 2003). Connecting ideology directly with policy outputs, this tradition implicitly assumes parties to be policy-seeking. However, if we zoom in onto the government level there turn out to be a large number of left-wing governments that retrench (e.g. Nyrup Rasmussen II & III in Denmark, Schröder II in Germany and Kok I in Netherlands) (Vis, 2010).

An important alternative strand of research focuses on socio-economic change as the cause of welfare state reform (Schwartz, 2001). This literature argues that socioeconomic changes fuel demand for policies. For example, high levels of unemployment create a demand for social policies that protect the welfare of the unemployed. Vote-seeking parties respond to such demands by introducing these policies in an attempt to reap electoral gain. Factors that authors have examined include globalization (Adelantado and Calderón Cuevas, 2006, Adserà and Boix, 2002, Cameron, 1978, Garrett, 1995, Garrett and Mitchell, 2001, Ha, 2008, Katzenstein, 1985, Koster, 2007, Rodrik, 1998, Swank, 2002), de-industrialization (Iversen and Cusack, 2000, Manow et al., 2009) and “post-industrialization” (Bonoli, 2007, Castles, 2004, Pierson, 2001b).

The new politics of the welfare state argument integrates both the political reasoning and socioeconomic one. In the 70s/80s the costs of stagflation and long-term unemployment committed all parties to budget austerity, eliminating welfare state expansion as a feasible policy option. On the other hand public opinion did not support welfare state retrenchment (Boeri et al., 2002, Boeri et al., 2001), hence theory predicted that the development of the welfare state freezes. Consequentially, partisan differences become irrelevant for explaining welfare state reform (Castles, 2004, Huber and Stephens, 2001, Kittel and Obinger, 2003).

To explain the cases of retrenchment that did occur, some studies point to the collusion of bad economic tidings with political ones. Kitschelt (2001) argues that parties engage in welfare state retrenchment if they have no credible competition from other parties and if the economic situation demands such a reform. In a case study of German economic policy in the Kohl Era, Zohlnhöfer (2003) concludes that radical reforms only took place when a poor economic situation endangered the electoral
position of the Christian democrats. Similarly, based on prospect theory (Kahneman and Tversky 1979, 2000), Vis (2010) theorizes that when parties end up in a situation of losses because of poor electoral and/or economic prospects, they engage in risky, unpopular behavior such as welfare state retrenchment. From a case study of welfare Green-Pedersen (2002) concludes that a coalition of Christian-democrats and Social Democrats can introduce retrenchment measures with little risk of being punished by voters who simply have no alternative pro-welfare party to turn to.

Problematic in this rich literature, is that there is not an explicit formalization of party behavior. Although many studies pay theoretical lip service to the variation in party behavior, the implications have rarely been studied (Hicks and Swank, 1992, Korpi, 1989, Pierson, 2001a). We propose a model that explicitly studies the variety in party behavior and this changes the pay-offs parties receive from introducing retrenchment (or refraining from it). The main components of such a model are, (1) how parties value office, policy and vote pay-offs, (2) how a good (or bad) economy influences voters and subsequently the vote pay-offs of parties, and (3) how the behavior of other parties affects a party’s ability to gain vote, office (and/) or policy pay-offs. These factors taken together determine the utility of welfare state retrenchment.

3. The utility of welfare state retrenchment

How and why do parties differ in the goals they strive to obtain? We follow Müller and Strøm’s (Müller and Strøm, 1999, Strøm, 1990) framework by arguing that parties differ in the goals they value most (prioritize) and that this is affected by 1) the type of party organization and 2) the type of party system. Assuming that generally speaking party activists are policy-seeking, while party leaders are office-seeking, the intraparty balance-of-power between party members and the party leaders determines whether parties are office-seeking or policy-seeking. A strong presence of party activists forces a party leadership to be policy-seeking. Alternatively, if the party leadership faces a weak party activist base, party leaders can pursue the prestige and salary associated with office. The type of party system determines the importance of gaining votes. Votes are instrumental in gaining access to office or for accomplishing policy goals. In two-party systems winning a majority of the vote is essential to achieve these goals, however in multiparty systems small parties can easily join coalition government without applying vote-maximizing strategies.

Taking into account this goal-diversity, parties calculate for policy proposal what the consequences of the policy (C) are in terms of office, vote and policy gains. Hence, parties calculate an expected vote pay-off (V) from the policy that is the number of votes a party loses or gains because of
the implementation of the policy. Parties calculate whether the policy \((C)\) provides the party with more or less office pay-offs \((O)\) and whether the action \((P)\) is a close as possible to their own policy preference \((P)\). Then the three goals are weighted by their importance. The importance of vote-seeking \((\alpha)\) is determined by the type of electoral system, the importance of office-seeking \((\beta)\) is determined by the strength of the party leader vis-à-vis the party members. Policy-seeking is defined as the opposite of office-seeking, therefore the value of policy-seeking is 1 minus the value of office-seeking \((1-\beta)\). In formal terms, the utility function for a party is:

\[
U_{i,j} = \alpha_{i,j} (V_{p,i,j}) + \beta_{i,j} (O_{p,i,j}) + (1 - \beta_{i,j}) (|C_i - P_{i,j}|)
\] (1)

The central argument of this paper is that the literature lacks an explicit formalization of party goals. Without such a theory we cannot understand and predict why Social Democrats (or other parties) pursue welfare state retrenchment. Therefore, we propose to simulate the outcome of the utility function by imputing real data, but varying the \(\alpha\) and \(\beta\) values. In this way, we can assess how the strategic situation of Social Democrats changes when office-seeking (or vote-seeking or policy-seeking) becomes more (or less) important, and subsequently what kind of behavior (retrenchment or not retrenchment) emerges from this strategic situation.

4. Formal Model of Retrenchment

Some papers in the welfare reform literature propose game-theoretic formal models aimed at predicting welfare reform (Alesina et al., 2006, Hollanders and Vis, 2009). We, on the other hand, simulate our formal model in the tradition of Agent-Based Modeling (ABM). The difference between ABM and game theory is that the latter tries to analytically solve a set of functions finding a closed-form solution, whereas ABM simulates the model by imputing data into the model and finding comparative numerical statistics (Smirnov and Fowler, 2007). The main advantage of ABM in comparison to game theory is that many complex social situations are mathematically intractable, forcing the game theorist to use overly restrictive assumptions in order to make the model analytically solvable (Axelrod, 2008). Since, we argue that parties apply at least three different decision rules, our model is difficult to solve analytically. Therefore, we choose to simulate the model using realistic data in order to assure real-life comparability. Table 1 details the steps in the simulation for every run.
**Table 1. Steps in simulation for every run.**

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Parties take position $P$ using the AGGREGATOR, HUNTER or GOVERNATOR rule.</td>
</tr>
<tr>
<td>2.</td>
<td>Voters update their preferences. Increases in inflation push electorate rightward, increases in unemployment push electorate leftward.</td>
</tr>
<tr>
<td>3.</td>
<td>Voters vote for most proximate party OR punish Social Democratic party or Christian Democratic party for welfare state retrenchment in previous run.</td>
</tr>
<tr>
<td>4.</td>
<td>Parties calculate the utility of every possible coalition, using the utility function.</td>
</tr>
<tr>
<td>5.</td>
<td>Parties choose the coalition with the highest utility.</td>
</tr>
<tr>
<td>6.</td>
<td>Cabinet decides on coalition position, which leads to retrenchment or expansion.</td>
</tr>
</tbody>
</table>

Our model consists of six steps per run (see table 2). First, parties take positions on a scale from -5 to 5 updating their position after every election. From empirical research, we learn that policy-seeking parties respond to changes in the mean party voter position, that vote-seeking parties respond to changes in the mean voter position, and office-seeking parties respond to exclusion from office (Schumacher et al., 2010). We borrow and slightly modify two decision rules from the literature: HUNTER and AGGREGATOR (Laver, 2005, Laver and Fowler, 2008, Laver and Schilperoord, 2007, Laver and Sergenti, forthcoming). HUNTER describes the vote-seeking party. In order to optimize its vote share, a vote-seeking party needs to move towards a policy area where the largest share of the votes is located. Hence, a HUNTER looks at the last election, observes the location of the mean voter and moves towards that position. The AGGREGATOR rule describes the policy-seeking party. In such parties, activists force the party leadership towards their preference. Hence, an AGGREGATOR looks at the last election, observes the location of the mean party voter and moves towards that position. We add one rule, the GOVERNATOR, which operationalizes office-seeking behavior. When in office in the period prior to the election, this party does not move, if the party is not in office it moves towards the position of the coalition position. Table 2 displays the three party decision rules.

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5 It is common to use ten-point scales to describe a range of voter preferences (ref). We set the range from -5 to 5, to sum them directly on our welfare state variable. Hence, minus values indicate preferences for retrenchment.
Table 2. Party decision rules

<table>
<thead>
<tr>
<th>Rule</th>
<th>Operationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGGREGATOR</td>
<td>Take the mean of all your voters at t-1 and move there.</td>
</tr>
<tr>
<td>GOVERNATOR</td>
<td>If party is in coalition at t-1, party position (t) is party position (t-1); if else party position (t-1) moves to coalition position (t-1).</td>
</tr>
<tr>
<td>HUNTER</td>
<td>Take the mean of all voters at t-1 and move there.</td>
</tr>
</tbody>
</table>

Second, voters update their preferences, which are scaled on a scale from -5 to 5 as well. Using the public opinion literature, we move the electorate rightward in case of an increase in inflation and leftward in case of an increase in unemployment (Erikson et al., 2002). We multiply the difference in the unemployment and inflation rate in the current and previous run by 0.05 (see appendix I) in order to produce a mean voter position shift which is comparable to real mean voter position shifts in European countries (Schmitt and Scholz, 2005). In order to provide realistic data, we use inflation rates and unemployment rates similar to European experiences in the period 1960-2000. Most European countries experienced four economic phases in this period. In phase 1 there is low inflation and low unemployment, in phase 2 inflation increases but unemployment remains low, in phase 3 unemployment increases and the increase in inflation levels off and in phase 4 inflation decreases whereas unemployment remains high (see appendix II). To enforce comparability between phases, each economic phase in the simulation lasts 10 runs.

Third, voters vote for the most proximate party. We adopt this proximity rule since it is the dominant paradigm in the voting literature (Adams et al., 2005). However, a small subset of voters chooses to punish with a given probability (here: 0.01, see appendix I) Social Democratic and Christian Democratic parties for retrenching the welfare state in a previous run. Empirical research shows that electoral punishment is inevitable for these parties after introducing retrenchment measures (Schumacher et al., 2009). If these parties retrench, we let voters use the punishment rule instead of the proximity rule with probability 0.1 (see appendix I) in order to punish parties according to the empirical results.

Fourth, at this point parties have seats and will move to form a government. To do so parties calculate the utility of every possible coalition applying the utility function defined earlier. To calculate the vote pay-offs of a coalition, a party calculates the number of seats it gains or losses if it had used the coalition position as the party position in the last elections. Office pay-offs represent the number of
portfolios a party captures (see appendix I). Policy pay-offs are calculated by the distance between the party position \(P\) and the coalition position \(C\). Parties choose the coalition with the highest utility.\(^6\)

Fifth, if two parties have the same coalition preference, they form a coalition. If this is not the case, parties may go for the second-best option. If one party has 51% of the votes, it forms a government on its own. Obviously in this case, both the office and policy pay-offs are maximal.

Sixth, the coalition implements its policy. The coalition position is the average position of the parties involved in the coalition weighted by their number of seats. A coalition position is a value between -5 and 5. We add this number directly to the already present generosity of the welfare state, which is set at 100 in the first run. Hence, if a coalition position is less than 0, the welfare state shrinks, if a coalition position is higher than 0, the welfare state expands. At the end of one run, the simulation goes back to step 1, for a theoretically unlimited number of times.

5. Simulation setup

Initially, we run our simulations with three parties: left-wing Social Democrats (SD), a centre party Christian Democrats (CD) and a right-wing Liberal Party (LP). In an extension we add the Democratic Socialists (DS) as a more radical left-wing competitor of SD. The party systems of Germany (before 1983), Austria and are characterized by a Social Democratic party facing a centrist Christian Democratic party and a right-wing Liberal party. The model should therefore replicate the strategic situation in these countries. Adding the left-wing competitor DS to the model makes it more alike party systems in the Netherlands, Germany (after 1983) and Scandinavia.\(^7\)

For each party system setup, we run two simulations, one that tests the implications of office-seeking versus policy-seeking behavior (simulation 1), and another one that tests the implications of vote-seeking versus not-vote-seeking (policy-seeking or office-seeking) (simulation 2).\(^8\) In simulation 1 we start with the minimum value of \(\beta\) (pure policy-seeking) and end with the maximum value of beta (pure office-seeking). To test the implications of mixed strategies we also use six \(\beta\) values starting at 0, and increasing with increments of 0.2 to 1. For each \(\beta\) value we run 10 simulations in order to grasp the mean

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6. We standardize \(V, P\) and \(O\) so that they enter the equation with the same minimum and maximum values.
7. In Sweden, Norway and Denmark Social Democrats tend to have only one competitor to the left of them. There have been some extra challengers, but one competitor seems to be the standard. In the Netherlands there are traditionally several parties to the left of the Social Democrats. Also in all these countries there are more than 2 parties to the right of the Social Democrats. However, for the model it matters that strategic positions to the left and right of Social Democrats are occupied, it matters less how many parties occupy these spots. Therefore our four party setup can reproduce a similar strategic situation as Social Democrats experienced in these countries.
8. The simulations are written in R. R-scripts of the simulations become available after publication of the paper.
tendency of the model. Each simulation has 40 runs\textsuperscript{9}, hence in total we have 2400 observations per simulation. In these simulations LP and CD have an equal chance of choosing the HUNTER, AGGREGATOR or GOVERNATOR rule.\textsuperscript{10} Similarly, in simulation 2 we pursue the same strategy but instead we vary SD’s $\alpha$ values. For both simulations we consider one extension, adding DS, the left-wing competitor to the party system. We fix DS’ position at 4, at the extreme-left position of the policy distribution.\textsuperscript{11}

6. Results

Simulation 1: Policy-seeking versus Office-seeking Social Democrats

Figures 2A to 2D present descriptive information of simulation 1. We show mean values of percentage cabinets including SD that retrenched, the mean ratio of SD cabinet participation, the mean SD position and the mean number of seats for SD. Means are given per economic phase and per $\beta$ value, as well as a mean for all economic phases per $\beta$ value. The means per economic phase and per $\beta$ value are calculated on the basis of 100 observations, the means of all economic phases per $\beta$ value are calculated on the basis of 400 observations, and finally with six different $\beta$ values the total number of observations is 2400. We discuss a number of conclusions and corollaries of those conclusions below.

$C1$: Policy-seeking Social Democrats do not retrench.

For $\beta$ values of 0.4 and below, SD stays strictly to the left and hardly ever undertakes welfare state retrenchment in any of the economic phases, because welfare state retrenchment is simply too far away from the SD policy preference. There is no significant difference between SD party positions in economic phases 1, 2 and 3 for $\beta$ values of 0.4. Hence, even though voters shift rightwards in response to inflation in phase 2, a policy-seeking SD does not move along in rightwards direction. This is because in the distribution of SD voters, the most right-wing voters move under the pressure of inflation even more to the right and become more proximate to other parties. Hence, SD retains the relatively more radical voters and takes the mean of these voters as a policy position. Consequentially, in phase 2 SD loses seats, and as a more radical party it does not participate in government very often. A corollary of conclusion 1 is that because of SD’s policy-seeking strategy CD and LP easily win votes and can share the

\textsuperscript{9} Technically, the number of runs is rather trivial. We use 40 runs, because we do 10 runs for all four economic phases. This approximates the length in years for each economic phase in reality.

\textsuperscript{10} In additional models we evaluated model changes if LP and CD choose one of the three rules more often. This does affect SD’s number of seats and probability of SD cabinet participation, but not the probability that SD introduces welfare state retrenchment. Results are available on request.

\textsuperscript{11} In a later stage we will study the effects of letting DS apply AGGREGATOR, which is the rule we theoretically expect it to adopt.
spoils of office. Generally, the CD-LP coalition is centre-right, hence policy-seeking Social Democrats make it easy for CD and LP to pursue welfare state retrenchment.

**Corollary: Policy-seeking Social Democrats do not become less radical under high levels of inflation, leaving the Christian Democrats and Liberals free to pursue retrenchment.**

**C2: Office-seeking Social Democrats retrench AFTER a phase with relatively high inflation.**

For $\beta$ values of 0.6 and higher, Social Democrats often introduce welfare state retrenchment measures when in the cabinet. As expected from the GOVERNATOR rule Social Democrats have more seats and are positioned closer to the centre. Also, since they care less about policy pay-offs, they are more willing to let swap office pay-offs for implementing policies far from Social Democratic utopia. Interestingly, SD retrenches more in phase 3 than in phase 2. SD's policy position is slightly more centrist in phase 3 than in phase 2, despite that the mean voter swings back to the left in phase 3. The GOVERNATOR rule forces SD to move towards the position of the ruling coalition, and in phase 2 (except for $\beta =1$) SD is mostly kept out of government. Because of the mix of office-seeking and policy-seeking rules at $\beta = 0.6$ and $\beta = 0.8$, SD creeps towards the centre and gets there at the time that the mean voter swings leftwards and vote-seeking CD and LP move leftwards too. Hence, this is a moment of depolarization, where party policy distances are very small. In this period it is easy for SD to find coalition partners, and because of its centrist position, retrenchment is an obvious policy choice, disregarding what the mean voter wants. In fact, SD remains in this position in phase 4 because of the office-seeking successes. Obviously a larger share of the vote is now to the left of SD and in some cases CD jumps over SD to capture the empty left.

An important corollary of this conclusion is that economic conditions have a long time lag. Whereas most of the large-N empirical literature works with independent variables that have one-year time lags, our model suggests that with office-seeking parties, a much longer time lag is justified. It does depend, however, on the strategic situation what the exact length of the time lag should be.

**Corollary: Economic conditions have a longer time lag than assumed in large-N studies.**
Figures 2A and 2B. Results of Simulation 1, mean ratio of SD cabinets engaged in welfare state retrenchment (2A: left) and mean ratio of cabinets including SD (2B: right) per economic phase and β value.

Figures 2C and 2D. Results of Simulation 1, mean SD policy position (2C: left), and mean number of seats for SD (2D: right) per economic phase and β value.

Simulation 1 Extension: Including Left-wing competitor

The descriptive information of the extension of simulation 1 is found in appendix III. Rather than discussing this extensively, we simply compare this extension to simulation 1. Because DS picks up the
more radical voters of SD, the mean of SD party voters shifts to the right in comparison to the mean party voter position of SD without DS. Therefore for policy-seeking seeking values (β ≤ 0.4), SD is less marginalized than in simulation 1. It remains more in the centre, and therefore attracts more votes, even though there are more parties in the party system. For the office-seeking values (β ≤ 0.6), SD is also closer to the centre than in simulation 1. Because the left-side of the policy distribution is denser with the DS on the radical left, it is less profitable for CD to swing to the left than it was in simulation 1. With CD staying more often on the right than in simulation 1, government coalitions are more positioned in the centre or centre-right position. Consequentially, an office-seeking SD moves towards that position. Hence, both for office-seeking as well as policy-seeking SDs, retrenchment is more likely to occur when there is an extra left-wing party included.

C: Including DS makes SD (office-seeking or policy-seeking) more centrist, increasing the probability that SD engages in welfare state retrenchment.

A co-finding of this simulation is that the lagged economic effect differs in comparison to simulation 1. An office-seeking SD responds with a one-year time lag to inflation or unemployment if LP and CP implemented the HUNTER or AGGREGATOR rule and consequently form a government together. In simulation 1 we concluded that it takes SD much longer than a one-year time lag to reach a position in which it supports welfare state retrenchment. However since both SD and CD are positioned more to the right if DS is included in the simulation, SD needs to travels less in order to reach a pro-retrenchment position and with CD more to the right the SD applying the GOVERNATOR rule, moves rightwards as well. Hence, an office-seeking SD responds quicker to economic effects in a system with DS than in a system without DS. However, with unemployment increasing and the mean voter swinging to the left, CD and LP move towards the position of SD, making it easier for SD to form coalitions with them. Hence, there is no reason for SD to move. This of course bolsters the vote share of DS.

Corollary: The time lag of the economic effect is shortened in comparison to simulation 1.

Simulation 2: Vote-seeking versus Not-vote-seeking Social Democrats

Figures 3A-D present descriptive information of simulation 2 similar to those discussed in simulation 1. Simulation 2 differs in two important aspects from simulation 1.
C3: Vote-seeking Social Democrats retrench when inflation is high and shortly after that.

First, in simulation 2 SD is most active in retrenchment in phase 2 rather than phase 3. Obviously, this can be explained by the application of the HUNTER rule that directly adopts to mean voter shifts. Hence, with the mean voter shifting rightwards in response to increasing inflation in phase 2, the mean voter chases SD towards the centre. Not surprisingly, in phase 2 SD’s position is below zero, whereas in simulation 1 SD’s position is slightly above zero. Also, because it takes some time to move back to the left phase 3 experiences also some retrenchment by SD. However, in phase 4, SD is back on the left again. However, in general a vote-seeking SD is much less likely than an office-seeking SD to pursue retrenchment in economic better times.

Corollary: Vote-seeking Social Democrats are less likely than Office-seeking Social Democrats to pursue retrenchment in economic good times.

Second, in economic phases 3 and 4 pure vote-seeking strategies (α = 0.8 v 1) are clearly suboptimal in comparison to mixed strategies (α = 0.4 v 0.6) in terms of vote pay-offs. In a number of simulations the SD’s centrist vote-seeking strategy backfired as CD leapfrogged SD capturing the empty left and reducing SD’s seats when the mean voter is moving leftwards. By using an AGGREGATOR rule SD is better capable at moving back to the left in phases 3 and 4. However, this has little consequences for the development of the welfare state.
Figures 3A and 3B. Results of Simulation 2, mean ratio of Social Democratic cabinets engaged in welfare state retrenchment (3A: left) and mean ratio of cabinets including Social Democrats (3B: right) per economic phase and alpha value.

Figures 3C and 3D. Results of simulation 2, mean SD policy position (3C: left), and mean number of seats for SD (3D: right) per economic phase and α value.

Simulation 2 Extension: Including Left-wing competitor

The descriptive information of the extension of simulation 2 is found in appendix IV. Rather than discussing this extensively, we simply compare the extension to simulation 2. Obviously including more
parties (DS), causes parties to gain less seats on average. However, on some occasions SD captures more seats as it obtained a more centrist position than in simulation 2. Interestingly, in those cases the pain of the introduction of DS lies with CD, who is marginalized in the centre by SD and LP. Also, for every $\alpha$ value SD’s party position is less left-wing than in simulation 2, and approaches the centre for every incremental increase of $\alpha$. In total, SD retrenches less in the extension than in simulation 2. Despite the fact that on average SD is now closer to the centre than in simulation 2, there are fewer cabinets that include SD. The main reason is that SD becomes less flexible in choosing a policy position in the extension. Because of the presence of DS, SD directly loses votes to DS if it implements welfare state retrenchment. This replicates Kitschelts’ finding. He predicted that the presence of Left-Libertarian parties limited the abilities of Social Democratic parties to capture the centre (Kitschelt, 2001). However, contradicting Kitschelt, if SD participates in a cabinet the probability that it retrenches is higher for $\alpha$ values in a party system with DS than in party system without DS. Even some policy-seeking SDs introduce retrenchment measures in the extension. The reason is that with the presence of DS, SD has to move closer to centre, either to find more voters, or because it loses the radical voters on the left to DS, and therefore the mean position of the party voter is more to the right. Because SD is more centrist, it retrenches more often.

C: Including a left-wing competitor limit the possibilities of a vote-seeking SD to enter a centre, or centre-right government, but IF the negative vote pay-offs of such a government are limited SD engages quicker than in simulation 2 in welfare state retrenchment because it has a more centrist position.

Finally, vote-seeking SDs move away quicker from a pro-retrenchment position when unemployment swings the mean voter to the left than the office-seeking SDs in the extension of simulation 1.

7. Empirical Applicability

Because of space limitations, we present an empirical application of our model elsewhere. Here, we limit ourselves to highlighting an important difficulty to be dealt with before proceeding to an empirical test. An empirical test of our model obviously has retrenchment as the independent variable. The dependent variables are the policy, vote and office pay-offs associated with retrenchment. We can use data from the Manifesto Research Group and expert surveys to assess policy positions (Budge et al., 2001, Laver and Benoit, 2006, Laver and Hunt, 1992), from the economic voting literature we can tap
into the vote pay-offs of policies. Also using party positions and party seats, we can calculate which possibilities for coalition government Social Democrats had. However, the crucial aspect of our model, the variation in party behavior, is probably also the most difficult concept to measure in the empirical reality. Müller and Strøm (1999) propose a rather elaborate scheme of party organization and party system parameters that drive party behavior. Although, party system parameters that measure vote-seeking behavior, such as the effective number of parties, are easily calculated or widely available in comparative datasets (e.g. Armingeon et al., 2006), party organization parameters are often more difficult to collect. To our knowledge there is not a single dataset comprising a large set of relevant party organization variables for various countries over a significant period of time. This suggests that an empirical test of our model is better situated in a small-N study. Even if comparative party organization data exist, there is a complex interaction between different components of party organization. For example, in large parties a highly centralized party organization leads to favoring office pay-offs over policy pay-offs, however in smaller parties a centralized party organization may simply be an organizational necessity and other factors like a culture of member participation can make such parties more policy-seeking than office-seeking. An alternative to using party organization variables is to resort to expert surveys. Specifically, one expert survey asks (Laver and Hunt, 1992) asks: “Assess the influence that party leaders, party legislators and party activists have over the formulation of party policy.”. Experts are asked to judge this influence on 0-20 (no influence to great influence) scale. Parties where the influence of activists is judged to be higher than the influence of party leaders are policy-seeking parties, whereas parties where party leaders have more influence than party activists are office-seeking parties. Tapping directly into the relevant behavior this question can be used to measure party behavior. This variable is, however, time-invariant, which may not be such a big problem, as party organizations are usually stable over time and not prone to radical changes.

8. Conclusion

In this paper we introduced a novel technique to assess the strategic situation of Social Democrats with regard to the welfare state. Specifically, our aim was to solve the puzzle of why Social Democrats pursue retrenchment measures given the negative vote and policy pay-offs that retrenchment may offset. We proposed a model in which we varied the goals Social Democrats tried to achieve. Our simulation produced numerical comparative statics using real economic data and realistic assumptions about party behavior. Although we only consider 3 or 4 party systems our model is applicable to a fair number of
party systems with developed welfare states. Introducing more parties to the right is unlikely to change the strategic situation of Social Democrats, however additional tests with left-wing competitor close to Social Democrats may be an interesting future avenue for modeling Social Democrats strategic situations.

Our main conclusions from the analysis of the numerical comparative statics are that office-seeking Social Democrats are the most likely of all three behaviors to retrench. Economic conditions are important, but have a very long time lag. Even when economic conditions swing voters to the left, office-seeking Social Democrats may retrench, still responding to a change in voter preferences some time lags ago. We found that introducing an extra left-wing competitor compels the Social Democrats even more to the centre, increasing the probability of retrenchment by Social Democrats. At the other extreme are policy-seeking Social Democrats, who are very unlikely to implement welfare state retrenchment. Economic effects do not bring the Social Democrats to the centre. Even stronger, because of the strategic behavior of others, Social Democrats radicalize relatively when inflation is on the increase, which pushes the mean voter to the right. In this period of radicalization, Social Democrats do not put much of a fight against Liberals and Christian Democrats. Without effective interference of Social Democrats, they are essentially free to pursue unpopular welfare state retrenchment. If there is a more radical left-wing competitor policy-seeking Social Democrats move slightly to the centre, slightly increasing the probability that they engage in welfare state retrenchment, but with odds of 0.1, this probability is low comparable to office-seeking and vote-seeking Social Democrats. Finally, vote-seeking Social Democrats retrench when the economy pushes the mean voter to the right, however when unemployment sweeps the mean voter back to the left, Social Democrats quickly cease retrenchment measures. Introducing a left-wing competitor, push vote-seeking Social Democrats more to the centre, increasing the changes of them participating in retrenchment, but surprisingly decreasing their chances of participating in government.

References


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Appendix I. Model Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Operationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of runs</td>
<td>40 (see footnote 9)</td>
</tr>
<tr>
<td>Number of voters</td>
<td>100</td>
</tr>
<tr>
<td>Voter preferences</td>
<td>Normal distribution ($\mu = 0, \sigma = 2$). After round $t$ voter preferences $+ 0.05 \times (\text{unemployment}(t) – \text{unemployment}(t-1))$ $– 0.05 \times (\text{inflation}(t) – \text{inflation}(t-1))$. Based on Erikson et. al (Erikson et al., 2002).</td>
</tr>
<tr>
<td>Mean voter position</td>
<td>Mean of all voter preferences (see appendix II).</td>
</tr>
<tr>
<td>Party voter position</td>
<td>Mean of all party voter (at t-1) preferences (see appendix II).</td>
</tr>
<tr>
<td>Unemployment &amp; inflation</td>
<td>Four economic phases resembling real economic trends in Europe. Phase 1: Low</td>
</tr>
</tbody>
</table>

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rate inflation, low unemployment; Phase 2: High inflation, low unemployment; Phase 3: High inflation, high unemployment; Phase 4: Low inflation, high unemployment. See appendix II.

Punishment If party is Christian Democratic or Social Democratic and decreased welfare in previous round, voter may punish party.

Probability voter punishes 0.1

Parties 3: Social Democratic, Christian Democratic and Liberal party.

Initial party positions Social Democratic: 2, Christian Democratic: 0, Liberal: -2

Seats in parliament 100

Initial number of seats Social Democratic: 20, Christian Democratic: 60, Liberal: 20

α Between 0-1, if strictly vote-seeking: 1.

β Between 0-1, if strictly office-seeking: 1, if strictly policy-seeking: 0.

V Expected vote pay-off. Party calculates how much votes it could have gained at the current election if the proposed coalition position had been the party's position (P).

O Office pay-off. Calculates the number of ministerial portfolios attained by the party. If party captures all portfolios $O = 1$, if party captures no portfolios $O = 0$.

P Party Policy position. Parties choose a position at every election using either the HUNTER, AGGREGATOR or GOVERNATOR rule, depending on the $\alpha$ and $\beta$ values.

C Coalition’s policy position. The average position of the parties involved in the coalition weighted by their seat share.

Welfare Initial position: 100, at every turn welfare + $C$. Hence if $C < 0$ retrenchment occurs, if $C > 0$ expansion occurs.
Appendix II. Unemployment and inflation rate (left) and simulated mean voter and party voters positions (right).

Appendix III. Results simulation 1 extended.
Figures 5A and 5B. Mean ratio of SD cabinets engaged in welfare state retrenchment (5A: left) and mean ratio of cabinets including SD (5B: right) per economic phase and β value.
Figures 5C and 5D. Mean SD policy position (2C: left), and mean SD number of seats (5D: right) per economic phase and β value.

Appendix IV. Results simulation 2 extended.

Figures 6A and 6B. Mean ratio of SD cabinets engaged in welfare state retrenchment (6A: left) and mean ratio of cabinets including SD (6B: right) per economic phase and α value.
Figures 6C and 6D. Mean SD policy position (6C: left), and mean number of seats for SD (6D: right) per economic phase and α value.