



Cahier de Recherche / Working Paper
12-04

The Effect of Party Discipline on the Electoral Accountability of Politicians

Nicolas-Guillaume Martineau

The Effect of Party Discipline on the Electoral Accountability of Politicians

Nicolas-Guillaume Martineau*

21 March 2012

Abstract

This essay examines the influence of a politician's party on her accountability to the electorate. It also considers what the conjectured waning of political parties may imply for the effectiveness of elections in disciplining politicians, and for voter welfare. The paper models the election mechanism as a principal-agent relationship between the representative voter (principal) and the politician in office (agent). The party is heterogeneous, composed of factions whose preferences over policy differ. It may coerce the politician by threatening to remove her from the party's helm following certain policy choices. The main result is that putschist threats, despite being a distortion when the electoral mechanism is functioning well, can be welfare-enhancing in the presence of another distortion on the electoral mechanism. This serves to contribute to a theory of the political second-best.

JEL classification codes: D72, D6, H10.

Keywords: political agency; factions; accountability; political parties; ideology; voter welfare.

*Département d'économique, Faculté d'administration, Université de Sherbrooke. 2500, boul. de l'Université, Sherbrooke, Québec, J1K 2R1 CANADA. *Fax:* +(1) 819 821-7934. *E-mail:* nicolas-guillaume.martineau@usherbrooke.ca. I particularly wish to thank Robin Boadway, Al Slivinski, Dan Usher, Marco Cozzi, and J. Scott Matthews for comments, as well as those received in various workshops, notably at Queen's University, and at CPEG Queen's University Fall 2010. I acknowledge receipt of a SSHRC Doctoral Fellowship during the writing of this paper.

1 Introduction

In parliamentary systems, and to a lesser extent in presidential systems,¹ the organization and composition of political parties are determinant forces in the choice of policy. When choosing policies while in office, a party leader must lend an ear to the demands of the party's grassroots, activists, and other factions, or else face disavowal and a forced exit.

There are salient examples that show party leaders being ousted from their posts while also holding office. Most recently (June 2010, as reported by Le Noël, 2010), Australia's Labor Party leader and Prime Minister Kevin Rudd was removed from his post as his party deemed his performance in office, characterized by certain policy choices, to be unsatisfactory.² This came in light of his waning popularity with the electorate and a decline in the Labor Party's forecast electoral fortunes. Bowing to party pressure in the form of a "bloodless coup" led by Deputy Prime Minister Julia Gillard, Rudd chose to resign.

The demise of Margaret Thatcher's leadership constitutes another notorious example of a party leader being shown the door due in part to her choice of policies. In 1990, she faced opposition within Conservative Party ranks to her continued leadership, which was partly attributable to the introduction of a poll tax and controversial decisions concerning the European Monetary Union (EMU). She thereafter chose to resign. (More information and examples can be found in Richards, 2008.)

It is therefore plain to see that parties seek to hold their leaders responsible for their policy choices when in office, and do so by using the threat of non-confidence and removal. Moreover, the preceding examples only constitute a fraction of such events, since non-salient cases of leaders who responded well to party discipline such that they avoided triggering their own demise are much harder to establish.

Define *accountability* to mean acting in the voters' interests, and having to show for it or face dismissal from office. How can one then reconcile party discipline with the usual mechanism for keeping politicians accountable for their policy choices, this time to the broader electorate, that is elections? Indeed, they provide retrospective-looking voters with a means of removing an incumbent who displeases them. This disciplines the politician in office, thus creating an imperfect contract between the politician – the agent – and the representative voter – the principal. Yet the party does not feature in this narrative. Interestingly, and

¹Many presidential systems have party primaries, which can either amount to routine coronations, or harsh disavowals of the leader by party members and affiliated supporters. For a clear example, see the United States' Democratic Party's internal divisions over the Vietnam War, and how it led to Lyndon B. Johnson's decision to bow out of the nomination race for a second (full) term as president, following some poor primary results.

²The very policies that caused his demise were the abandonment of a carbon dioxide emission control plan, and a plan to further tax the profits of mining companies.

motivating in part this essay’s enquiry, this line of research has largely been left unexplored, as noted by Besley (2006, p. 105). He wrote that parties could affect the process of political accountability in ambiguous ways, due for instance to the sanctions that they impose on incumbent politicians.

The importance of establishing clearly the role of parties for electoral accountability and voter welfare is made even more imperative by recent claims of the demise of political parties, at least as far as their traditionally-upheld model of organization is concerned. This ideal party organization, as favoured by a 1950 report by the American Political Science Association (“Toward a More Responsible Two-Party System”), can be likened to a “responsible party” most associated with the British parliamentary system, and consisting of cohesive organizations with collectively-drafted and well-defined programs, strong and active supporters, and a permanent staff (Whiteley and Seyd, 2002, p. 11).

However, as mentioned by Whiteley and Seyd (2002, p. 12), various theses have been put forward to describe changes in the parties’ importance for political life, and away from the responsible party model. For instance, the “cartel” party thesis (Katz and Mair, 1995) views parties as having become mere agencies of the state, and thus having lost their autonomy. The “electoral-professional” party thesis, first championed by Panebianco (1988), sees the party as having become a mere electoral machine, devoid of grassroots support and internal democracy.

Such claims, while disputed by many (including Whiteley and Seyd), nonetheless cast doubt over whether the party still can, or could in the near future, be a disciplining force on politicians. This is also compounded by the declining trends of active participation in political parties (Whiteley and Seyd, 2002), which may call into question their existence as mass organizations with a popular legitimacy.

These considerations therefore motivate the present essay’s focus, which can be summarized by the following research questions:

- What is the influence of the party on the politician, conditional on the type of discipline exerted, and on her accountability to the electorate?
- Should the “responsible party” model be favoured, with regard to its effect on the accountability of politicians to the electorate?

In tackling these questions, this essay uses an approach that borrows from the models of political agency of Barro (1973), Ferejohn (1986), and Besley (2006), and their emphasis on a politician’s accountability to the electorate, in the presence of an imperfectly-informed representative voter casting a ballot retrospectively. The basic agency framework is taken from Besley (2006), with the present essay’s contribution being mainly the inclusion of the

incumbent politician's party and its coercive effect on its leader in office. The party is modelled as being heterogeneous and consisting of factions following Roemer (1999), with its internally-diverging preferences not necessarily agreeing with its leader's or the electorate's.

The recent economic literature on the internal dynamics of political parties also includes important related contributions. Among them are the works of Bernard Caillaud and Jean Tirole (Caillaud and Tirole, 1999, 2002), which generally consider how a party's internal organization impacts its electoral fortunes, through internal debate (or lack thereof) over policy and its effect on the electorate's perception of the party's credibility. Caillaud and Tirole (1999) considers the case of centrist parties. In them, the high degree of congruence between the leadership and the rank-and-file over policy choices leads voters to perceive that the policy is chosen on the grounds of its partisan- and office-seeking appeal, which coincide for centrist policies, rather than its quality. A greater degree of party heterogeneity and debate, characterized by an ideological dissonance between the office-seeking leadership and the partisan base, therefore improves the electoral fortunes of the party in question by signalling a disagreement over the merits of populist yet mediocre policies.

Meanwhile, their 2002 article studies the question of whether intra-party competition in the form of primaries improves on the party's fortunes in a general election, by increasing its probability of election. The main trade-offs are here that a primary provides an incentive for politicians to formulate quality platforms, but can hurt the party's image through too many disagreements between candidates. Intra-party competition can therefore serve as another means of disciplining politicians by making them exert effort in their choice of platform and campaign, thereby complementing the similar effects of inter-party competition, especially when the information available to voters is scarce.

Two recent works by Castanheira et al. (2010b; 2010a) broach the same themes found in that last article by Caillaud and Tirole, while also building upon it. In particular, the first of their articles, entitled "Party Organization and Electoral Competition", adds considerations of the challenger party's organization to electoral competition between the two. Party organization, instead of being exogenous, can here be strategically chosen so as to maximize a party's probability of election. In the event of weak inter-party competition and imperfect voter information, parties may then choose to favour debate over the choice of a platform by allowing primaries, so as to maximize exposure. On the other hand, a firm grip on the internal processes leading to a candidate's appointment may be preferable if inter-party competition is more fierce.

In this essay's model, the politician's innate preferences over policy – which vary according to her type (either welfarist or ideological), and which may or may not coincide with the electorate's – must be traded-off against ego rents derived from holding office, and thus a

concern for re-election. To this end, a two-period model is used.

Considerations of a party's discipline (or coercion – the two terms are used interchangeably throughout the essay) on its leader are included by introducing a supplementary agency relationship between the leader and incumbent politician (the agent), and her party (the principal). The party may choose to remove the politician at its helm before the election is held, and replace her with a newcomer.

The party's preferences over policy are assumed to be heterogeneous, with the party consisting of three factions. They take their names from Roemer's work, but their preferences are tailored to suit the essay's needs. These include: militants, whose concern is ideology; opportunists, who favour being in office above all else; and reformists, whose objective is to maximize the utility of the *average* party member, deemed here to match catering to the preferences of the *representative* voter. In this context, discipline can express itself through majority rule, either ex-ante through a policy line with full commitment to remove an incumbent not following it, or ex-post through a leadership review. It can also happen via a *coup de force*, that is a putsch against the party leader.

In the setting serving as this essay's benchmark, and in which the election is an effective mechanism for keeping the incumbent accountable to the representative voter's interests, the introduction of democratic means of party coercion is equivalent to the introduction of an additional enlightened and informed principal. It therefore increases accountability and voter welfare. However, putschist means of coercion act as a distortion on the electoral system, which has the opposite effect on accountability and welfare.

In contrast, in a second-best setting – in the presence of an existing distortion to the electoral system – the party's presence is nearly always accountability- and welfare-enhancing, in relation to when it is absent. This is particularly so for democratic means of coercion, but it can also now hold for the influence of putschist militants on accountability and welfare.

The essay is organized as follows. The next section (section 2) presents the general model, then considers in turn benchmark results in the absence of a party, and results in its presence. Section 3 presents and contrasts results when a distortion to the electoral system is introduced. A discussion of the results follows in section 4. Finally, section 5 concludes.

2 The model

2.1 The environment

The world lasts for two periods, $t \in \{1, 2\}$. At the beginning of period 1, a politician is chosen to lead the party and is then elected to office, both processes which are abstracted

from as they are of no interest to the question of political accountability.

At the beginning of each period, the politician in office observes a state of the world ($s_t \in \{0, 1\}$, each equally likely to occur), also known to party members, but unknown to the representative voter. The incumbent must then decide which one of two policies to implement, $p_t \in \{0, 1\}$.

The choice of policy is assumed to be observed by the representative voter, but also to be devoid of information, for he does not know the state of the world nor how the policy choice optimally relates to it. (Equivalently, the policy could also not be observed.) He also observes the payoffs stemming from a given policy choice before the election.

When making her choice, the politician in office has to take into account her own preferences for policy, the representative voter's preferences (which determine her chances of re-election), and her party's preferences and expected coercion (if applicable). Politicians discount future payoffs at rate $\delta < 1$, which is fully observable by everyone.

The politician's type, either *welfarist* (W) or *ideological* (I), determines the payoffs she derives from different policies, all potentially enacted while she is in office. (Politicians of all types do not derive benefits from policy choices made by their successors, when they are out of office.) Politicians are drawn from a pool common to both parties, under the assumption that they belong to a professional class (or that the frequency of ideological bias is equal across parties), the frequency of welfarists in that class being π .

In the case of welfarists, policies and payoffs are state-dependent, meaning that $p_t = s_t$ yields payoff Ψ , and $p_t \neq s_t$ yields zero payoff. These payoffs are also derived by the representative voter. Payoffs from the welfare-maximizing policy are fully known to everyone.

On the other hand, ideological politicians (also referred to as *ideologues*) only derive rents from implementing the ideologically-identified policy, which is $p_t = 1$ for the incumbent party (and $p_t = 0$ for the challenger party), by assumption. These rents, denoted by r_t , are stochastic and drawn from distribution F with support $[0, R]$ and mean \bar{r} . It is assumed to be C^2 (i.e., smooth, continuous, and twice-continuously differentiable) and strictly increasing. Its cumulative distribution function (c.d.f.) is denoted by $F(\cdot)$, while its probability density function (p.d.f.) is $F'(\cdot) \equiv f(\cdot)$. The distribution, its mean and support are fully known to everyone, but only ideologues are privy to the rents' realization.

Furthermore, all types of politicians receive ego rents both for being in office (E_t), and at the party's helm (e_t). These are fully known to everyone.

In choosing whether or not to re-elect the incumbent politician at the end of period 1 (should the party have kept her as leader), the representative voter *votes retrospectively*. That is, he would like to keep welfarists in power, while removing ideologues, for the latter provide him with payoffs only in one state of the world. He takes payoffs Ψ to be the signal

of an incumbent acting in his interest, or being a welfarist. He then compares his posterior belief of the incumbent being a welfarist, derived via Bayes rule (whenever possible), with the prior, $\pi \in (0, 1)$. The re-election rule is here that if the voter's posterior belief exceeds his prior belief, the incumbent is re-elected with probability 1.

The second period is a repeat of the first period, except that politicians are now unburdened by electoral concerns and party coercion: all challengers elected at the end of period 1 are “lame-duck” politicians. No strategic concerns therefore apply to the policy choices made in the second period.

The full timing of the game, and the definition of the equilibrium follow.

2.2 The timing

Below is the general timing of the game. The party is not present in the benchmark case. Thus, items related to the party's presence are italicized, and may be skipped to obtain the benchmark timing. Hence, in $t = 1$:

1. Nature plays: the state of the world and the ideological policy rents are realized. The politician is elected in office.
2. *If applicable, the party chooses a policy line by democratic means (i.e., majority voting). This accounts for rational expectations of the politician's choice, subject to the information available to the party factions concerning the state of the world, ideological policy rents, and ego rents.*
3. The incumbent chooses a policy after observing the state of the world, and the ideological rents, if applicable.
4. *Once the incumbent politician has chosen a policy, she is deemed worthy or unworthy of remaining at the helm of her party in an ex-post leadership review, by commitment (or lack thereof) to an ex-ante policy line, or through the influence of putschist factions, if applicable. Either she is removed, or she remains party leader.*
 - (a) *If she remains party leader, the game continues in step 5.*
 - (b) *If she is removed, her replacement is deemed drawn at random from the pool of available politicians, and hence is a welfarist with probability π . The policy payoffs are then not used to form posterior beliefs and the game skips to step 6. The election becomes a toss-up, each party's candidate being elected with probability $1/2$, since the representative voter has identical beliefs about each party's leader being a welfarist.*

5. The representative voter observes benefits from the policy enacted, and updates his beliefs concerning the incumbent politician's type ahead of the election.
6. The incumbent (*or the new leader of the incumbent party*) faces re-election (*resp. election*). If defeated, the leader of the challenger party takes power.

In $t = 2$:

1. Nature plays.
2. The politician in office chooses a policy.
3. The world ends.

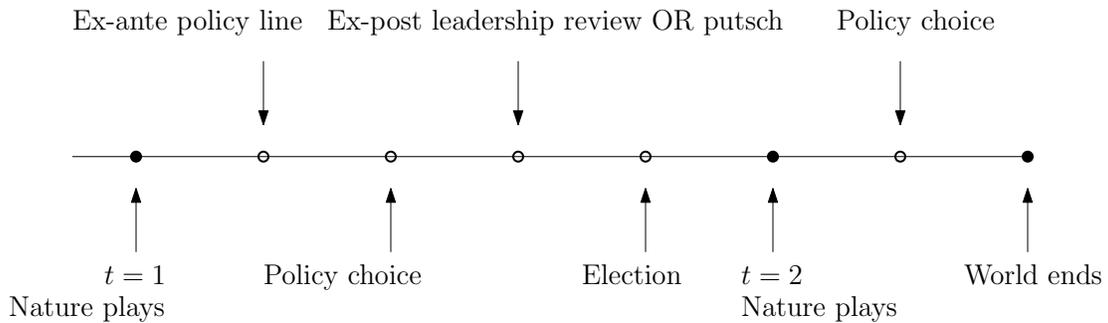


Figure 1: General timing of the game, in the presence of different forms of party discipline

2.3 The equilibrium

The equilibrium concept used in this game is that of a perfect Bayesian equilibrium (PBE), defined below. The definition in the benchmark characterized by the party's absence omits the italicized item, but is otherwise unchanged.

Definition 1. In this setting, a PBE is defined as:

- a set of policies $P = \{p_1^W, p_2^W, p_1^I, p_2^I\}$ encompassing all periods ($t = \{1, 2\}$) and all types ($j = \{W, I\}$), such that an incumbent's intertemporal utility is maximized given the representative voter's beliefs;
- a set of equilibrium prior and posterior beliefs for the representative voter, the latter generated using Bayes rule (whenever possible), with corresponding out-of-equilibrium beliefs, such that the representative voter's decision to re-elect or not the incumbent is optimal given these beliefs and the incumbent's policy choice;

- a set of optimally-chosen coercive measures by party factions, given the optimal choice of actions from the politicians and the representative voter’s beliefs, if applicable.

This equilibrium is solved for by backward induction.

2.4 State-contingent policies: some examples

Readers may have some difficulty grasping what is meant by state-contingent policies, that is policies yielding voters and politicians payoffs only in certain states of the world. In order to facilitate the comprehension of the sections that follow, some plausible examples of state-contingent policies are presented below.

In the case of economic policies, it is possible to claim that their complexity, especially with respect to context (i.e., the so-called state of the world) and how it affects their desirability, often escapes the general public. Case in point, popular (or populist) policies are, in some contexts, not necessarily (most) desirable. It is therefore plausible for the politician to be more informed about what is best than the representative voter, and especially about the exact economic context, or state of the world.

A canonical example of such a state-contingent policy choice relates to the presence or the absence of a market failure. There is a theoretical case for governmental intervention whenever such a market failure is present, provided that public choice concerns about government failure are not too prevalent.³ Let state $s_t = 0$ denote no market failure, while letting $s_t = 1$ denote the presence of a market failure, in one or several markets that may vary across time t . It follows that the welfare-maximizing policy here is *laissez-faire* ($p_t = 0$) in $s_t = 0$, and *interventionism* ($p_t = 1$) in $s_t = 1$.

A more precise example, culled from the literature on optimal taxation, concerns the enactment of a minimum wage. Lee and Saez (2010) have shown that the imposition of a binding minimum wage (e.g., $p_t = 1$) can be welfare improving when there is *efficient rationing* ($s_t = 1$) in an otherwise-competitive labour market (i.e., the workers receiving the least surplus utility from working are laid-off first by firms, following the enactment of a minimum wage), rather than *uniform rationing* ($s_t = 0$, where workers are fired independently of their surplus as a result of the minimum wage’s enactment). This binding minimum wage makes redistribution towards low-income workers – in the form of an earned-income tax credit, for instance – more effective. Indeed, it prevents supply-side effects that would normally

³As famously pointed out by Greenwald and Stiglitz (1986), it is even the case that government intervention is welfare-improving in any otherwise-competitive market where there exists an informational asymmetry, for the *laissez-faire* outcome is then not constrained-Pareto optimal. This broadens considerably the definition of “market failure”, and thus the potential scope for intervention outlined above.

depress low-skill wages through increased labour force participation, and thus partially offset government transfers.

It is of great importance to this essay that these examples of state-dependent policies also have clear ideological ties. The political left can historically be said to have favoured interventionism in the economy over *laissez-faire*, at least until the social-democratic “Third Way” (arising from the writings of Anthony Giddens (1998), in the United Kingdom, and applied notably by the centre-left governments of Tony Blair, in the UK, and Gerhard Schröder, in Germany) of the 1990s moderated such leanings. In contrast, the political right has tended to favour economic *laissez-faire* both out of ideology, and when intervention is nonetheless deemed desirable by some, then out of the perceived greater inefficiency of government relative to the private sector. More pointedly, the political left was historically supportive of minimum wages (with an emphasis on their redistributive purpose, at little to no cost for the state), while the political right deemed that the fiscal burden of low-income support should not fall on employers, when it did not oppose minimum wages for reasons of economic liberalism.

2.5 The choices of politicians

This subsection examines the choices of politicians and solves the game by backward induction. It thus provides a benchmark where the electoral mechanism functions well, in that it provides the right incentives for keeping all types of politicians accountable, which then serves to qualify the impact of the party’s presence in this context.

2.5.1 Behaviour in $t = 2$

In the second period, both types of politicians in office choose their preferred policy since they have to worry neither about their tenure at the helm of the party, nor about their chances of re-election. They therefore behave non-strategically. Welfarists choose $p_2 = s_2$ and receive utility $U_2^W = E_2 + e_2 + \Psi$. Ideological politicians choose $p_2 = 1$ and obtain utility $U_2^I = E_2 + e_2 + r_2$.

2.5.2 Equilibrium and out-of-equilibrium posterior beliefs of the representative voter

The representative voter judges a politician’s performance based on whether he observes payoffs Ψ before the election; this follows from the assumption of retrospective voting. He also updates his beliefs, and hence forms posterior beliefs of a politician’s welfarism, based on that observation. The posterior equilibrium beliefs that arise by Bayes rule is that a

politician yielding Ψ cannot be deemed less welfarist than he previously was (given by the prior, π). The representative voter's estimate of the probability of receiving payoff Ψ is given by:

$$\Pr(\Psi) \equiv \Pr(\Psi|W) \Pr(W) + \Pr(\Psi|I) \Pr(I) = 1 \cdot \pi + \bar{\lambda}(1 - \pi) \leq 1$$

where $\bar{\lambda}$ is the average probability of an ideologue yielding payoffs Ψ across states, in $t = 1$. (A welfarist is always deemed to do so, and always does here in equilibrium, as shown below.)

Hence, his posterior belief Π across all states is given by:

$$\begin{aligned} \Pi &= \Pr(W|\Psi) \\ &= \frac{\Pr(\Psi|W) \Pr(W)}{\Pr(\Psi)} \\ &= \frac{\pi}{\pi + (1 - \pi)\bar{\lambda}} \geq \pi \end{aligned}$$

His posterior belief exceeds his prior π , which gives him an inclination to re-elect the incumbent with certainty. The corresponding out-of-equilibrium belief that an incumbent not producing Ψ is a welfarist is zero, and they re-elect her with probability 0.

As $\Pi \geq \pi$, any politician who implements $p_1 = s_1$ is therefore re-elected. In this setting, $\bar{\lambda}$ can be thought of as an “index of political discipline” (Besley, 2006, p. 110), for it captures the likelihood that an ideologue would “control” herself so as to cater to the voter's best interests (in $s_1 = 0$) rather than follow an agenda of her own.

2.5.3 The behaviour of welfarists in $t = 1$

In the first period, a politician has to weigh current and expected future payoffs from a particular action. Denote expected utilities for all types, policies, and states in the form $E[U^j(p_1, s_1)] \forall j$. Let $\sigma(p_1, s_1) \in [0, 1]$ be the probability that an incumbent is *not* removed from the party's helm at the end of $t = 1$, and before the election is held, if applicable. In the benchmark case where the party is not present, $\sigma = 1 \forall p_1, s_1$. A welfarist's problem in $t = 1$ is given by the following equations:

$$E[U^W(0, 0)] = E_1 + e_1 + \Psi + \sigma(0, 0)\delta(E_2 + e_2 + \Psi) \quad (1)$$

$$E[U^W(1, 0)] = E_1 + e_1 + \sigma(1, 0)\delta e_2 \quad (2)$$

$$E[U^W(0, 1)] = E_1 + e_1 + \sigma(0, 1)\delta e_2 \quad (3)$$

$$E[U^W(1, 1)] = E_1 + e_1 + \Psi + \sigma(1, 1)\delta(E_2 + e_2 + \Psi) \quad (4)$$

Equations (1) and (4) represent the intertemporal utility of a welfarist who behaves ac-

ording to what her innate preferences dictate in each state, while equations (2) and (3) represent a welfarist's intertemporal utility if she were to diverge from those preferences, for reasons related to re-election. Since the welfarists' incentives to deviate from their prescribed behaviour are not a concern here, to preserve the efficacy of the electoral system in providing the right incentives and to ensure strategies are consistent with beliefs, it must be that $E [U^W(0,0)] \geq E [U^W(1,0)]$ and $E [U^W(1,1)] \geq E [U^W(0,1)]$. This requires, when $\sigma = 1 \forall p_1, s_1$, that:

$$\Psi \geq \frac{-\delta E_2}{1 + \delta}$$

which holds by assumption for all $\Psi > 0$. For cases where the party is present, the same result still holds whenever:

$$\Psi \geq \frac{-\delta [\sigma(0,0)E_2 + (\sigma(1,0) - \sigma(0,0)) e_2]}{1 + \sigma(0,0)\delta}$$

To ensure that the incentives of welfarists are unchanged by the party's presence requires $E_2 \gg e_2$, which is here assumed to hold.

Note that $E_1 + e_1$, the ego rents derived respectively from holding office and being at the party's helm in $t = 1$, do not play any explicit role in the analysis. This is because the initial election that brings a politician in office is abstracted from, and these rents therefore do not incentivize politicians. Henceforth, they are normalized to be zero.

2.5.4 The behaviour of ideologues in $t = 1$

By the time ideologues make their choice of policy, the ideological rent r_1 is assumed to have been revealed, making it simple to compute their lifetime expected utility:

$$\begin{aligned} E [U^I(0,0)] &= \sigma(0,0)\delta (E_2 + e_2 + \bar{r}) \\ E [U^I(1,0)] &= r_1 + \sigma(1,0)\delta e_2 \\ E [U^I(0,1)] &= \sigma(0,1)\delta e_2 \\ E [U^I(1,1)] &= r_1 + \sigma(1,1)\delta (E_2 + e_2 + \bar{r}) \end{aligned}$$

This yields the following policy choices:

$$(p_1^I, s_1) = \begin{cases} (0,0) & \text{if } r_1 < \sigma(0,0)\delta (E_2 + \bar{r}) + \delta (\sigma(0,0) - \sigma(1,0)) e_2 \\ (1,0) & \text{if } r_1 \geq \sigma(0,0)\delta (E_2 + \bar{r}) + \delta (\sigma(0,0) - \sigma(1,0)) e_2 \\ (0,1) & \text{if } r_1 < -\sigma(1,1)\delta (E_2 + \bar{r}) + \delta (\sigma(0,1) - \sigma(1,0)) e_2 \\ (1,1) & \text{if } r_1 \geq -\sigma(1,1)\delta (E_2 + \bar{r}) + \delta (\sigma(0,1) - \sigma(1,0)) e_2 \end{cases}$$

It can now be determined probabilistically when ideologues mimic welfarist types. An accountability index, λ , is therefore found in each state. Thus, in $s_1 = 0$:

$$\lambda_{s_1=0}(\sigma) = F(\sigma(0,0)\delta(E_2 + \bar{r}) + \delta(\sigma(0,0) - \sigma(1,0))e_2) \quad (5)$$

while in $s_1 = 1$:

$$\lambda_{s_1=1}(\sigma) = 1$$

Therefore, averaged across states, it yields, first in the benchmark case where the party is absent and $\sigma = 1 \forall p_1, s_1$, then generally, $\forall \sigma(p_1, 0) \leq 1$:

$$\bar{\lambda}(1) = \frac{1}{2}F(\delta(E_2 + \bar{r})) + \frac{1}{2} \quad (6)$$

$$\bar{\lambda}(\sigma) = \frac{1}{2}F(\sigma(0,0)\delta(E_2 + \bar{r}) + \delta(\sigma(0,0) - \sigma(1,0))e_2) + \frac{1}{2} \quad (7)$$

This game's possible equilibria are summarized in the proposition that follows.

Proposition 1. *There are three possible types of equilibria in this game: separating, semi-pooling, and fully pooling. In this setting, the first occurs whenever $s_1 = s_2 = 0$, and $r_1 \geq \sigma(0,0)\delta(E_2 + \bar{r}) + \delta(\sigma(0,0) - \sigma(1,0))e_2$: ideologues separate from welfarists in each period when in office. The second occurs when: $s_1 = s_2 = 0$ and $r_1 < \sigma(0,0)\delta(E_2 + \bar{r}) + \delta(\sigma(0,0) - \sigma(1,0))e_2$; $s_1 = 0, s_2 = 1$ and $r_1 \geq \sigma(0,0)\delta(E_2 + \bar{r}) + \delta(\sigma(0,0) - \sigma(1,0))e_2$; or, when $s_1 = 1$, and $s_2 = 0$: ideologues pool with welfarists in one period, while their behaviour separates in the other. Finally, whenever $r_1 < \sigma(0,0)\delta(E_2 + \bar{r}) + \delta(\sigma(0,0) - \sigma(1,0))e_2$, $s_2 = 1$, and for all s_1 , then behaviour pools in all periods.*

It is considered next how the rules governing party coercion, captured by σ , affect accountability and welfare in relation to the benchmark case without a party. First, the preferences of factions are considered in detail. Then, various forms of coercion are examined.

2.6 Party factions: descriptions and preferences

There are three factions $\Phi \in \{m, o, r\}$ in the party, the size of which is normalized to be 1. Recall that all factions have an informational advantage over the representative voter in that they know the exact state of the world and how policy relates to it.

The first faction is that of the militants (m), the size of which is denoted by $\mu \in (0, 1)$: they only care about ideology. Assume here that their objective function is maximized if $p_t = 1$, the ideologically-identified policy. This is done in the simplest way by assuming a utility function such as:

$$v^m : P = \{0, 1\} \longrightarrow \mathbb{R}$$

which is normalized to yield:

$$\begin{aligned} v^m(p_t = 1) &= v^m > 0 \\ v^m(p_t = 0) &= 0 \end{aligned}$$

The opportunists (o) constitute the second faction, of size $\omega \in (0, 1)$: they care about staying in office, and their objective function is to maximize the probability of re-election. It is given by:

$$v^o(p_1, s_1) = \Pr(\text{Re-election} | p_1, s_1) = \begin{cases} 1 & \text{if } p_1 = s_1 = 0 \\ 0 & \text{if } p_1 = 1, s_1 = 0 \\ 1 & \text{if } p_1 = s_1 = 1 \\ 0 & \text{if } p_1 = 0, s_1 = 1 \\ \frac{1}{2} & \text{if the leader is replaced} \end{cases}$$

The third faction is composed of reformists (r), and is of size $\rho = 1 - \mu - \omega$: their objective function matches the representative voter's, provided that their party is in office when the policy is chosen, meaning that their payoffs are:

$$v^r(p_1, s_1) = \begin{cases} \Psi > 0 & \forall p_1 = s_1 \\ 0 & \forall p_1 = 1 - s_1 \end{cases}$$

Contrary to reformists, militants and opportunists are assumed to be *active* factions in the sense that they may initiate a putsch against a leader whose policy choice they dislike. Indeed, they thus have “extreme” preferences relative to the electorate. Reformists are therefore only needed when voting ex-ante on a policy line or ex-post in a leadership review.

2.7 An ex-ante policy line with full commitment

In considering democratic means of coercion, assume at the outset that no single faction has a simple majority of members (50%+ 1 vote), yet that any two factions voting together satisfy the majority rule $\mathcal{Q} \geq 1/2$. All results are conditional on this voting rule being sufficiently low for effective majorities to prevail: for \mathcal{Q} sufficiently high, discipline is much weakened since any two factions voting together may not satisfy it. It then amounts to requiring unanimity among all factions. The propositions that follow therefore all come with the caveat that an agreement satisfying \mathcal{Q} is found, provided that a consensus exists.

All factions are assumed to be voting sincerely, which allows one to focus solely on the

Condorcet winner, should it exist. If no majority is found, the status quo consisting of *no policy line* – N – then prevails. By assumption, should a faction be indifferent between the choice of a policy line and the status quo, it sides for the latter in any pair-wise vote.

The policy line being determined *before* the politician’s choice of policy in office, the benefits of each option ($p_1 = 0, p_1 = 1, p_1 = N$) must then be derived by backward induction. Rational expectations regarding the behaviour of both types of politicians being subjected to party discipline are thus obtained. Recall that a leader who does not follow the line is deemed to be automatically dismissed from her post, a stark punishment.

2.7.1 Rational expectations of a policy line’s effect on the leader’s choices

The following table summarizes the behaviour of welfarist politicians, in both states, facing a given policy line chosen by the party. It is based on lifetime expected payoffs, when not following the policy line results in an immediate dismissal from the party’s helm, thus making it impossible to run for office again. It appears that the party’s presence does not alter their behaviour, regardless of its choice of policy line, provided that $\Psi \geq \delta e_2$.

		Policy line	
		$p_1 = 0$	$p_1 = 1$
State of the world	$s_1 = 0$	$p_1^W = 0$	$p_1^W = \begin{cases} 0 & \text{if } \Psi \geq \delta e_2 \\ 1 & \text{otherwise} \end{cases}$
	$s_1 = 1$	$p_1^W = \begin{cases} 1 & \text{if } \Psi \geq \delta e_2 \\ 0 & \text{otherwise} \end{cases}$	$p_1^W = 1$

Table 1: Behaviour of welfarists when facing a policy line determined ex-ante

In contrast, party discipline changes the incentives of ideologues in $s_1 = 0$ when $p_1 = 0$ is chosen as a policy line. They now opt to mimic welfarists with probability denoted $\lambda'_{s_1=0}$, to distinguish it from probability $\lambda_{s_1=0} \equiv \lambda_{s_1=0}(\sigma = 1 \forall p_1, s_1)$ in the benchmark:

$$\lambda'_{s_1=0} = F(\delta(E_2 + \bar{r} + e_2)) > F(\delta(E_2 + \bar{r})) = \lambda_{s_1=0}$$

Ideological politicians are also induced to follow a policy line $p_1 = 1$ when $s_1 = 0$. Then, $\lambda'_{s_1=0} = 0$, such that no ideologue ever mimics a welfarist.

Little change in the behaviour of ideologues is expected when either policy line is chosen in $s_1 = 1$. If $p_1 = 0$ were chosen, for instance, then any ideologue choosing $p_1 = 1$ would be removed from the party’s helm. However, scarcely any benefits, future or present, would accrue to her if she were to follow the policy line, as she would then be ousted from office by the representative voter subsequently. Precisely, the policy line is never followed whenever

$r_1 \geq \delta e_2$, which makes ideological incumbents accountable in $s_1 = 1$ with probability:

$$\lambda'_{s_1=1} = 1 - F(\delta e_2) < 1 = \lambda_{s_1=1}$$

This is therefore less than in the status quo. In the event where the policy line chosen is $p_1 = 1$, there is absolutely no change in incentives.

2.7.2 The factions' choice of policy line

The expected payoffs for each faction, given the known state of the world and the incumbent's rationally-anticipated reaction, for each choice of policy line, are presented in the following tables:

<i>Policy line</i>	$p_1 = 0$	$p_1 = 1$	N
Opportunists, ω	$\pi + \frac{1}{2}(1 - \pi)(1 + \lambda'_{s_1=0})$	$\frac{1}{2}\pi$	$\pi + (1 - \pi)\lambda_{s_1=0}$
Militants, μ	$v^m(1 - \pi)(1 - \lambda'_{s_1=0})$	$v^m(1 - \pi)$	$v^m(1 - \pi)(1 - \lambda_{s_1=0})$
Reformists, ρ	$\Psi(\pi + (1 - \pi)\lambda'_{s_1=0})$	$\Psi\pi$	$\Psi(\pi + (1 - \pi)\lambda_{s_1=0})$

(a) $s_1 = 0$

<i>Policy line</i>	$p_1 = 0$	$p_1 = 1$	N
Opportunists, ω	$\frac{1}{2}\pi + \frac{1}{2}(1 - \pi)\lambda'_{s_1=1}$	1	1
Militants, μ	$v^m(\pi + (1 - \pi)\lambda'_{s_1=1})$	v^m	v^m
Reformists, ρ	$\Psi(\pi + (1 - \pi)\lambda'_{s_1=1})$	Ψ	Ψ

(b) $s_1 = 1$

Table 2: Expected payoffs for factions, for each choice of policy line, in each state, given rational expectations and full commitment, and assuming $\Psi \geq \delta e_2$.

This leads to factions having the following preference orderings:

Opportunists, ω		Militants, μ		Reformists, ρ	
$s_1 = 0$	$s_1 = 1$	$s_1 = 0$	$s_1 = 1$	$s_1 = 0$	$s_1 = 1$
$\{p_1 = 0\}$	$\{p_1 = N\}^*$	$\{p_1 = 1\}$	$\{p_1 = N\}^*$	$\{p_1 = 0\}$	$\{p_1 = N\}^*$
$\{p_1 = N\}$	$\{p_1 = 1\}^*$	$\{p_1 = N\}$	$\{p_1 = 1\}^*$	$\{p_1 = N\}$	$\{p_1 = 1\}^*$
$\{p_1 = 1\}$	$\{p_1 = 0\}$	$\{p_1 = 0\}$	$\{p_1 = 0\}$	$\{p_1 = 1\}$	$\{p_1 = 0\}$

Table 3: Preference rankings for factions for each choice of policy line, in each state, given rational expectations and full commitment, and assuming $\Psi \geq \delta e_2$. (An asterisk denotes an ex-æquo ranking.)

Therefore, $p_1 = 0$ is a Condorcet winner in $s_1 = 0$, while $p_1 = N$ is chosen in $s_1 = 1$.

The effect of this choice is to further coerce ideologues in $s_1 = 0$. No choice is made in $s_1 = 1$, since it is rationally expected by factions to neither have an effect on the incumbent, nor to be beneficial to them.

Proposition 2. *The choice of $p_1 = 0$ as an ex-ante policy line further constrains ideologues in $s_1 = 0$. They mimic welfarists with greater probability, provided that future party ego rents, e_2 , are positive. This increases accountability. In $s_1 = 1$, no such discipline is effective or beneficial to a majority of members. No policy line is therefore chosen in that state.*

2.8 An ex-post leadership review, with factions voting retrospectively

In the case of an ex-post leadership review, one must again proceed by backward induction, now by first looking at the factions' choices.

In $s_1 = 0$, militants are the only faction that would like to see removed a politician who has chosen $p_1 = 0$. Yet since $\mu < \mathcal{Q}$, no politician choosing this is ever removed. However, a politician choosing $p_1 = 1$ is disavowed by a majority of party members, $\omega + \rho \geq \mathcal{Q}$. This expected discipline weakens the incentives of ideologues to act true to their innate preferences, which means that they now mimic welfarists with probability:

$$\lambda'_{s_1=0} = F(\delta(E_2 + \bar{r} + e_2)) > F(\delta(E_2 + \bar{r})) = \lambda_{s_1=0}$$

In $s_1 = 1$, no faction likes seeing a politician to have chosen $p_1 = 0$, which means that anyone who has done so is unanimously disavowed and removed. However, since both types of politicians choose $p_1 = s_1 = 1$ anyway, this does not amount to an effective means of coercion. In turn, the lack of effective discipline causes the incentives of politicians of all types to be unchanged.

These results lead to the following proposition.

Proposition 3. *An ex-post leadership review is an equivalent means of changing the incentives of ideological politicians in $s_1 = 0$, in comparison with a ex-ante policy line with full commitment. (It is also equally ineffective in $s_1 = 1$.) This requires that the voting rule, \mathcal{Q} , be the same for both processes.*

Corollary 1. *Factions voting retrospectively are sufficient to ensure full commitment to a policy line when it is not assumed at the outset. They would not renege on the decision to remove a leader who crossed the policy line even if they were given the opportunity to do so.*

2.9 A putsch by one or more factions

Yet it would be somewhat naïve to think that parties are entirely-democratic bodies. Cloak-and-dagger moments also have their place, and one must reckon with a *coup de force* by a determined wing seeking to oust the party's leader.

Party coercion by clique interests is modelled in such a fashion that the relative size of the two putschist factions (militants and opportunists) also corresponds to the probability of that faction alone successfully removing the leader through a putsch. The preferences of each faction are here unchanged. Putschist opportunists seek to remove any leader who did not choose $p_1 = s_1 \forall s_1$, and succeed with probability ω . Meanwhile, putschist militants seek to have any incumbent who did not choose $p_1 = 1 \forall s_1$ removed, their probability of success being μ .

The putschist factions' presence changes the incentives of welfarists in $s_1 = 0$ such that they now only behave true-to-type whenever:

$$\Psi \geq \frac{\delta((\mu - \omega)e_2 - (1 - \mu)E_2)}{1 + \delta(1 - \mu)} \quad (8)$$

which again holds by assumption for any $\Psi > 0$ whenever $E_2 \gg e_2$, that is the ego rents from holding office far exceed those of being at the party's helm. In contrast, in $s_1 = 1$, that condition can be written:

$$\Psi \geq \frac{-\delta(E_2 + (\mu + \omega)e_2)}{1 + \delta} \quad (9)$$

which always holds. Welfarists also conform to their innate preferences by choosing $p_1 = s_1 = 1$, as otherwise they lose the subsequent election, and also risk losing their place at the party's helm.

In contrast, the accountability index of ideological politicians in $s_1 = 0$, now denoted by $\lambda''_{s_1=0}$ to distinguish it from accountability in the presence of democratic party coercion ($\lambda'_{s_1=0}$) and in the party's absence ($\lambda_{s_1=0}$), is given by:

$$\lambda''_{s_1=0} = F(\delta(1 - \mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2)$$

Meanwhile, the accountability index of ideologues in $s_1 = 1$ is:

$$\lambda''_{s_1=1} = 1$$

This is driven by the ideologues' innate preferences, which coincide with the welfarist politicians' preferences (and the representative voter's) in $s_1 = 1$.

It is therefore that across all states:

$$\bar{\lambda}'' = \frac{1}{2}\lambda''_{s_1=0} + \frac{1}{2}\lambda''_{s_1=1} = \frac{1}{2}F(\delta(1-\mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) + \frac{1}{2} \quad (10)$$

Comparing the average accountability of ideologues in the presence of a putschist party with the benchmark case, found in equation 6, yields:

$$F(\delta(1-\mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) < F(\delta(E_2 + \bar{r})) \quad (11)$$

since whatever gain in party ego rents exists on the left-hand side is likely to be minuscule if both factions are close in relative size, and when E_2 is sufficiently large relative to e_2 . This result is made clearest by setting $e_2 = 0$, thus showing that *accountability is unambiguously reduced* by the putschist factions' coercive influence, whenever party ego rents are sufficiently low:

$$F(\delta(1-\mu)(E_2 + \bar{r})) < F(\delta(E_2 + \bar{r}))$$

2.10 Effect of party discipline on welfare

Ex-ante expected voter welfare is characterized by the fact that ideologues of the incumbent party will act in the representative voter's interest (and thus provide them with Ψ , while still receiving r_1) half of the time by implementing $p_1 = s_1 = 1$. (Ideologues of the challenger party do the same for $p_2 = s_2 = 0$.) This is driven by the fact that each state of the world has an equal chance of occurring. Given these considerations, ex-ante voter welfare, in the benchmark case, can be expressed in the following way:

$$\begin{aligned} E[V(\lambda_{s_1=0}, \lambda_{s_1=1})] &= \frac{1}{2}(\pi + (1-\pi)\lambda_{s_1=0})\Psi + \frac{1}{2}(\pi + (1-\pi)\lambda_{s_1=1})\Psi + \delta\pi\Psi \\ &\quad + \frac{1}{4}\delta\Psi(1-\pi)\pi(1-\lambda_{s_1=0}) \\ &\quad + \frac{1}{4}\delta\Psi(1-\pi)\pi(1-\lambda_{s_1=1}) + \frac{1}{2}\delta\Psi(1-\pi) \end{aligned}$$

Welfare is an increasing function of accountability in both states:

$$\frac{\partial E[V]}{\partial \lambda_{s_1=0}} = \frac{\partial E[V]}{\partial \lambda_{s_1=1}} = \frac{1}{2}\Psi(1-\pi) \left(1 - \frac{1}{2}\delta\pi\right) > 0$$

Accountability is even more welfare-increasing whenever π and δ are low. Indeed, when the quality of the pool of politicians decreases (i.e., as π falls), making ideological politicians in office accountable in $t = 1$ has a greater effect on welfare, as expected second-period welfare

is lower when they are not held accountable and defeated – they are then likely to be replaced by another ideologue anyway. Similarly, the more heavily-discounted is future utility (i.e., the lower is δ), then the more welfare-maximizing (i.e., accountable) behaviour on the part of ideologues in office in $t = 1$ matters for ex-ante expected voter welfare.

Democratic forms of party discipline always increase accountability relative to the benchmark, this while not changing the formulation of ex-ante expected voter welfare and therefore unambiguously increasing it.

In the case of putschist factions, however, two effects are afoot. First, as seen before, the accountability of ideologues is reduced by the putschist factions' coercion. This is said to be an *indirect effect* on welfare. Formally, each faction's respective effect on accountability is given by:

$$\begin{aligned}\frac{\partial \bar{\lambda}''}{\partial \mu} = \frac{\partial \lambda''_{s_1=0}}{\partial \mu} &= -\frac{1}{2} \delta (E_2 + \bar{r} + e_2) f(\delta(1-\mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) < 0 \\ \frac{\partial \bar{\lambda}''}{\partial \omega} = \frac{\partial \lambda''_{s_1=0}}{\partial \omega} &= \frac{1}{2} \delta e_2 f(\delta(1-\mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) > 0\end{aligned}$$

given that $\lambda''_{s_1=1} = 1$ is left unaffected by the putschist party. The opportunists' clout is accountability- and welfare-increasing, and conversely for the militants' influence, with the latter prevailing given that $E_2 + \bar{r}$ is deemed much greater than e_2 . This reduces ex-ante expected voter welfare, now reformulated thus:

$$\begin{aligned}E[V(\lambda''_{s_1=0}, \lambda''_{s_1=1})] &= \frac{1}{2}(\pi + (1-\pi)\lambda''_{s_1=0})\Psi + \frac{1}{2}(\pi + (1-\pi)\lambda''_{s_1=1})\Psi \\ &+ \frac{1}{4}\delta\Psi\pi(\mu\pi + (1-\mu)) + \frac{3}{4}\delta\Psi\pi \\ &+ \frac{1}{4}\delta\Psi(1-\pi)\pi[(1-\lambda''_{s_1=0}) + \lambda''_{s_1=0}\mu] \\ &+ \frac{1}{4}\delta\Psi(1-\pi)\pi(1-\lambda''_{s_1=1}) + \frac{1}{2}\delta\Psi(1-\pi)\end{aligned}$$

Second, the effect of putschist factions also translates itself *directly* in a drop in welfare compared with the benchmark case, when presuming (counter-factually) identical accountability indices in both states. It originates from the potential removal of incumbents of all types by the putschist militants, after having chosen $p_1 = 0$. The total effect of each faction

on welfare is thus:

$$\begin{aligned} \frac{\partial E[V]}{\partial \mu} &= \underbrace{\frac{1}{2}\Psi(1-\pi)\frac{\partial \lambda''_{s_1=0}}{\partial \mu}\left(1-\frac{1}{2}\delta\pi(1-\mu)\right)}_{\text{Indirect effect } (<0)} \underbrace{-\frac{1}{4}\delta\Psi(1-\pi)\pi(1-\lambda''_{s_1=0})}_{\text{Direct effect } (<0)} < 0 \\ \frac{\partial E[V]}{\partial \omega} &= \underbrace{\frac{1}{2}\Psi(1-\pi)\frac{\partial \lambda''_{s_1=0}}{\partial \omega}\left(1-\frac{1}{2}\delta\pi(1-\mu)\right)}_{\text{Indirect effect } (>0)} > 0 \end{aligned}$$

The overall effect of putschist coercion is therefore welfare-decreasing relative to the benchmark where $\mu = \omega = 0$:

$$\begin{aligned} \frac{\partial E[V]}{\partial \mu} + \frac{\partial E[V]}{\partial \omega} &= \underbrace{\frac{1}{2}\Psi(1-\pi)\left(1-\frac{1}{2}\delta\pi(1-\mu)\right)\left(\frac{\partial \lambda''_{s_1=0}}{\partial \mu} + \frac{\partial \lambda''_{s_1=0}}{\partial \omega}\right)}_{\text{Indirect effect } (<0)} \\ &\quad - \underbrace{\frac{1}{4}\delta\Psi(1-\pi)\pi(1-\lambda''_{s_1=0})}_{\text{Direct effect } (<0)} \\ &< 0 \quad \forall \mu, \omega \geq 0 \end{aligned}$$

3 Party discipline when the electoral mechanism's efficacy is weakened

In the presence of a well-functioning electoral mechanism, democratic means of coercion were found to be accountability- and welfare-increasing, while putschist threats had the opposite effect.

Yet what if the efficacy of the electoral mechanism is weakened? Specifically, what can be said about the effect of all types of party discipline on accountability and welfare when less information is available to the representative voter, so that even the incentives of welfarist politicians become distorted? This is what this section seeks to establish.

3.1 A second-best benchmark with pandering welfarist politicians

Suppose now that the representative voter only observes *any payoffs* (i.e., a payoff of zero is still observed) before the election with probability $q < 1$, known *only* to the incumbent and to party factions, if applicable. (In the initial benchmark, q was always 1.) This creates two separate games: the game when payoffs (i.e., a signal) are observed, and the game when they

are not.⁴

In the event that payoffs are observed, the previous game is played, for no new information is available to the representative voter. Thus, given that a signal is received and the voter is unaware that it could have not been so, his posterior beliefs about the type of politician yielding a positive payoff are left unchanged. He therefore still decides to re-elect an incumbent if positive payoffs are revealed, on the presumption that his is more likely to be a welfarist than the challenger.

When payoffs are not revealed before the election, even less information is available to the voter than before. He therefore cannot hold the same beliefs as when he receives a signal. Yet, while he might not observe payoffs from policy before the election, he still sees the *policy choice* $p_1 = \{0, 1\}$. Of course, in the absence of information about how policy should relate to the state of the world, and about the state of the world, this information *could* still be devoid of significance to him. However, it is not inconceivable that the representative voter then form some beliefs concerning each choice of policy. Suppose he knows that $p_1 = 1$, given the nature of the incumbent party, is the ideologically-coloured policy. Any politician implementing it is then branded as an ideologue, and not re-elected, unless payoffs are revealed before the election. Conversely, the choice of $p_1 = 0$ is deemed to be a sign of welfarism, and the incumbent is re-elected with certainty, unless payoffs are again revealed.

Given these beliefs, the probabilities of re-election are therefore now given by:

$$\begin{aligned} \Pr(\text{Re - elect} | p_1 = 0, s_1 = 0) &= 1 \\ \Pr(\text{Re - elect} | p_1 = 1, s_1 = 0) &= 0 \\ \Pr(\text{Re - elect} | p_1 = 0, s_1 = 1) &= 1 - q \\ \Pr(\text{Re - elect} | p_1 = 1, s_1 = 1) &= q \\ \Pr(\text{Re - elect} | \text{Leader replaced}) &= \frac{1}{2} \end{aligned}$$

While these beliefs are somewhat *ad hoc*, they are far from being unreasonable given the information available to the voter, who by not knowing q cannot infer the exact change in behaviour of all types of incumbents. He uses all the information available to him, although here his beliefs are not derived using Bayes rule. Furthermore, similar beliefs that serve to induce a bias against a subset of policies are used in Besley (2006, p. 136).⁵ This type of

⁴Put differently, the fact that q is unknown to the representative voter represents the hypothesis that he is *unaware* of the signalling technology, and also *unaware* that politicians and factions are *aware* of it.

⁵The notable difference being that beliefs are derived using Bayes rule in Besley's example. Here, they consistently could too, by assuming instead that $q = 0$, and that it were known to the representative voter. However, allowing $q > 0$ to be known would lessen considerably the distortion, and the incentives of welfarists to pander, for the strategies to be consistent with the beliefs, and conversely.

bias may well be present in the electorate against, say, the enactment of a minimum wage, or all types of government intervention. These beliefs thus provide an easy way of inducing welfarist, yet office-motivated politicians to pander to the representative voter's perception of reality.

If there is no coercion by the party (i.e., $\sigma = 1 \forall p_1, s_1$), as in the previous benchmark, the lifetime payoffs of a welfarist incumbent are now, for each choice of policy given the state:

$$\begin{aligned} E[U^W(0,0)] &= \Psi + \delta(E_2 + e_2 + \Psi) \\ E[U^W(1,0)] &= 0 + \delta e_2 \\ E[U^W(0,1)] &= 0 + \delta((1-q)(E_2 + \Psi) + e_2) \\ E[U^W(1,1)] &= \Psi + \delta(q(E_2 + \Psi) + e_2) \end{aligned}$$

All welfarist incumbents still always opt for $p_1 = s_1 = 0$. Yet, while they were previously deemed to always choose $p_1 = s_1 = 1$, it now happens that whenever:

$$\Psi < \frac{\delta(1-2q)E_2}{1-\delta(1-2q)}, \quad q < 1/2 \quad (12)$$

welfarist politicians *pander* by choosing $p_1 = 1 - s_1 = 0$, the policy that maximizes chances of re-election and, *de facto*, lifetime expected utility.

Meanwhile, the problem for an ideological incumbent is now given by:

$$\begin{aligned} E[U^I(0,0)] &= 0 + \delta(E_2 + e_2 + \bar{r}) \\ E[U^I(1,0)] &= r_1 + \delta e_2 \\ E[U^I(0,1)] &= 0 + \delta((1-q)(E_2 + \bar{r}) + e_2) \\ E[U^I(1,1)] &= r_1 + \delta(q(E_2 + \bar{r}) + e_2) \end{aligned}$$

In $s_1 = 0$, the condition for ideologues to be held accountable (i.e., here redefined slightly to mean acting *true* to the representative voter's – known – interests, not their *perception* thereof) is left unchanged (see equation 5), yet in $s_1 = 1$ it now becomes:

$$r_1 \geq \delta(1-2q)(E_2 + \bar{r}), \quad q < 1/2$$

or in probabilistic form:

$$\lambda_{s_1=1} = 1 - F(\delta(1-2q)(E_2 + \bar{r})) < 1$$

The accountability of ideologues is therefore *reduced* in this setting, relative to the initial

benchmark.

By the presence of pandering welfarists, and by the lowered accountability of ideologues in $s_1 = 1$, ex-ante voter welfare is reduced relative to the initial benchmark.⁶ This case thus forms a *second-best benchmark*, in which the effects of various forms of party coercion are examined next.

3.2 Effect of an ex-ante policy line with full commitment

3.2.1 Rational expectations of a policy line's effect on the leader's choices

Here, first reconsider party discipline through a policy line chosen democratically. Proceeding still by backward induction, the effects of party discipline on both types of politicians yield the following behaviours.

Welfarist politicians choose the policies described in the table below, given the state and the policy line:

		Policy line	
		$p_1 = 0$	$p_1 = 1$
State of the world	$s_1 = 0$	$p_1^W = 0$	$p_1^W = \begin{cases} 0 & \text{if } \Psi \geq \delta e_2 \\ 1 & \text{otherwise} \end{cases}$
	$s_1 = 1$	$p_1^W = \begin{cases} 0 & \text{if } \Psi < \frac{\delta((1-q)E_2 + e_2)}{1 - \delta(1-q)} \\ 0 & \text{otherwise} \end{cases}$	$p_1^W = 1$

Table 4: Behaviour by welfarists when facing a policy line determined ex-ante, when there is an incentive to pander

This means that pandering is *eliminated* by the choice of the policy line $p_1 = 1$ in the state $s_1 = 1$.

Faced with a policy line of $p_1 = 0$ in $s_1 = 0$, the behaviour of ideologues is affected in such a way that their accountability index becomes:

$$\lambda'_{s_1=0} = F(\delta(E_2 + \bar{r} + e_2)) > F(\delta(E_2 + \bar{r})) = \lambda_{s_1=0}$$

On the contrary, the choice of a policy line $p_1 = 1$ in $s_1 = 0$ again means that ideologues are then *never held accountable*, due to party discipline: $\lambda_{s_1=0} = 0$.

In contrast, in $s_1 = 1$, if the policy line chosen is $p_1 = 0$, their accountability is then

⁶To see that even for identical accountability indices, pandering is welfare-decreasing, refer to Appendix A.1 on page 35.

reduced:

$$\lambda'_{s_1=1} = 1 - F(\delta((1-q)(E_2 + \bar{r}) + e_2)) < 1 - F(\delta(1-2q)(E_2 + \bar{r})) = \lambda_{s_1=1}$$

Similarly to welfarists, if $p_1 = 1$ is chosen as a policy line ideologues are now constrained by the party in $s_1 = 1$, thus making them perfectly accountable to the representative voter's interests:

$$\lambda'_{s_1=1} = 1 > \lambda_{s_1=1}$$

This form of coercion is therefore potentially welfare-improving in all states. Indeed, it tames the welfarists' tendency to pander, the ideological politicians' office-motivated behaviour in $s_1 = 1$, and their ideologically-motivated behaviour in $s_1 = 0$.

3.2.2 The factions' expected payoffs, preference orderings, and choice of ex-ante policy line

Given that politicians are expected to behave in the way represented above, the payoffs of all factions for each choice of policy line, in every known state, are given by the following tables:

<i>Policy line</i>	$p_1 = 0$	$p_1 = 1$	N
Opportunists, ω	$\pi + \frac{1}{2}(1-\pi)(1 + \lambda'_{s_1=0})$	$\frac{1}{2}\pi$	$\pi + (1-\pi)(1 - \lambda_{s_1=0})$
Militants, μ	$v^m(1-\pi)(1 - \lambda'_{s_1=0})$	$v^m(1-\pi)$	$v^m(1-\pi)(1 - \lambda_{s_1=0})$
Reformists, ρ	$\Psi(\pi + (1-\pi)\lambda'_{s_1=0})$	$\Psi\pi$	$\Psi(\pi + (1-\pi)\lambda_{s_1=0})$

(a) $s_1 = 0$

<i>Policy line</i>	$p_1 = 0$	$p_1 = 1$	N
Opportunists, ω	$(\pi + (1-\pi)(1 - \lambda'_{s_1=1}))(1-q) + \frac{1}{2}(1-\pi)\lambda'_{s_1=1}$	q	$(\pi + (1-\pi)(1 - \lambda_{s_1=1}))(1-q) + q(1-\pi)\lambda_{s_1=1}$
Militants, μ	$r_1(1-\pi)\lambda'_{s_1=1}$	r_1	$r_1(1-\pi)\lambda_{s_1=1}$
Reformists, ρ	$\Psi(1-\pi)\lambda'_{s_1=1}$	Ψ	$\Psi(1-\pi)\lambda_{s_1=1}$

(b) $s_1 = 1$

Table 5: Expected payoffs for factions, with pandering, for each choice of policy line, in each state, given rational expectations and full commitment, and assuming $\Psi \geq \delta e_2$.

These yield the following preference orderings:

Opportunists, ω		Militants, μ		Reformists, ρ	
$s_1 = 0$	$s_1 = 1$	$s_1 = 0$	$s_1 = 1$	$s_1 = 0$	$s_1 = 1$
$\{p_1 = 0\}$	$\{p_1 = 0\}$	$\{p_1 = 1\}$	$\{p_1 = 1\}$	$\{p_1 = 0\}$	$\{p_1 = 1\}$
$\{p_1 = N\}$	$\{p_1 = N\}$	$\{p_1 = N\}$	$\{p_1 = N\}$	$\{p_1 = N\}$	$\{p_1 = N\}$
$\{p_1 = 1\}$	$\{p_1 = 1\}$	$\{p_1 = 0\}$	$\{p_1 = 0\}$	$\{p_1 = 1\}$	$\{p_1 = 0\}$

Table 6: Preference rankings for factions, with pandering, for each choice of policy line, in each state, given rational expectations and full commitment, and assuming $\Psi \geq \delta e_2$.

In $s_1 = 0$, the Condorcet winner is the policy line $p_1 = 0$, due to the joint influence of the opportunists and the militants, while in $s_1 = 1$ it is $p_1 = 1$, this time due to the convergence between the interests of the militants and the reformists.

Proposition 4. *Factions choose the ex-ante policy line $p_1 = s_1 \forall s_1$. All incumbent leaders not following the policy line are removed. This eliminates pandering of welfarist politicians in $s_1 = 1$, while also improving the accountability of ideologues in $s_1 = 1$ relative to the second-best benchmark.*

3.3 An ex-post leadership review, with factions voting retrospectively

The equivalence between the effects of an ex-ante policy line and an ex-post leadership review still holds, as retrospective voting by factions and identical majority rules (i.e., \mathcal{Q}) are maintained (see Proposition 3). The results of Proposition 4 above therefore carry through for the latter's effect on the politician. Any leader not choosing $p_1 = s_1 \forall s_1$ is removed in an ex-post leadership review: in $s_1 = 0$, by the coalition of opportunists and reformists, assuming again that $\omega + \rho \geq \mathcal{Q}$; and in $s_1 = 1$, by the coalition of militants and reformists, provided that $\mu + \rho \geq \mathcal{Q}$.

3.4 A putsch by one or more of the factions

How effective, in comparison with democratic means, is the threat of forcibly removing the party leader? That is what this subsection endeavours to establish, keeping in mind how the benchmark results have changed following the alteration of the game's informational structure.

Party factions now have to contend with the probability of payoffs being revealed to the representative voter, q . (Remember that by assumption, so as to induce pandering, $q < 1/2$.) This will cause the opportunists to weigh differently whether or not to attempt a putsch. Namely, the ex-ante probability of re-election if $p_1 = 1 = s_1$ is chosen and the incumbent

remains at the party's helm is q , whereas the ex-ante probability of (party) re-election if $p_1 = 1 = s_1$ is chosen and the incumbent politician is removed is $1/2$. In consequence, the faction of putschist opportunists will not be as virtuous as it used to be.

Welfarist politicians in $s_1 = 0$ now still choose $p_1 = s_1 = 0$ for all $\Psi > 0$. In contrast, in $s_1 = 1$, welfarist incumbents pander to the representative voter and choose $p_1 = 1 - s_1 = 0$ whenever:

$$\Psi < \frac{\delta((1-2q)E_2 - (\mu(1-q) - \beta q)E_2 - (\mu - \omega)e_2)}{1 - \delta((1-2q) - (\mu(1-q) - \omega q))}$$

This leads to the following proposition.

Proposition 5. *Coercion by putschist factions may reduce the incidence of pandering by welfarist incumbents for any given payoff $\Psi > 0$, or even eliminate it for all possible $\Psi > 0$. In the former case, this happens whenever a certain threshold $\mu > \tilde{\mu}$ is met, where:*

$$\tilde{\mu} = \frac{qE_2 + e_2}{(1-q)E_2 + e_2}\omega$$

and in the latter case, whenever a certain (stronger) threshold $\mu > \hat{\mu}$ is met, where:

$$\begin{aligned} \hat{\mu} &= \frac{(1-2q)E_2}{(1-q)E_2 + e_2} + \omega \left(\frac{qE_2 + e_2}{(1-q)E_2 + e_2} \right) \\ &= \frac{(1-2q)E_2}{(1-q)E_2 + e_2} + \tilde{\mu} \end{aligned}$$

Proof. See Appendix A.3 on page 36. □

The ideologues' problem in $s_1 = 0$ is left unchanged. This means that the accountability index also remains the same as in the case with putschist factions, and without pandering from welfarist politicians:

$$\lambda''_{s_1=0} = F(\delta(1-\mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) > 0$$

This is of course not so in $s_1 = 1$, where the coercion by party factions has changed. Opportunists are now demanding to see $p_1 = 0$, for it maximizes chances of re-election. Therefore, the accountability index here becomes:

$$\lambda''_{s_1=1} = 1 - F(\delta((1-\mu)(1-q) - (1-\omega)q)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2)$$

It is thus plain to see that militants have an ambiguous effect on the accountability of ideologues, as an increase in their relative size coerces the incumbent to select $p_1 = 1$ more often across all states, which is beneficial in $s_1 = 1$, and detrimental in $s_1 = 0$. Similarly,

opportunists increase the accountability of ideological politicians in $s_1 = 0$, while they reduce it in $s_1 = 1$.

3.5 Effect of party discipline on welfare

Democratic means of coercion are here also strictly welfare-improving, relative to the second-best benchmark. This happens both through a *direct – i.e., level – effect* (the elimination of pandering by welfarists, and the removal before the election of non-accountable ideologues), and an *indirect effect* (the improved accountability of ideologues). For technical details, refer to the Appendix on page 36.

The formulation of ex-ante voter welfare in the presence of putschist factions changes in contrast with the second-best benchmark. In comparing welfare between the case of a putschist party and the second-best benchmark, similar effects as before are found. The first is the *direct (level) effect*, which for equal accountability indices in both cases can be either positive or negative, so that the putschist party *may* improve welfare comparatively to the second-best benchmark.⁷ The second is the *indirect effect*, which describes how welfare is positively affected by changes in accountability. This effect is found to matter more in $s_1 = 0$ when the putschist party is present, and potentially less in $s_1 = 1$, than in the second-best benchmark:

$$\begin{aligned} \frac{\partial E[V]}{\partial \lambda''_{s_1=0}} &= \frac{1}{2} \Psi(1 - \pi) \left(1 - \frac{1}{2} \delta \pi (1 - \mu) \right) > \frac{1}{2} \Psi(1 - \pi) \left(1 - \frac{1}{2} \delta \pi \right) = \frac{\partial E[V]}{\partial \lambda_{s_1=0}} \\ \frac{\partial E[V]}{\partial \lambda''_{s_1=1}} &= \frac{1}{2} \Psi(1 - \pi) \left(1 + \frac{1}{2} \delta \pi (1 - \mu - q(2 - \mu - \omega)) \right) \leq \frac{1}{2} \Psi(1 - \pi) \left(1 + \frac{1}{2} \delta \pi (1 - 2q) \right) \\ &= \frac{\partial E[V]}{\partial \lambda_{s_1=1}} \\ &\text{iff } q \leq \frac{\mu}{\mu + \omega}, \quad q < 1/2 \end{aligned}$$

⁷This is so whenever:

$$\mu < \frac{\omega q \lambda_{s_1=1}}{1 - \lambda_{s_1=0} + (1 - q) \lambda_{s_1=1}}$$

That is, if the relative size of militants is below a certain threshold, which represents the ratio of the direct effect on welfare of putschist opportunists to that of putschist militants. If the first outweighs the second, the fraction will be large enough for admissible values of $\mu \in (0, 1)$ to exist. In the event where pandering is eliminated, this threshold can then be written:

$$\mu < \frac{2 - \delta(1 - \pi) [1 - q(2 - \omega(1 - \lambda_{s_1=1}))]}{\delta(1 - \pi) [1 - \lambda_{s_1=0} + (1 - q) \lambda_{s_1=1}]}$$

where the ratio now corresponds to the benefits of the elimination of pandering and the direct effect of putschist opportunists, divided by the direct effect of putschist militants on welfare. Again, the greater is the former to the latter, the more likely are admissible values of μ found.

Yet it is generally the case, as seen above, that in the presence of the putschist party, and in relation to the second-best benchmark, accountability is reduced in $s_1 = 0$ while it is increased in $s_1 = 1$, i.e. $\lambda''_{s_1=0} < \lambda_{s_1=0}$; $\lambda''_{s_1=1} > \lambda_{s_1=1}$. The overall effect of putschist factions on welfare – the sum of the direct and indirect effects – is thus ambiguous.

This result, though largely indeterminate, is still striking in contrast with the initial benchmark, where the election mechanism was not distorted and the addition of the putschist party had a unambiguously detrimental effect on accountability and welfare. Further examination and decomposition of the above result is thus worthwhile.

First, it is possible to decompose the effects of the putschist party on welfare into those of each putschist faction, by looking at comparative statics of the expected welfare formulation with respect to the relative size of each faction, both when pandering is occurring and when it is not. These comparative statics can then be decomposed into direct and indirect effects. Then, the sum of both factions' influence on welfare can be found. The following tables summarize the signs of such comparative statics, while the corresponding mathematical expressions can be found in the Appendix on page 39:

	Opportunists, size ω	Militants, size μ
<i>Pandering</i> : Indirect effect	+/-	+/-
<i>Pandering</i> : Direct effect	+	-
<i>No pandering</i> : Indirect effect	+/-	+/-
<i>No pandering</i> : Direct effect	-	+/-

(a) Decomposing the effects

	Total partial effects	Total effect
<i>Pandering</i> : Indirect effect	+/-	<i>Pandering</i> : -
<i>Pandering</i> : Direct effect	-	
<i>No pandering</i> : Indirect effect	+/-	<i>No pandering</i> : +/-
<i>No pandering</i> : Direct effect	+/-	

(b) Total effects

Table 7: Effects on accountability and welfare of putschist factions, second-best setting, for all $q < 1/2$

For all $q < 1/2$, the direct effect is generally larger than the indirect effect, and the effect of militants also greater than that of opportunists. The overall effect of putschist factions on welfare therefore tends to be, as before, *negative*, except when pandering is eliminated, in which case it is ambiguous. However, such general results obfuscate the role of the *intensity* of the distortion on the electoral mechanism, measured by q , in determining the effect of putschist factions on welfare.

For $q = 1$, the initial (undistorted) benchmark case, the influence of putschist factions

was found to be unambiguously overall accountability- and welfare-decreasing. Yet when the payoffs are *never* revealed to representative voter, i.e. $q = 0$, the putschist party *can* then *clearly* be *accountability- and welfare-improving*. To see this, the above table is updated for $q = 0$:

	Opportunists, size ω	Militants, size μ
<i>Pandering</i> : Indirect effect	–	+
<i>Pandering</i> : Direct effect	0	–
<i>No pandering</i> : Indirect effect	–	+
<i>No pandering</i> : Direct effect	0	≈ 0

(a) Decomposing the effects

	Total partial effects	Total effect
<i>Pandering</i> : Indirect effect	+	<i>Pandering</i> :+/-
<i>Pandering</i> : Direct effect	–	
<i>No pandering</i> : Indirect effect	+	<i>No pandering</i> :+
<i>No pandering</i> : Direct effect	≈ 0	

(b) Total effects

Table 8: Effects on accountability and welfare of putschist factions, second-best setting, for $q = 0$

For low-enough values of μ , the indirect effect is positive overall, due to the greater influence of militants. This indirect effect may then outweigh the negative direct effect. Also worth noting is that for values of μ exceeding the threshold $\hat{\mu} = (E_2 + \omega e_2)/(E_2 + e_2)$, pandering is eliminated. Since welfare without pandering always exceeds welfare with pandering, there is a jump in welfare at the threshold value $\mu = \hat{\mu}$, which is a local maximum of ex-ante voter welfare. For values of μ exceeding this threshold, the effect of militants expresses itself through the positive indirect effect only, which increases welfare.

These findings are replicated in the figure below, holding ω constant, and assuming that the sign of $\partial E[V]/\partial \mu$ is initially positive.⁸

⁸Regarding the shape of the function, the second derivative of $E[V]$ with respect to μ , evaluated at $q = 0$, is given by:

$$\frac{\partial^2 E[V]}{\partial \mu^2} \Big|_{q=0} = \frac{1}{4} \delta \Psi \pi (1 - \pi) \left[\underbrace{2 \left(\frac{\partial \lambda''_{s_1=0}}{\partial \mu} \Big|_{q=0} - \frac{\partial \lambda''_{s_1=1}}{\partial \mu} \Big|_{q=0} \right)}_{<0} + (1 - \mu) \underbrace{\left(- \frac{\partial^2 \lambda''_{s_1=0}}{\partial \mu^2} \Big|_{q=0} + \frac{\partial^2 \lambda''_{s_1=1}}{\partial \mu^2} \Big|_{q=0} \right)}_{\geq 0} \right]$$

This holds for both pieces of the function. The sum of terms between brackets determines the sign of the derivative. The first term is negative and likely larger in absolute value than the second term, which is preceded by a factor of less than one, and which is positive (resp. negative) whenever $F(\cdot)$ is strictly concave (resp. convex). This likely overall concavity is reflected in the included figure.

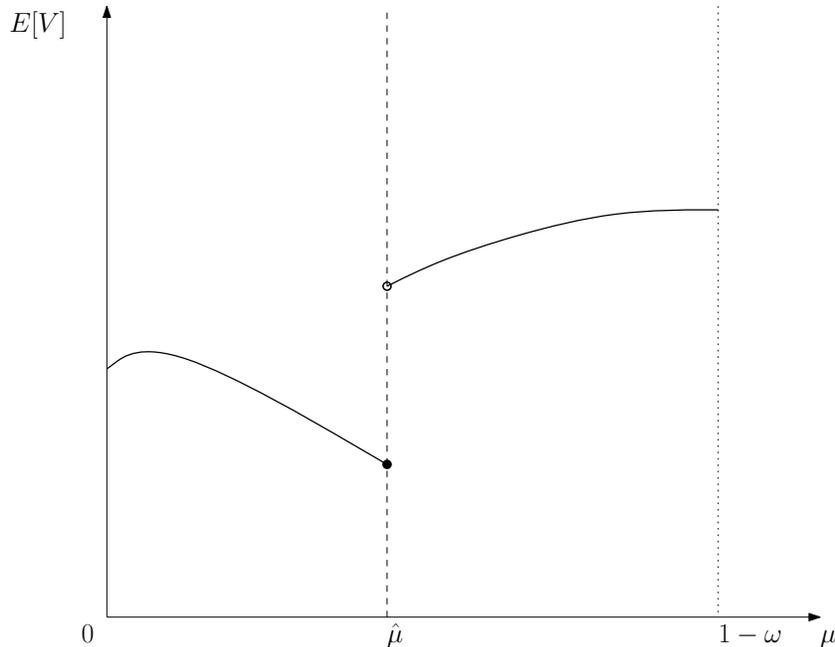


Figure 2: The total effect of putschist militants on welfare, when $q = 0$, holding ω constant

Note that by setting $\omega = 0$, one could get a direct comparison with the second-best benchmark level of welfare at $q = 0$, which would translate into the intersection of the curve with the vertical axis in the figure above. It is a local (boundary) maximum if $\partial E[V]/\partial \mu|_{q=\omega=\mu=0} \leq 0$ and $\partial E[V]/\partial \mu|_{q=\omega=0, \mu=0+} < 0$. However, as shown above, it could be bested for some μ such that $\hat{\mu} \geq \mu > 0$, or for some value $\mu > \hat{\mu}$.

In other words, reducing the distortion on the electoral mechanism (i.e., improving its effectiveness in keeping politicians accountable by increasing q) makes the distortion brought upon by the putschist party less desirable. This is a classic second-best argument.

The proposition below summarizes the findings of Section 3.

Proposition 6. *In the presence of an additional distortion to the electoral system (i.e., less information available to the representative voter), the effect of party discipline on politicians is now accountability- and welfare-increasing both for democratic means of coercion (unconditionally so), and for coercion by putschist factions (conditionally on choices of parameters and functions).*

These results therefore contribute to a theory of the political second-best. In the absence of any other distortions, the putschist party's coercive influence on the incumbent *weakens* the accountability-inducing effects of the electoral mechanism and decreases welfare, while in the presence of a pre-existing distortion to the electoral mechanism, the *reverse* can be true.

4 Discussion of results

The previous sections have shown the following. First, democratic means of coercion of incumbents by their party, such as the choice of an ex-ante policy line or an (equivalent) ex-post leadership review, are accountability- and welfare-improving, even when the electoral mechanism is functioning well. It is a straightforward result considering the introduction of a supplementary, more informed principal, i.e. the factional party, whose majority interests are aligned with those of the imperfectly-informed representative voter. It thus allows the implicit electoral contract to be respected more fully.

Second, coercion by putschist factions, in the absence of distortions to the electoral mechanism, is accountability- and welfare-decreasing.

Third and last, whenever the electoral mechanism is hampered by a distortion, *all* means of party coercion are then potentially accountability- and welfare-improving. It is again unambiguously so for democratic means, for the reasons outlined above, which are made all the more important given the poorer control exerted by the representative voter on the incumbent.

In an interesting turn, however, it is found that the putschist party, a distortion on the electoral mechanism, can improve outcomes in the presence of another pre-existing distortion to the electoral mechanism. This is attributable to a change in the influence of the militant faction, due to there being a bias in the electorate against the policies it prefers. Indeed, its influence again dominates that of opportunists, but can now also be welfare-improving: it induces both welfarists and ideologues to choose $p_1 = 1$ more often, despite the poor probability of re-election associated with such a choice. In contrast, putschist opportunists can now have a detrimental influence on welfare, for they encourage pandering by welfarists to secure re-election, and thus weaken the incentives for ideologues to be kept accountable in $s_1 = 1$.

These results seem to hinge on the assumption of party factions having better information about policies than the representative voter. Yet certain forms of coercion retain a positive effect on accountability and welfare despite party factions being less informed. In the event where the state of the world is unknown to party factions, democratic means of coercion perform worse than under full information, especially in the context of the second-best benchmark. Precisely, an ex-ante policy line with full commitment is weakened because it must be made state-invariant: it could therefore either not discourage pandering, should $p_1 = 0$ be favoured, or decrease the accountability of ideologues, whenever $p_1 = 1$ is chosen. The reformist faction's preferences over policy may then also become indeterminate. This would cause them to hedge the uncertainty inherent to the state of the world by choosing

the status quo, i.e. the choice of *no policy line*. Under this scenario, an ex-ante policy line would be made *completely ineffective*.

Furthermore, when the state of the world is unknown to factions, the equivalence result between an ex-ante policy line and an ex-post leadership review may no longer hold. The effectiveness of the former would then be dependent on the assumption of full commitment being true. The efficacy of the ex-post leadership review would then also be weakened through the channels outlined above.

Nevertheless, when factions are uninformed about the state of the world, putschist coercion by militants performs *just as well* in improving accountability when the electoral mechanism is distorted (i.e., relative to the second-best benchmark). This is so because: no party majority coalition is needed for action to be effective, and thus the problem of the indeterminacy of the reformists' preferences does not present itself; and the overall positive effect of the militant faction can still prevail, its policy preferences being independent from the state of the world.

Another crucial modelling hypothesis for all forms of coercion to be effective is that party factions be near-sighted, that is *vote retrospectively*. By introducing a tradeoff between current and future policy choices, far-sightedness would here align the objectives of all party factions with the careerist politician's, thus weakening coercion.

Finally, regarding the responsible party model, and whether it should be upheld in the light of its effects on the politicians' accountability and voter welfare, the answer to that question is a conditional "yes". As implied by the above discussion, a "responsible" or "strong" party can have a beneficial effect on accountability and welfare. This is especially so if it happens to be internally-democratic, for it can then even ameliorate a well-functioning electoral system. The responsible party's influence is especially beneficial if information is readily accessible to party factions – making them as informed as the politician in office – and if they are near-sighted – in the sense that they vote retrospectively, just as the representative voter is assumed to be doing.

It can also further be argued that the conjectured waning of political parties, due for instance to the declining active participation of the electorate as a whole in such organizations, may have dire consequences for political accountability and voter welfare. One effect of this decline in participation could be to decrease the *quality* of political candidates vying for the party's leadership – captured in the model exogenously by π , the quality of the pool of available politicians. This would lead to ill-chosen policies and a consequent decrease in voter welfare. Furthermore, a decline in participation due to political alienation may for instance decrease the size of the militant faction, μ . While this may *improve* accountability and welfare when the electoral mechanism functions well, its effects in this essay's second-best

framework could instead prove to be detrimental.

5 Conclusion

This essay sought to model the coercion exerted by a politician's party on her policy choices while in office, and its resulting effect on political accountability and voter welfare. To this end, it used a model of political agency where the politician's heterogeneous party, composed of factions, could remove her through different means before the election was held, and after the policy choice had been made. It did so in an otherwise unbiased setting, with full information concerning policy and the state of the world being available to the politician in office and to party factions, and with the representative voter observing policy payoffs before the election – the benchmark case. It also considered a second-best setting where less information available to the representative voter weakened the effectiveness of the electoral mechanism in keeping politicians accountable.

In the benchmark case, the party's influence increased the accountability of politicians in office when discipline was expressed through democratic means. When discipline was expressed through the influence of putschist factions, it however reduced the accountability of politicians in office, thereby also reducing ex-ante expected voter welfare. This was due to the influence of the militant faction, and contrary to that of the opportunistic faction, with the former influence prevailing.

The benchmark case was then modified, so as to allow for a different information structure and beliefs that enabled pandering by welfarist politicians. Coercion by the party through democratic means was then still accountability- and welfare-increasing, relative to the case with pandering but without any party present. Meanwhile, putschist threats now could potentially be accountability- and welfare-increasing, through the influence of the militant faction. The putschist party's effect in this setting was shown to follow a second-best argument. In the presence of a distortion to the electoral mechanism (i.e., less information available to the representative voter), introducing another distortion (i.e., normally welfare-decreasing putschist threats) could now be shown to potentially increase welfare.

In sum, this essay contributed to the literature on political agency by demonstrating how a party's disciplining effect on its leader may have a beneficial impact on her accountability to the representative voter, even when the electoral mechanism is performing well. It also contributed to a theory of the political second-best by showing how a malfunctioning electoral mechanism can potentially be improved upon by the introduction of an additional distortion: here, putschist factions and particularly putschist militants. Finally, it provided evidence for upholding the normative idea of a responsible party.

References

- (1950): “Foreword,” *The American Political Science Review*, 44(3), pp. v–ix.
- BARRO, R. J. (1973): “The Control of Politicians: an Economic Model,” *Public Choice*, 14(1), 19–42.
- BESLEY, T. (2006): *Principled Agents? The Political Economy of Good Government*. Oxford University Press.
- CAILLAUD, B., AND J. TIROLE (1999): “Party Governance and Ideological Bias,” *European Economic Review*, 43(4-6), 779 – 789.
- (2002): “Parties as Political Intermediaries,” *Quarterly Journal of Economics*, 117, 1453–1489.
- CASTANHEIRA, M., B. S. Y. CRUTZEN, AND N. SAHUGUET (2010a): “The Impact of Party Organization on Electoral Outcomes,” *Revue économique*, 61(4), 677–695.
- (2010b): “Party Organization and Electoral Competition,” *Journal of Law, Economics and Organization*, 26(2), 212–242.
- FEREJOHN, J. (1986): “Incumbent Performance and Electoral Control,” *Public Choice*, 50(1-3), 5–25.
- GIDDENS, A. (1998): *The Third Way: The Renewal of Social Democracy*. Polity Press.
- GREENWALD, B. C., AND J. E. STIGLITZ (1986): “Externalities in Economies with Imperfect Information and Incomplete Markets,” *The Quarterly Journal of Economics*, 101(2), 229–264.
- KATZ, R. S., AND P. MAIR (1995): “Changing Models of Party Organization and Party Democracy: The Emergence of the Cartel Party,” *Party Politics*, 1, 5–28.
- LE NOËL, M.-M. (2010): “Kevin Rudd, chassé du poste de premier ministre australien par son propre parti,” *Le Monde*, 25 June.
- LEE, D., AND E. SAEZ (2010): “Optimal Minimum Wage Policy in Competitive Labor Markets,” Institute for Research on Labor and Employment, Working Paper Series 1278056, Institute of Industrial Relations, UC Berkeley.
- PANEBIANCO, A. (1988): *Political Parties: Organization and Power*. Cambridge University Press.

RICHARDS, S. (2008): “The perils of power,” *The New Statesman*, 6 October, 28–30.

ROEMER, J. E. (1999): “The Democratic Political Economy of Progressive Income Taxation,” *Econometrica*, 67, 1–19.

WHITELEY, P. F., AND P. SEYD (2002): *High-intensity Participation: The Dynamics of Party Activism in Britain*. The University of Michigan Press.

A Technical Appendix

A.1 Pandering reduces ex-ante voter welfare in the second-best benchmark: A simple proof

Consider the difference between ex-ante expected voter welfare with and without pandering.

Ex-ante expected voter welfare *with pandering* is given by:

$$\begin{aligned}
E[V(\lambda_{s_1=0}, \lambda_{s_1=1})] &= \frac{1}{2} [\pi + (1 - \pi) \lambda_{s_1=0}] \Psi + \frac{1}{2} [0 + (1 - \pi) \lambda_{s_1=1}] \Psi \\
&\quad + \frac{1}{2} \delta \Psi (1 - q) \pi + \frac{1}{4} \delta \Psi q \pi^2 + \frac{1}{4} \delta \Psi q \pi + \frac{1}{2} \delta \Psi \pi \\
&\quad + \frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \lambda_{s_1=0}) + \frac{1}{2} \delta \Psi (1 - \pi) \\
&\quad + \frac{1}{4} \delta \Psi (1 - \pi) \pi (q (1 - \lambda_{s_1=1}) + (1 - q) \lambda_{s_1=1})
\end{aligned}$$

Ex-ante expected voter welfare in the *absence of pandering* is given by :

$$\begin{aligned}
E[V(\lambda_{s_1=0}, \lambda_{s_1=1})] &= \frac{1}{2} [\pi + (1 - \pi) \lambda_{s_1=0}] \Psi + \frac{1}{2} [\pi + (1 - \pi) \lambda_{s_1=1}] \Psi \\
&\quad + \frac{1}{4} \delta \Psi (1 - q) \pi^2 + \frac{1}{4} \delta \Psi (1 - q) \pi + \frac{1}{2} \delta \Psi q \pi \\
&\quad + \frac{1}{2} \delta \Psi \pi + \frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \lambda_{s_1=0}) \\
&\quad + \frac{1}{2} \delta \Psi (1 - \pi) + \frac{1}{4} \delta \Psi (1 - \pi) \pi (q (1 - \lambda_{s_1=1}) + (1 - q) \lambda_{s_1=1})
\end{aligned}$$

Ex-ante expected voter welfare is diminished by pandering, for identical accountability indices, if and only if:

$$\delta < \frac{2}{(1 - 2q)(1 - \pi)}$$

which holds by assumption for all $\delta \in (0, 1)$, whenever $q < 1/2$. ■

A.2 Ex-ante expected voter welfare for democratic means of coercion, second-best setting

$$\begin{aligned}
E [V (\lambda'_{s_1=0}, \lambda'_{s_1=1})] &= \frac{1}{2} [\pi + (1 - \pi) \lambda'_{s_1=0}] \Psi + \frac{1}{2} [\pi + (1 - \pi) \lambda'_{s_1=1}] \Psi \\
&+ \frac{1}{4} \delta \Psi (1 - q) \pi^2 + \frac{1}{4} \delta \Psi (1 - q) \pi + \frac{1}{2} \delta \Psi q \pi \\
&+ \frac{1}{2} \delta \Psi \pi + \frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \lambda'_{s_1=0}) \\
&+ \frac{1}{2} \delta \Psi (1 - \pi) + \frac{1}{4} \delta \Psi (1 - \pi) \pi ((1 - \lambda'_{s_1=1}) + (1 - q) \lambda'_{s_1=1})
\end{aligned}$$

Effect of accountability on voter welfare:

$$\begin{aligned}
\frac{\partial E[V]}{\partial \lambda'_{s_1=0}} &= \frac{1}{2} \Psi (1 - \pi) \left(1 - \frac{1}{2} \delta \pi \right) \\
\frac{\partial E[V]}{\partial \lambda'_{s_1=1}} &= \frac{1}{2} \Psi (1 - \pi) \left(1 - \frac{1}{2} \delta q \pi \right)
\end{aligned}$$

The effect of accountability on welfare is increased in $s_1 = 1$, relative to the second-best benchmark.

A.3 Proof of Proposition 5 on page 26

If one compares it with the previous pandering threshold, given by:

$$\Psi < \frac{\delta (1 - 2q) E_2}{1 - \delta (1 - 2q)}, q < 1/2$$

then it appears plainly that as long as $\mu > \omega$, that is the faction of militants being larger than that of opportunists, then the incidence of pandering by welfarist politicians is *reduced* in the presence of coercion from putschist factions, for any given $\Psi > 0$. Formally, the (weaker) condition is that:

$$\mu > \frac{qE_2 + e_2}{(1 - q) E_2 + e_2} \omega$$

where since $q < 1/2$,

$$\frac{qE_2 + e_2}{(1 - q) E_2 + e_2} < 1$$

But can party coercion from putschist factions *eliminate* pandering $\forall \Psi > 0$, as was the case for a policy line chosen democratically? This would require:

$$\frac{\delta((1-2q)E_2 - (\mu(1-q) - \omega q)E_2 - (\mu - \omega)e_2)}{1 - \delta((1-2q) - (\mu(1-q) - \omega q))} < 0$$

which holds if and only if:

$$\begin{cases} 1 - \delta((1-2q) - (\mu(1-q) - \omega q)) \geq 0 \\ (1-2q)E_2 - (\mu(1-q) - \omega q)E_2 - (\mu - \omega)e_2 \leq 0 \end{cases}$$

simultaneously hold. Solving for μ yields:

$$\begin{cases} \mu \geq 1 - \frac{1}{\delta(1-q)} - \frac{q}{1-q}(1 + \omega) \\ \mu \geq \frac{(1-2q)E_2}{(1-q)E_2 + e_2} + \omega \left(\frac{qE_2 + e_2}{(1-q)E_2 + e_2} \right) \end{cases}$$

The first inequality in that system is inconsequential as $\omega < 1$, $\delta < 1$, $q < 1/2$, and $\mu > 0$ by assumption: it amounts to nothing more than imposing $\mu > 0$. Meanwhile, the second inequality amounts to a threshold on μ for no longer only reducing the possibility (conditional on parameters) of pandering, but rather *eliminating* its occurrence. Should the militant faction's relative size be above this threshold, denoted by $\hat{\mu}$, it coerces *absolutely* the pandering welfarists, for *all possible parameter values*. The above system is then reduced to:

$$1 > \mu > \frac{(1-2q)E_2}{(1-q)E_2 + e_2} + \omega \left(\frac{qE_2 + e_2}{(1-q)E_2 + e_2} \right) > 0$$

which, assuming that party leadership ego rents are small enough (i.e., setting $e_2 = 0$), further simplifies to be:

$$\mu > 1 - \frac{q}{1-q}(1 - \omega)$$

the right-hand side being indeed less than 1 and greater than 0 for all $\omega \in (0, 1)$ and $q < 1/2$. ■

A.4 Ex-ante expected voter welfare for putschist means of coercion, second-best setting

If pandering is not eliminated:

$$\begin{aligned}
E [V (\lambda''_{s_1=0}, \lambda''_{s_1=1})] &= \frac{1}{2} [\pi + (1 - \pi) \lambda''_{s_1=0}] \Psi + \frac{1}{2} [0 + (1 - \pi) \lambda''_{s_1=1}] \Psi \\
&+ \frac{1}{4} \delta \Psi (1 - q) \pi (\mu \pi + (1 - \mu)) + \frac{1}{4} \delta \Psi (1 - q) \pi \\
&+ \frac{1}{4} \delta \Psi q \pi^2 + \frac{1}{4} \delta \Psi q \pi + \frac{1}{4} \delta \Psi \pi (\mu \pi + (1 - \mu)) \\
&+ \frac{1}{4} \delta \Psi \pi + \frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \lambda''_{s_1=0} + \mu \lambda''_{s_1=0}) \\
&+ \frac{1}{2} \delta \Psi (1 - \pi) + \frac{1}{4} \delta \Psi (1 - \pi) \pi (\mu + (1 - \mu)q) (1 - \lambda''_{s_1=1}) \\
&+ \frac{1}{4} \delta \Psi (1 - \pi) \pi (\omega + (1 - \omega) (1 - q)) \lambda''_{s_1=1}
\end{aligned}$$

If pandering is eliminated:

$$\begin{aligned}
E [V (\lambda''_{s_1=0}, \lambda''_{s_1=1})] &= \frac{1}{2} [\pi + (1 - \pi) \lambda''_{s_1=0}] \Psi + \frac{1}{2} [\pi + (1 - \pi) \lambda''_{s_1=1}] \Psi \\
&+ \frac{1}{4} \delta \Psi (1 - q) \pi^2 + \frac{1}{4} \delta \Psi (1 - q) \pi + \frac{1}{4} \delta \Psi q \pi (\omega \pi + (1 - \omega)) \\
&+ \frac{1}{4} \delta \Psi q \pi + \frac{1}{4} \delta \Psi \pi (\mu \pi + (1 - \mu)) + \frac{1}{4} \delta \Psi \pi \\
&+ \frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \lambda''_{s_1=0} + \mu \lambda''_{s_1=0}) + \frac{1}{2} \delta \Psi (1 - \pi) \\
&+ \frac{1}{4} \delta \Psi (1 - \pi) \pi (\mu + (1 - \mu)q) (1 - \lambda''_{s_1=1}) \\
&+ \frac{1}{4} \delta \Psi (1 - \pi) \pi (\omega + (1 - \omega) (1 - q)) \lambda''_{s_1=1}
\end{aligned}$$

Welfare without pandering exceeds welfare with pandering, for identical accountability indices, whenever:

$$\delta [(1 - \mu(1 - \pi)) - q(2 - (1 - \pi)(\mu + \omega)) - (1 - 2q)\pi] < 2$$

which is to say:

$$\delta \leq \frac{2}{(1 - \mu(1 - \pi)) - q(2 - (1 - \pi)(\mu + \omega)) - (1 - 2q)\pi}$$

iff $(1 - \mu(1 - \pi)) - q(2 - (1 - \pi)(\mu + \omega)) - (1 - 2q)\pi \geq 0$

This is always verified if $(1 - \mu(1 - \pi)) - q(2 - (1 - \pi)(\mu + \omega)) - (1 - 2q)\pi < 0$, for $\delta > 0$ by assumption. Note that when $\mu = \omega = 0$, we are back in the second-best benchmark case, and the threshold reduces to:

$$\delta < \frac{2}{(1 - 2q)(1 - \pi)}$$

or what we had previously found.

A.5 Comparative statics of the putschist factions' effects on ex-ante voter welfare, second-best case

A.5.1 Effects for all $q < 1/2$, with pandering

Partial effects:

$$\begin{aligned} \frac{\partial E[V]}{\partial \mu} &= \underbrace{\frac{1}{2}\Psi(1 - \pi) \left[\left(1 - \frac{1}{2}\delta\pi(1 - \mu)\right) \frac{\partial \lambda''_{s_1=0}}{\partial \mu} + \left(1 + \frac{1}{2}\delta\pi(1 - \mu - q(2 - \mu - \omega))\right) \frac{\partial \lambda''_{s_1=1}}{\partial \mu} \right]}_{\text{Indirect effect } (\geq 0)} \\ &\quad + \underbrace{\frac{1}{4}\delta\Psi(1 - \pi)\pi \left(-1 - (1 - q)\lambda''_{s_1=1} + \lambda''_{s_1=0}\right)}_{\text{Direct effect } (< 0)} \\ \frac{\partial E[V]}{\partial \omega} &= \underbrace{\frac{1}{2}\Psi(1 - \pi) \left[\left(1 - \frac{1}{2}\delta\pi(1 - \mu)\right) \frac{\partial \lambda''_{s_1=0}}{\partial \omega} + \left(1 + \frac{1}{2}\delta\pi(1 - \mu - q(2 - \mu - \omega))\right) \frac{\partial \lambda''_{s_1=1}}{\partial \omega} \right]}_{\text{Indirect effect } (\geq 0)} \\ &\quad + \underbrace{\frac{1}{4}\delta\Psi(1 - \pi)\pi q \lambda''_{s_1=1}}_{\text{Direct effect } (> 0)} \end{aligned}$$

where:

$$\begin{aligned} \frac{\partial \lambda''_{s_1=0}}{\partial \mu} &= -\delta(E_2 + \bar{r} + e_2)f(\delta(1 - \mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) < 0 \\ \frac{\partial \lambda''_{s_1=0}}{\partial \omega} &= \delta e_2 f(\delta(1 - \mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) > 0 \\ \frac{\partial \lambda''_{s_1=1}}{\partial \mu} &= \delta((1 - q)(E_2 + \bar{r}) + e_2) f((\delta(1 - \mu)(1 - q) - (1 - \omega)q)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) > 0 \\ \frac{\partial \lambda''_{s_1=1}}{\partial \omega} &= -\delta(q(E_2 + \bar{r}) + e_2) f((\delta(1 - \mu)(1 - q) - (1 - \omega)q)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) < 0 \end{aligned}$$

Total effect:

$$\begin{aligned}
\frac{\partial E[V]}{\partial \mu} + \frac{\partial E[V]}{\partial \omega} &= \underbrace{\frac{1}{2}\Psi(1-\pi) \left(1 - \frac{1}{2}\delta\pi(1-\mu)\right) \left(\frac{\partial \lambda''_{s_1=0}}{\partial \mu} + \frac{\partial \lambda''_{s_1=0}}{\partial \omega}\right)}_{\text{Indirect effect in } s_1=0 (<0)} \\
&+ \underbrace{\frac{1}{2}\Psi(1-\pi) \left(1 + \frac{1}{2}\delta\pi(1-\mu-q(2-\mu-\omega))\right) \left(\frac{\partial \lambda''_{s_1=1}}{\partial \mu} + \frac{\partial \lambda''_{s_1=1}}{\partial \omega}\right)}_{\text{Indirect effect in } s_1=1 (>0)} \\
&+ \underbrace{\frac{1}{4}\delta\Psi(1-\pi)\pi \left(- (1-2q)\lambda''_{s_1=1} + \lambda''_{s_1=0} - 1\right)}_{\text{Direct effect (<0)}}
\end{aligned}$$

where:

$$\begin{aligned}
\frac{\partial \lambda''_{s_1=0}}{\partial \mu} + \frac{\partial \lambda''_{s_1=0}}{\partial \omega} &= -\delta(E_2 + \bar{r}) f(\delta(1-\mu)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) < 0 \\
\frac{\partial \lambda''_{s_1=1}}{\partial \mu} + \frac{\partial \lambda''_{s_1=1}}{\partial \omega} &= \delta((1-2q)(E_2 + \bar{r})) f((\delta(1-\mu)(1-q) - (1-\omega)q)(E_2 + \bar{r}) + \delta(\omega - \mu)e_2) \\
&> 0
\end{aligned}$$

The sum of indirect effect terms of opposite sign is likely to be small, especially relative to a direct effect whose term within brackets is close to -1 , which means that the overall sign is likely negative.

A.5.2 Effects for all $q < 1/2$, without pandering

Partial effects:

$$\begin{aligned}
\frac{\partial E[V]}{\partial \mu} &= \underbrace{\frac{1}{2}\Psi(1-\pi) \left[\left(1 - \frac{1}{2}\delta\pi(1-\mu)\right) \frac{\partial \lambda''_{s_1=0}}{\partial \mu} + \left(1 + \frac{1}{2}\delta\pi(1-\mu-q(2-\mu-\omega))\right) \frac{\partial \lambda''_{s_1=1}}{\partial \mu} \right]}_{\text{Indirect effect } (\geq 0)} \\
&+ \underbrace{\frac{1}{4}\delta\Psi(1-\pi)\pi \left(-q - (1-q)\lambda''_{s_1=1} + \lambda''_{s_1=0}\right)}_{\text{Direct effect } (\geq 0 \iff q \leq \frac{-\lambda''_{s_1=1} + \lambda''_{s_1=0}}{1 - \lambda''_{s_1=1}})} \\
\frac{\partial E[V]}{\partial \omega} &= \underbrace{\frac{1}{2}\Psi(1-\pi) \left[\left(1 - \frac{1}{2}\delta\pi(1-\mu)\right) \frac{\partial \lambda''_{s_1=0}}{\partial \omega} + \left(1 + \frac{1}{2}\delta\pi(1-\mu-q(2-\mu-\omega))\right) \frac{\partial \lambda''_{s_1=1}}{\partial \omega} \right]}_{\text{Indirect effect } (\geq 0)} \\
&+ \underbrace{-\frac{1}{4}\delta\Psi(1-\pi)\pi q \left(1 - \lambda''_{s_1=1}\right)}_{\text{Direct effect } (<0)}
\end{aligned}$$

Total effect:

$$\begin{aligned}
\frac{\partial E[V]}{\partial \mu} + \frac{\partial E[V]}{\partial \omega} &= \underbrace{\frac{1}{2}\Psi(1-\pi)\left(1 - \frac{1}{2}\delta\pi(1-\mu)\right)\left(\frac{\partial\lambda''_{s_1=0}}{\partial\mu} + \frac{\partial\lambda''_{s_1=0}}{\partial\omega}\right)}_{\text{Indirect effect in } s_1 = 0 (<0)} \\
&+ \underbrace{\frac{1}{2}\Psi(1-\pi)\left(1 + \frac{1}{2}\delta\pi(1-\mu-q(2-\mu-\omega))\right)\left(\frac{\partial\lambda''_{s_1=1}}{\partial\mu} + \frac{\partial\lambda''_{s_1=1}}{\partial\omega}\right)}_{\text{Indirect effect in } s_1 = 1 (>0)} \\
&+ \underbrace{\frac{1}{4}\delta\Psi(1-\pi)\pi(-2q - (1-2q)\lambda''_{s_1=1} + \lambda''_{s_1=0})}_{\text{Direct effect } (\geq 0 \iff q \leq \frac{-\lambda''_{s_1=1} + \lambda''_{s_1=0}}{2(1-\lambda''_{s_1=1})})}
\end{aligned}$$

Given that the indirect effects go in opposite directions in each respective state, and their sum is thus likely to be small, the direct effect is once again likely to determine the sign of the above equation.

A.5.3 Effects for $q = 0$, with pandering

Partial effects:

$$\begin{aligned}
\left.\frac{\partial E[V]}{\partial \mu}\right|_{q=0} &= \underbrace{\frac{1}{4}\delta\Psi(1-\pi)\pi(1-\mu)\left(-\left.\frac{\partial\lambda''_{s_1=0}}{\partial\mu}\right|_{q=0} + \left.\frac{\partial\lambda''_{s_1=1}}{\partial\mu}\right|_{q=0}\right)}_{\text{Indirect effect } (>0)} \\
&+ \underbrace{\frac{1}{4}\delta\Psi(1-\pi)\pi\left(-\lambda''_{s_1=1}\big|_{q=0} + \lambda''_{s_1=0}\big|_{q=0} - 1\right)}_{\text{Direct effect } (<0)} \\
\left.\frac{\partial E[V]}{\partial \omega}\right|_{q=0} &= \underbrace{\frac{1}{4}\delta\Psi(1-\pi)\pi(1-\mu)\left(-\left.\frac{\partial\lambda''_{s_1=0}}{\partial\omega}\right|_{q=0} + \left.\frac{\partial\lambda''_{s_1=1}}{\partial\omega}\right|_{q=0}\right)}_{\text{Indirect effect } (<0)}
\end{aligned}$$

using the simplification brought upon by:

$$\begin{aligned}
\left.\frac{\partial\lambda''_{s_1=0}}{\partial\mu}\right|_{q=0} &= -\left.\frac{\partial\lambda''_{s_1=1}}{\partial\mu}\right|_{q=0} \\
\left.\frac{\partial\lambda''_{s_1=0}}{\partial\omega}\right|_{q=0} &= -\left.\frac{\partial\lambda''_{s_1=1}}{\partial\omega}\right|_{q=0}
\end{aligned}$$

Total effect:

$$\begin{aligned}
\frac{\partial E[V]}{\partial \mu} \Big|_{q=0} + \frac{\partial E[V]}{\partial \omega} \Big|_{q=0} &= \underbrace{-\frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \mu) \left(\frac{\partial \lambda''_{s_1=0}}{\partial \mu} \Big|_{q=0} + \frac{\partial \lambda''_{s_1=0}}{\partial \omega} \Big|_{q=0} \right)}_{\text{Indirect effect in } s_1 = 0 (> 0)} \\
&+ \underbrace{\frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \mu) \left(\frac{\partial \lambda''_{s_1=1}}{\partial \mu} \Big|_{q=0} + \frac{\partial \lambda''_{s_1=1}}{\partial \omega} \Big|_{q=0} \right)}_{\text{Indirect effect in } s_1 = 1 (> 0)} \\
&+ \underbrace{\frac{1}{4} \delta \Psi (1 - \pi) \pi \left(-\lambda''_{s_1=1} \Big|_{q=0} + \lambda''_{s_1=0} \Big|_{q=0} - 1 \right)}_{\text{Direct effect } (< 0)}
\end{aligned}$$

since:

$$\begin{aligned}
\frac{\partial \lambda''_{s_1=0}}{\partial \mu} \Big|_{q=0} + \frac{\partial \lambda''_{s_1=0}}{\partial \omega} \Big|_{q=0} &= -\delta (E_2 + \bar{r}) f (\delta (1 - \mu) (E_2 + \bar{r}) + \delta (\omega - \mu) e_2) < 0 \\
\frac{\partial \lambda''_{s_1=1}}{\partial \mu} \Big|_{q=0} + \frac{\partial \lambda''_{s_1=1}}{\partial \omega} \Big|_{q=0} &= \delta (E_2 + \bar{r}) f (\delta (1 - \mu) (E_2 + \bar{r}) + \delta (\omega - \mu) e_2) > 0
\end{aligned}$$

Here, with both indirect effects being of the same sign, it is plausible that they could outweigh the direct effect. Furthermore, at $\mu = \omega = 0$, it reduces to:

$$\begin{aligned}
\frac{\partial E[V]}{\partial \mu} \Big|_{q=\mu=\omega=0} + \frac{\partial E[V]}{\partial \omega} \Big|_{q=\mu=\omega=0} &= \frac{1}{2} \delta \Psi (1 - \pi) \pi (\delta (E_2 + \bar{r}) f (\delta (E_2 + \bar{r})) - 1 + F (\delta (E_2 + \bar{r}))) \\
&\geq 0
\end{aligned}$$

A.5.4 Effects for $q = 0$, without pandering

Partial effects:

$$\begin{aligned}
\frac{\partial E[V]}{\partial \mu} \Big|_{q=0} &= \underbrace{\frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \mu) \left(-\frac{\partial \lambda''_{s_1=0}}{\partial \mu} \Big|_{q=0} + \frac{\partial \lambda''_{s_1=1}}{\partial \mu} \Big|_{q=0} \right)}_{\text{Indirect effect } (> 0)} \\
&+ \underbrace{\frac{1}{4} \delta \Psi (1 - \pi) \pi \left(-\lambda''_{s_1=1} + \lambda''_{s_1=0} \right)}_{\text{Direct effect } (\approx 0 \iff \lambda''_{s_1=1} \approx \lambda''_{s_1=0})} \\
\frac{\partial E[V]}{\partial \omega} \Big|_{q=0} &= \underbrace{\frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \mu) \left(-\frac{\partial \lambda''_{s_1=0}}{\partial \omega} \Big|_{q=0} + \frac{\partial \lambda''_{s_1=1}}{\partial \omega} \Big|_{q=0} \right)}_{\text{Indirect effect } (< 0)}
\end{aligned}$$

Total effect:

$$\begin{aligned}
\frac{\partial E[V]}{\partial \mu} \Big|_{q=0} + \frac{\partial E[V]}{\partial \omega} \Big|_{q=0} &= \underbrace{-\frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \mu) \left(\frac{\partial \lambda''_{s_1=0}}{\partial \mu} \Big|_{q=0} + \frac{\partial \lambda''_{s_1=0}}{\partial \omega} \Big|_{q=0} \right)}_{\text{Indirect effect in } s_1 = 0 (> 0)} \\
&+ \underbrace{\frac{1}{4} \delta \Psi (1 - \pi) \pi (1 - \mu) \left(\frac{\partial \lambda''_{s_1=1}}{\partial \mu} \Big|_{q=0} + \frac{\partial \lambda''_{s_1=1}}{\partial \omega} \Big|_{q=0} \right)}_{\text{Indirect effect in } s_1 = 1 (> 0)} \\
&+ \underbrace{\frac{1}{4} \delta \Psi (1 - \pi) \pi (-\lambda''_{s_1=1} + \lambda''_{s_1=0})}_{\text{Direct effect } (\approx 0 \iff \lambda''_{s_1=1} \approx \lambda''_{s_1=0})}
\end{aligned}$$

The total effect is therefore here unambiguously positive.