

Endogenous Elections and the Economic Vote: For whom do early elections bolster electoral prospects?*

Cassandra Grafström[†]

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Abstract

Economic performance is thought to have two interrelated effects on electoral politics. Strong performance increases support for incumbent governments (e.g. Duch & Stevenson, 2008; Lewis-Beck, 1988; Powell & Whitten, 1993) and strong economic performance increases the likelihood of early elections being called (e.g. Chowdhury, 1993; Ito, 1990; Kayser, 2006). The truth of the former is assumed to be the motivation for the latter. However, in multiparty contexts the electoral implications of economic performance may vary across governing parties. When no single party can dictate election timing, new coalitions of parties need to form in order to force early elections. This paper builds on Lupia and Strøm's (1995) model of coalition termination to examine how changes in the relative benefits parties expect following an economic shock would shape their support for early elections, with implications for the distribution of votes in the election.

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[†]Hertie School of Governance and the University of Michigan.

Do economic shocks lead to opportunistic elections? While a number of answers to this question exist, most consider the relationship between swings in the economy and the value of elections to be simply a function of government, particularly prime ministerial, control over parliamentary dissolution (e.g. Kayser, 2006). Governments, observing either current economic strength or future economic woes, call snap elections in order to capitalize on their current good fortunes or minimize electoral losses in the future after a downturn. Strong economic performance is expected to translate more or less directly into strong showings at the polls. Thus, when the economy is performing well, there is a strong incentive to go to the voters as soon as possible.

Missing from these stories of economic shocks determining electoral timing are voter attributions of credit and blame. There is no direct link between the health of the macroeconomy and a party's electoral fortunes. Instead voters' understandings of the economy and its relationship to the (in)actions of political parties creates the apparent link between economic and electoral outcomes (Anderson, 1995; Rudolph, 2003). The manner in which voters attribute credit and blame for economic outcomes to different parties is an important consideration for politicians weighing the benefits of dissolving the parliament before the end of its constitutional term. While there is significant evidence that the economy's strength predicts incumbents' electoral strength, this relationship is weakened as governance structures include a larger number of partisan actors (e.g. Duch & Stevenson, 2008; Norpoth, 2001; Powell & Whitten, 1993; Whitten & Palmer, 1999). In single party majority governments this relationship is strongest, but it can be significantly weaker in coalition and minority governments. Government vote share is less dependent upon economic performance in coalition environments than in environments with greater clarity of responsibility (Powell & Whitten, 1993; Whitten & Palmer, 1999).

In coalition governments the question of attribution for economic outcomes is thus of particular importance in the decision of election timing. A single party governing alone is likely

to be attributed with all of the credit for good outcomes and blame for bad. A single party government therefore has a strong incentive to call elections when the economy is performing well (Balke, 1990; Cargill & Hutchinson, 1991; Smith, 2004). This may not be the case in multiparty governments. If voters rush to support one party within a coalition government at its partner's expense, there may be insufficient support for calling early elections.

Because voters typically can vote for a single party in national elections, which parties in government or opposition benefit/suffer most from economic outcomes will shape the coalitions that form in favor of parliamentary dissolution and early elections. The coalitions supporting early elections may not be the same coalitions that governed together during the parliament. Those parties pushing for early elections, if they are composed of rational actors, ought to do better at the ballot box come election day than those that want to fulfill the parliament's term, *ceteris paribus*. When the parties supporting early elections are not coterminous with the governing coalition, then there is no reason to expect government electoral support to improve from one election to the next.

This paper takes Lupia and Strøm's (1995) model of coalition termination to examine how different forms of voter attribution of responsibility would result in different combinations of support for early elections in multiparty parliamentary systems. When election timing is dependent upon the wishes of multiple parties whose electoral fates are inherently interdependent opportunistic elections are constrained. I find that a strong economy does not necessarily lead to early elections in multiparty systems, nor does it necessarily benefit all members of a coalition at the polls. Instead, the manner in which economic performance is attributed to different partisan actors greatly affects how strongly "economic voting" would appear in cross-national studies. If a cabinet or prime minister has little control over the timing of elections the opportunism as imagined in the extant literature might be turned on its head as junior coalition partners and the opposition exploit a dominant party's weakness that results from poor economic performance.

This paper is organized as follows. The next section describes our current understanding of opportunistic election timing and its connection to the economic voting hypothesis. Section 2 briefly describes Lupia and Strøm’s model of coalition termination and section 3 describes the changes made in this paper to better explore the conditions under which elections occur with predictions of how these would shape the patterns of economic voting we would see in each case. The concluding section details future avenues of research for this project.

1 Opportunistic elections and the economic vote

Opportunistic elections are elections called before the end of the constitutional inter-electoral period (CIEP) in an attempt to capitalize on particularly strong government support. The precipitating factor for parliamentary dissolution is generally expected to be particularly strong economic performance. When the economy is doing very well, the argument goes, governments have stronger incentives to call early elections, capitalizing on an increase in support that accompanies the improved economy (Heckelman & Berument, 1998). This argument is predicated on the belief that government parties are credited with strong economic performance, thereby providing these parties with potentially longer terms or larger majorities in government.

The economic voting literature has shown that voter perceptions of economic performance strongly predict their support for the incumbent government (Alvarez & Nagler, 1998; Bloom & Price, 1975; Cohen, 2004; Duch, Palmer & Anderson, 2000; Duch & Stevenson, 2008; Middendorp & Kolkhuis Tanke, 1990; Nadeau, Niemi & Yoshinaka, 2002; Marsh & Tilley, 2010; Norpoth, 2001). While there is broad support for the individual-level relationship between perceptions and support, there is less robust evidence that strong economic performance itself actually helps government parties at the polls. Anderson (2007) notes that the evidence in

favor of a macro-level relationship between real economic performance and government vote share “is intermittent, highly contingent, and substantively small.” Instead, the strength of this relationship is highly contingent on the particular institutional setting that governments act under. Institutional contexts that lead to power being shared among multiple partisan actors reduces the effect of economic performance on electoral support (Powell & Whitten, 1993; Whitten & Palmer, 1999).

While a voluminous literature has developed around the conditioning effects of institutions on the economic voting relationship, surprisingly little research has investigated whether calling early elections provides governments with an advantage at the polls. Within the economic voting literature election dates are generally assumed to be exogenously determined.¹ However, we might expect that elections called by strategic politicians would result in supporters of early elections doing better at the polls than if they had no control over when elections were held.

Most work on endogenous election timing assumes that a strong economy leads governments to be reelected and so uses economic performance to predict when elections will be held but does not continue to how successful such a strategy is (Chowdhury, 1993; Ito, 1990; Kayser, 2006, 2005; Palmer & Whitten, 2000). An exception is Smith (2004) book. Smith investigates both the logic and consequences of early parliamentary elections in Britain. He finds that governments call early elections when they expect there to be an economic downturn in the near future but that the longer they wait on the heels of good performance to call elections, the higher their vote share. The UK, however, presents something of an extreme case. It is, in fact, the ideal case to find evidence in favor of opportunistic election timing and economic voting. Because of the plurality electoral rules and strong party discipline, the government tends to be composed of a single party and to have parliamentary majority, allowing it dissolve parliament largely at will. Because the government tends to be a sin-

¹An exception can be found in Samuels & Hellwig (2010).

gle party majority, it is quite straightforward for voters to attribute economic performance – good or bad – to a single partisan actor (Powell & Whitten, 1993; Whitten & Palmer, 1999). Such clear capacity to dissolve parliament at will and attribute responsibility is not the norm across countries. Instead, governments are faced with the possibility that they will be replaced by another majority within parliament and voters have to decide for or against whom of a number of possible parties they can use their single vote. Clearly these linked phenomena create incentives that are not fully accounted for in the endogenous election timing literature.

If voters (or some significant subset of voters) are using their perceptions of the national economy’s health to evaluate the political parties they can support at the polls, then parties that are viewed as responsible for good economic performance have incentives to pursue early elections. That support, however, has to come from other parties. Which parties are the beneficiaries of a strong or weak economy is necessary information when considering how economic performance is related to economic voting, particularly in multiparty systems.

In considering attribution at the aggregate level an outcome to political parties in coalition government it might be useful to draw from existing theories of coalition governance: either voters are crediting the party that controls that policy area (ministerial responsibility) or the government as a whole (cabinet responsibility) (Shepsle & Weingast, 1987; Tsebelis, 2002). If government parties rise and fall together (cabinet responsibility), then they may be able to maintain a parliament through souring economic times because the benefits from early elections are small for a majority of the parliament and there is likely to be some degree of agenda setting power to prevent unwanted confidence votes. However, when government parties’ do not benefit in similar ways from economic outcomes, there is greater opportunity to elections to be called at times that are inopportune for some part of the government. When this is the case, the expected relationship between both economic performance and election timing and economic and electoral performance may not behave

as predicted by theory. Specifically, when the impact of the economy on government parties' electoral prospects are vastly different, early elections could be called during economic downturns (contrary to the endogenous election timing literature); because elections are expected to affect government parties differently, evidence for economic voting would be weakened as some government parties benefit and others are harmed by the economy because of its effects on election timing.

In order to explore these dynamics in a more rigorous fashion, the next section describes a model by Lupia and Strøm that describes the various means of coalition termination. This is followed by a description of the changes made to this model to allow us to explore when good or bad economic performance leads to early elections.

2 Lupia and Strøm's static model of coalition termination

The Lupia & Strøm (1995) model how various combinations of preferences over the distribution of government power and elections determine whether coalitions are maintained or reshuffled or whether early elections are called in the wake of a shock.

The Lupia and Strøm model contains a three party parliament in which any combination of two parties can form a majority government. The two parties in government, denoted by i and j ,² share control of the cabinet with i holding c and j holding $1 - c$ share of cabinet power, while the opposition party, o , holds no government posts ($c_o = 0$).

The value of being a member of a coalition varies for each party based on the party it coalesces with. (i.e, the value to party i of being in coalition with j does not necessarily equal the value value to j of being in coalition with i , let alone with i 's valuation of a coalition

²The notation in this paper differs slightly from the notation in the original paper. Because this paper considers how shocks are distributed across parties it reference to the parties that are positively (i or o), negatively (o or j), or unaffected (j or o) by the shock, instead of by who moves first as in the original model.

with the opposition party) The value that a party assigns to participating in a coalition is given by g .³ For instance, the value that i assigns to being in government with j is given by g_i^j , where the subscript indicates the party evaluating the value of a coalition with the superscripted party. The total value of a coalition is thus the coalition value discounted by the share of power within that coalition. So the net value of the coalition between i and j is by i is cg_i^j while the net value of that coalition to j is $(1 - c)g_j^i$; the opposition gains no value from this coalition.

Parties also value the seats that they hold. Lupia and Strøm assume this value to simply be each party's seat share, s . Thus, the value of the **status quo** is given by the net value of the coalition for a party and its seat share: $cg_i^j + s_i$ for party i ; $(1 - c)g_j^i + s_j$ for party j ; and s_o for the out party.

At the same time, elections also provide expected benefits, b , that parties can obtain only if they dissolve parliament immediately, foregoing their future parliamentary benefits. Elections also entail costs, E . These costs and benefits are assumed to be party specific, static, and constrained to be greater than zero in the Lupia and Strøm model. The net expected benefit of holding an election at any point in time is given by $b - E$ for a party (e.g., $b_i - E_i$ for party i). Importantly for this paper, neither of these variables is constrained beyond being non-negative.

Finally, at any time parties can attempt to negotiate a new deal with the other parties in parliament over government participation. A government party can make an offer to either its coalition partner or the opposition party at any time. Negotiating a new coalition is costly though. It requires time, it may require cultivating internal party support, and there is the possibility of voter backlash to deserting the government coalition. These costs, K , are again party specific, static, and constrained to be greater than zero. Thus, the values of negotiating a new distribution of power for the government parties with the opposition are

³ g is constrained to be greater than or equal to zero.

Table 1: Model variables

c	share of status quo coalition power to party i
c_x^y	share of coalition accruing to party x with party y
g_x^y	value of coalition between x and y to party x
s_x	parliamentary seat share of party x
b_x	expected benefits of an election to party x
E_x	expected costs of an election to party x
K_x	costs of negotiating a new coalition agreement for the initiating government party
h	the magnitude of the economic shock that changes the value of elections
δ_x	the amount by which elections are preferred to the status quo after a shock

defined as $c_i^{j,o} g_i^{j,o} + s_i - K_i$ for party i and $c_j^{i,o} g_j^{i,o} + s_j - K_j$ for the other governing party. However, the government parties can also propose cabinet reshuffles to change the value of c . Under the status quo, such offers will not be successful. However, when attractive alternatives present themselves to governing parties they may be able to renegotiate the terms of the coalition.

The Lupia and Strøm game begins following a shock, ensuring that the values for all variables are established before the game begins. A status quo government was in place prior to the shock but any two of the parties represented in parliament could form a majority government. The players have common knowledge and make offers (or fail to make offers) based on their knowledge of their own and the other players' values of all variables and expected responses to any offer. The first government party can choose to make an offer to its coalition partner, the opposition, or to make no offer. Should it make an offer that is accepted then a new coalition is formed based on that offer. If the offer is rejected or no offer is made, then the other governing party has an opportunity to make an offer to the first party, the opposition, or to forego making any offers. Should no agreement be reached at this point a confidence vote is called in which the parties vote either confidence (and the status quo governing coalition and parliament continues) or no confidence (directly leading to early elections).

3 Modeling dynamics

While the Lupia and Strøm model provides insights on when parties will choose to negotiate new coalitions, this paper focuses on a specific subset of their findings to examine a dynamic model of parliamentary dissolution. Their model does not provide us with insights about how big a shock, and how that shock's distribution across parties' preferences for elections, moves them from preferring the status quo to preferring elections. Under what circumstances does an economic shock lead to a parliamentary dissolution when, prior to the shock, there was a status quo government? And what implications does the electoral distribution of an economic shock have for the economic voting relationships we observe in election outcomes?

Lupia and Strøm find that the combinations of three conditions explain all possible outcomes. These conditions are as follows

Condition A: There is a majority that prefers an election to leaving the coalition exactly as it is.

$$b_i - E_i > c_i g_i^j + s_i \text{ and } b_j - E_j > c_j g_j^i + s_j \text{ or,}$$

$$b_i - E_i > c_i g_i^j + s_i \text{ and } b_o - E_o > s_o \text{ or,}$$

$$b_j - E_j > c_j g_j^i + s_j \text{ and } b_o - E_o > s_o$$

Condition B: All offering parties prefer an election to the best acceptable offer they can make.

$$b_i - E_i > c_i^{j,o} g_i^{j,o} + s_i - K_i \text{ and}$$

$$b_j - E_j > c_j^{i,o} g_j^{i,o} + s_j - K_j$$

Condition C: No offering party prefers the best acceptable offer it can make to leaving the governing coalition exactly as it is.

$$c g_i^j + s_i \geq c_i^{j,o} g_i^{j,o} + s_i - K_i \text{ and}$$

$$(1 - c) g_j^i + s_j \geq c_j^{i,o} g_j^{i,o} + s_j - K_j$$

Table 2: Lupia and Strøm Outcomes When Condition C is False

	B is True	B is False
A is True	Elections	Reshuffle
A is False	Reshuffle	Reshuffle

In order for the pre-shock government to have been a status quo coalition (to have been stable and not in the midst of renegotiations) prior to the shock, condition **A** must have been false and **C** must have been true. Whether an alternative “best acceptable offer” was preferred to an election by one of the governing parties is not known under the status quo condition.

For elections to occur **A** and **B** must both be true. Thus, condition **A** must switch from being false to being true. In order for a shock to induce an election the shock must at minimum result in at least one party changing its preferences for elections over the existing coalition and that both governing parties preferred (or were indifferent to) elections to alternative coalitions that they could form. At most, it requires that at least two parties preferences over the status quo relative to elections change and that both coalition partners preferences for early elections over alternative acceptable coalitions change.⁴

To model how a change in expected electoral fortunes moves the parliament from a status quo situation (**A** is false and **C** is true) to one in which opportunistic elections are called (**A** and **B** are both true), we have to compare preferences before and after the shock. Because we know that the status quo was preferred to immediate elections by at least two parties, at least one of these parties must experience a large enough change in their expected benefits of elections to change their preference ordering over elections and the status quo.

While Lupia and Strøm do not constrain the values of b other than that they be non-negative in this model, I have chosen to take the sum of all b s to be a constant. This makes intuitive sense considering that much of an election’s benefit will be related to vote share and

⁴Note that after a change in the values of elections, the value of acceptable coalition offers will change, thus potentially excluding previously acceptable offers and making previously unacceptable offers acceptable.

Table 3: Lupia and Strøm Outcomes When Condition C is True

	B is True	B is False
A is True	Elections	Reshuffle
A is False	Status Quo	Status Quo

the resultant seat shares in the new parliament. The value of elections, considered in this way, requires that one party's gains come at the expense of another party. Since electoral benefits are related to bargaining power and the likelihood of being chosen as a formateur when coalition talks begin (gaining the associated agenda setting benefits) and both of these are related to vote and seat shares this consideration is likely foremost in the minds of party leaders.

To examine how changes in economic performance moves parties from supporting a status quo government to pursuing early elections, a simple economic shock is modeled. The shock can be thought of as an unexpected deviation from the status quo sustaining level of economic growth, inflation, unemployment, etc. The magnitude of the economic shock will be denoted by h below. The cases scrutinized in this paper consider only cases in which a failure to negotiate a new agreement among the parliamentary parties would result in an election (**A** and **B** are both true).⁵ Because the total electoral benefits available are fixed at least one party will experience an expected loss of utility from elections when another experiences an increase. Hence, if party i experiences a positive electoral shock of h its value from elections will become $b_i - E_i + h$. The party that experiences the negative effects of this shock will now value elections at $b_o - E_o - h$ or $b_j - E_j - h$, depending on which party suffers from the economic boom.⁶

After a shock then at least one party has a stronger preference for elections than it did

⁵Formal proofs for all possible combinations of preferences and outcomes in which a change in government is possible are available from the author upon request.

⁶If one party experiences a positive shock effect from economic performance at the expense of both other parties (or two parties experience a positive shock at the expense of the third), then the parties experiencing the negative (positive) shocks would now value elections at $b_j - E_j - h_j$ and $b_o - E_o - (h - h_j)$ (or, for two parties experiencing a positive shock valuations of $b_i - E_i + h_i$ and $b_j - E_j + (h - h_i)$).

before. However, the shock must have a large enough effect to reverse the preference ordering of the benefitting party so that they now prefer elections when they had before preferred the status quo. There are then seven feasible distributions of a shock across the parties:

1. Party i experiences a positive shock to its electoral benefits from an economic boom and the opposition o a negative shock.
2. Party i experiences a positive shock to its electoral benefits from an economic boom and its coalition partner j experiences a negative shock.
3. Party i experiences a positive shock to its electoral benefits from an economic boom and both its coalition partner j and the opposition o experience negative shocks.
4. The opposition party o experiences a positive shock to its expected electoral benefits from an economic bust and one government party i experiences a negative shock.
5. The opposition party o experiences a positive shock to its expected electoral benefits from an economic bust and both government parties, i and j , experience negative shocks.
6. Both government parties i and j experience positive shocks to their expected electoral benefits from an economic boom and the opposition o experiences a negative shock.
7. One government party i and the opposition party o experience positive shocks to their expected electoral benefits from an economic boom or bust and the other government party experiences a negative shock.

The cases above in which only one party experiences a positive electoral shock require one of the other parties to have preferred elections over the status quo prior to the shock. This party must still prefer elections even if it suffered electoral setbacks as a result of the shock. In the cases in which two parties experience expected electoral gains it must be the case that

either both of those parties preference orderings change or that the negatively affected party preferred elections to the status quo before the shock and still does (the status quo is just that bad for them) and at least one of the government parties now prefers elections to the status quo. In only these cases is it possible for a shock to move a parliament from a status quo situation to an election. This discussion has been entirely about ensuring that condition **A** changes from being false to being true. Changing condition **A** from being false to being true is a necessary but not sufficient condition for opportunistic elections – condition **B** must also be true.

A status quo government can exist regardless of whether **B** is true or not. Hence, the prior state of **B** only has bearing if it does (or does not) change as a result of a shock. If both government parties preferred elections over all feasibly acceptable offers (aside from the status quo) prior to the shock then elections are possible.⁷ If **Condition B** did not hold prior to the shock then at least one party (possibly both if neither preferred elections to alternative coalitions) have to experience a large enough shock to their electoral benefits that going to the polls is now more appealing than any acceptable alternative offer. Note that a shock not only changes the benefits of elections but also changes the offers that are now acceptable to them. What once may have been a mutually agreeable distribution of power may no longer be sufficient to keep a party from moving toward elections after it experiences an expected electoral boost from high employment or growth.

Thus there are two sets of initial conditions that can exist prior to a shock: either **A** is false and **B** is true before an economic shock, or both **A** and **B** are false. In the next section each of these initial conditions are examined through the seven shock distributions that can lead to elections described above. The properties of an economic “shock” that result in both conditions being true vary based on the initial preferences of the parties for

⁷This would require that this preference ordering does not change (condition **B** remains true) while at least one of these parties also moves from preferring the status quo to preferring elections (**Condition A**).

elections relative to the status quo and how that shock is distributed across government and opposition parties.

4 Conditions are ripe for elections

Suppose that prior to the economic shock, a majority of parliamentarians preferred the existing coalition to holding immediate elections. In order for an economic shock to make elections possible one government party must come to prefer elections to the status quo and both government parties must prefer elections to any alternative offer. The preferences for **Condition B** to hold require the following to hold prior to or after any shock:

$$c_i^{j,o} g_i^{j,o} + s_i - K_i < b_i - E_i \text{ and}$$

$$c_j^{i,o} g_j^{i,o} + s_j - K_j < b_j - E_j$$

There are seven distributions of electoral benefits arising from economic shocks that can lead to elections. Many of these distributions can result in different coalitions forming in favor of early elections depending on the initial preferences of the parties. These initial preferences and the necessary shocks that would be needed to change them are discussed below. Each case describes how shocks have to change the preferences for elections relative the status quo and the conditions under which elections are preferred to any offer that would be acceptable to a potential coalition partner. When there are multiple initial configurations of preferences that can lead Illustrative cases are included throughout.

4.1 A government party i experiences a positive shock to its expected electoral benefits and the opposition party o experiences a negative shock

There are two sets of initial preferences that can support elections after a shock in which one government party's electoral prospects are bolstered at the opposition's expense. The first is when the opposition had originally preferred elections; the second, when its coalition partner had originally preferred elections. It is never the case that elections can result from a shock if the benefiting party was also the party that preferred elections to the status quo.⁸

In order for there to be elections when the opposition had preferred elections to the status quo requires that the opposition's utility loss from the shock does not change its preferences for an election over the status quo distribution of power.⁹ Such an outcome would result if voters are rewarding parties using a mechanism like ministerial responsibility to assign credit for good economic performance. If the party that experiences the increase in electoral benefits from an economic boom is the party that controls the ministry responsible for the economy - typically the Ministry of Finance or the Ministry of Economy¹⁰ - then the effects of economic voting would largely benefit that party at the expense of either/both its coalition partner or/and the opposition party. So long as the shock is large enough to reverse the preference ordering of the benefiting government party i for elections relative to the status quo without reversing the opposition's preference ordering, then an election is possible. Such a shock, h , would have the properties denoted below

$$h > cg_i^j + s_i - b_i + E_i \text{ and } h < b_o - E_o - s_o$$

In order to provide party specific valuations of h that provide useful references to the

⁸Proof available from the author upon request.

⁹This would also be equivalent substantively to one governing party benefiting at its coalition partner's expense with the opposition party's preferences unaffected.

¹⁰Empirically, the party that controls the prime minister's office is also highly likely to control the most important economic portfolio as well.

tipping point at which preference ordering change these two inequalities can be rewritten as

$$h = cg_i^j + s_i - b_i + E_i + \delta_i \text{ and } h = b_o - E_o - s_o - \delta_o$$

If the coalition partner j preferred elections to the status quo prior to the shock, then this preference will not change after the shock. The opposition party, being even worse off than before, will continue to prefer the status quo to elections after the shock.

4.1.1 The out party preferred elections to the status quo prior to the economic shock

There are likely many situations in which parties in opposition would prefer early elections to remaining out of government. Particularly when the value of holding government portfolios is large while the parliament's power is hamstrung by a strong government, opposition parties are more likely to prefer early elections. Similarly those in government may prefer the certainty of power today to the uncertainty of outcomes (both of poll results and coalition bargaining) that follow an election. In this case, the preferences for the different parties for elections versus the status quo before an economic shock is represented below. Recall that the "affected government party" is denoted by the subscript i , its coalition partner by the subscript j , and the opposition party by the subscript o .

$$cg_i^j + s_i \geq b_i - E_i$$

$$(1 - c)g_j^i + s_j \geq b_j - E_j$$

$$s_o < b_o - E_o$$

In order for an economic boom (say, an unexpected drop in unemployment or especially strong growth) to make elections a feasible outcome in this case, the shock must be large enough to make i prefer elections to the status quo, but not so large as to result in o 's preference order changing. These are given by

$$cg_i^j + s_i < b_i - E_i + h$$

$$s_o < b_o - E_o - h$$

h can be rewritten as

$$h = cg_i^j + s_i - b_i + E_i + \delta_i \text{ and } h = b_o - E_o - s_o - \delta_o$$

where δ indicates how far beyond a party's indifference point it is to the point that it prefers elections.

So long as the values of δ_i and δ_o are greater than zero, **Condition A** is true by definition. Thus the rest of this section will focus on the conditions under which **B** is also fulfilled.

I first provide the conditions under which elections will occur when party i has the first opportunity to make an offer that leads to elections and then provide the conditions in which party j can make the first offer that leads to elections. Both of these cases proceed by backward induction.

i makes first offer The assumption that negotiations are costly and that players have full information means that no unsuccessful offers will be made and therefore parliament will be dissolved only when there are no viable alternative offers. When party i has the first mover advantage elections will only occur when the only offers that would be acceptable to the other players fulfill the following inequalities

$$c_j^i < \frac{b_j - E_j - s_j + K_j}{g_j^i} \text{ and } c_j^o < \frac{b_j - E_j - s_j + K_j}{g_j^o}$$

This indicates that j will not engage in costly negotiations when the best acceptable offer it could make does not compensate it for the discounted costs of such a negotiation relative to the benefits it expects from elections.

When i anticipates that j will make no offer it will allow elections to proceed when

$$\delta_i > \max\{(c_i^j - c)g_i^j - K_i, c_i^o g_i^o - cg_i^j - K_i\}$$

Alternatively, substituting in the values of c_i^j and c_i^o under the conditions that lead j to make no offers denotes the same inequality as

$$\delta_i > \max\{(1 - \frac{b_j - E_j - s_j}{g_j^i} - c)g_i^j - K_i, (1 - \frac{\delta_o}{g_o^o})g_i^o - cg_i^j - K_i\}$$

When a shock results in a distance between i 's point of indifference that exceeds the

difference between all feasible alternative offers and the status quo, accounting for the costs of negotiating any alternative coalition, elections will occur. Specifically, the first term, $(1 - \frac{b_j - E_j - s_j}{g_i^j} - c)g_i^j - K_i$, states that when δ_i is larger than the coalition value discounted difference between j 's election values and i 's status quo share of government power minus any campaigning costs, i will make no offers to j . The second term, $(1 - \frac{\delta_o}{g_o^o})g_i^o - cg_i^j - K_i$, indicates that i will pursue early elections when their value of δ_i exceeds the difference between the value of forming a coalition with the opposition and the value its status quo coalition, less the cost of campaigning. Note that the share of power that i can extract in any alternative coalition is a function of its negotiating partner's election values.

j makes first offer If j were to have the first opportunity to make an offer, knowing that i would make no offer (i.e., the value of δ_i fulfills the inequality above), it would make no offers under precisely the same circumstances as when it was the second mover. This is because, knowing that i will make no offers puts j in a perfectly analogous position to the first case: choosing not to make any offers will assuredly end in elections. Thus, in this case the ordering of offers makes no difference as to the circumstances under which **Condition B** is true.

4.1.2 Unaffected government party preferred elections to the status quo prior to the economic shock

Suppose that one of the coalition parties, j , preferred elections over the status quo while its partner preferred the opposite before an economic shock. The initial preferences for elections relative to the status quo are given below.

$$cg_i^j + s_i \geq b_i - E_i$$

$$(1 - c)g_j^i + s_j < b_i - E_i$$

$$s_o \geq b_o - E_o$$

After a positive shock to the economy party i comes to prefer elections over the status quo as well while j 's preference order remain unchanged.¹¹ Since the opposition preferred the status quo to elections before the shock its preference ordering does not change after its electoral prospects are negatively impacted by the economic boom. After the shock the preference orderings are

$$\begin{aligned} cg_i^j + s_i &< b_i - E_i + h \\ (1 - c)g_j^i + s_j &< b_i - E_i \\ s_o &\geq b_o - E_o - h \end{aligned}$$

These can be rewritten to define h in terms of how much it moves preferences away from supporting the status quo by including a party specific δ term. So long as $\delta_i > 0$, then condition **A** is true as a result of the shock. h can be rewritten to reflect the post-shock relationships between the status quo and early elections for both i and o as

$$h = cg_i^j + s_i - b_i + E_i + \delta_i \text{ and } h = b_o - E_o - s_o + \delta_o$$

In order for condition **B** to remain true it must be the case that the newly acceptable offers still fail to make either government party better off than election. Because the coalition partners both prefer elections to the status quo they cannot negotiate an agreement between the two of them that makes both of them better off than would an election. This is because an agreement is only acceptable if it makes one no worse off than the best alternative. Because both parties would require a larger share of power than they currently hold when bargaining in the shadow of elections, this is not tenable.

The only consideration then is whether there exists an offer that the opposition would accept after the shock (but would not have accepted before) that makes either government party better off than an election. When bargaining in the shadow of the status quo o would

¹¹Note that even if j were negatively affected by the shock, so long as their preference ordering does not change the results in this section are robust.

have accepted any ϵ share of power. Following the economic boom that further reduced the opposition's electoral prospects, o would be willing to accept $\epsilon - \delta_o$ share of power. If $\delta_o \geq \epsilon$ then the out party would be willing to support a government in which it had no power (providing parliamentary support to a minority government) in order to prevent an early election. However, since $\epsilon \rightarrow 0$ in the limit, this same offer was effectively a feasible agreement before the shock and so would not be more preferred to elections by either party after the shock.

Hence, whenever one government party prefers elections to the status quo and both government parties prefer elections to any alternative offer in a status quo parliament, any shock that changes the other government party's preference order to elections being preferred to the status quo, elections are the only possible outcome.

4.2 The government party i experiences a positive shock to its expected electoral benefits and its coalition partner j experiences a negative shock

As in the previous scenario there are two sets of initial preferences to consider when the benefits of an economic boost come from a coalition partner's expense. The first is the case in which the opposition party had preferred elections to the status quo before the shock and the second is when the coalition partner preferred elections before the shock. As in the previous scenario $\delta_i > 0$ is a necessary condition for moving from **Condition A** being false to being true (and thus allowing elections to be a real possibility).

Under what circumstances we might expect this to be the likely outcome of an economic shock. Recall that under ministerial responsibility attribution for observed outcomes is given to the minister overseeing the policies related to that outcome. If the parties that chose to coalesce together are relatively close to one another ideologically, then it is likely that there

are some number of only loosely attached voters with weak preferences over the government parties who are likely to be swayed to support the party whose minister oversaw the good economic outcome. Further, as the opposition parties move further from the governing parties (and specifically the party in charge of the relevant ministry) the likelihood that its voters will move to supporting the government decreases. Therefore, the majority of a shock's negative effect would come at the expense of the party that experience the positive effect's governing partner.

4.2.1 Opposition party preferred elections to the status quo prior to the shock

In this case the only attribute of the economic shock necessary to fulfill **A** is that $\delta_i > 0$. Since the opposition party was unaffected by the shock its preferences for elections to the status quo remain unchanged.

In order to for **B** to be true any alternative acceptable offers that the governing parties can put forward must still make both parties worse off than would an election. I first provide the conditions under which elections will occur when party i has the first opportunity to make an offer that leads to elections and then provide the conditions in which party j can make the first offer that leads to elections using backwards induction.

j will make no offer to either i or o when the

$$\delta_j < \min\{(1 - c - c_j^i)g_j^i + K_j, (1 - c)g_j^i - c_j^o g_j^o + K_j\}$$

This can be simplified to

$$\delta_j < \max\{\delta_i + K_j, (1 - c)g_j^i - g_j^o + K_j\}$$

That is, j , while negatively impacted by the shock and preferring the status quo, is not so harmed by the shock that it would be willing to pay all of the costs associated with creating a new coalition with either i or o . This could be because the costs associated with negotiations are exceedingly high, the value of coalescing with a particular partner exceedingly low (e.g., ideologically dissimilar), or the share of power that j would have to accept would be very

small.

i will make no offers when

$$\delta_i > \max\{(c_i^j - c)g_i^j - K_i, c_i^o g_i^o - c g_i^j - K_i\}$$

$$\delta_i > \max\{(1 - \frac{b_j - E_j - s_j}{g_j^i} - c)g_i^j - K_i, (1 - \frac{b_o - E_o - s_o}{g_o^i})g_i^o - c g_i^j - K_i\}$$

In other words, i will make no offers when it strongly prefers elections to both the status quo and to any alternative offer that would be acceptable to a coalition partner. The less its potential coalition partners value being in government with i , the larger the value of its status quo coalition power (which is less preferred than elections by assumption in this case), and the higher its negotiation costs, the more likely elections are to be in this case.

4.2.2 Coalition partner preferred elections to the status quo prior to the shock

If j preferred elections to the status quo prior to the shock the only way for elections to occur is for the shock not to reduce the value of elections so significantly that this preference ordering flips. For this to be the case it must be true that the preference orderings of the parties after the shock are

$$c g_i^j + s_i < b_i - E_i + h$$

$$(1 - c)g_j^i + s_j < b_i - E_i - h$$

$$s_o \geq b_o - E_o$$

Though j prefers elections to the status quo, elections will only occur if j also prefers elections to the feasible coalitions it could form after the shock. Conditions under which j will make no offers are given by

$$\delta_j < \max\{(1 - c - c_j^i)g_j^i + K_j, (1 - c)g_j^i - c_j^o g_j^o + K_j\}$$

Substituting in the values of c_j^i and c_j^o

$$\delta_j < \max\{\delta_i + K_j, (1 - c)g_j^i - g_j^o + K_j\}$$

The conditions under which j makes no offers are exactly the same in this case as in the one above when o preferred elections to the status quo prior to the shock. The more strongly

i prefers elections to the status quo (δ_i is high), the less likely there is a new coalition agreement that makes j better off than would a poorly timed election.

i will make no offer when

$$\delta_i > \max\{(c_i^j - c)g_i^j - K_i, c_i^o g_i^o - c g_i^j - K_i\}$$

This can be written alternatively as

$$\delta_i > \max\left\{\left(1 - \frac{b_j - E_j - s_j}{g_j^i} - c\right)g_i^j - K_i, g_i^o - c g_i^j - K_i\right\}$$

Comparing these conditions to those in the previous section in which o preferred elections prior to the shock, the only difference for i in terms of fulfilling condition **B** is that i would expect to control all portfolios in a coalition with o if it were to have made an offer in this case ($c_i^o = 1$), instead of being forced to allot some ministerial posts to o in an alternative coalition, and yet still prefers elections to that outcome. The acceptable alternative agreements with j are the same regardless of which party preferred elections to the status quo prior to the shock.

4.2.3 Austria 1995

Only a year after the previous election Austrians returned to the polls after the grand coalition government of the SPÖ and ÖVP fell apart over a budget deadlock. Both parties had been experiencing a steady decrease in electoral support since 1987, but the ÖVP's new leader, Wolfgang Schüssel, led a recovery in the polls by stressing the party's essential role in maintaining stability (Müller, 1996). This strategy led the ÖVP to become unyielding in its negotiations over cutting the nation's budget deficit and debt in accordance with the Maastricht requirement, refusing to cut services to its constituents or raise taxes.

The ÖVP stated that the negotiations were a failure and that voters ought to decide the future of economic policy in October 1995. The SPÖ was unable to halt elections because the coalition agreement with the ÖVP tied the coalition to the parliamentary term. So the SPÖ was forced to either break its original promise to voters from the 1994 election campaign to

rule in a grand coalition for the entire parliament (and possibly still face a forced election if the ÖVP and opposition parties censured the government) or abide by their agreement and go to the polls.

In the end, the ÖVP did not gain as many votes as it had anticipated, seeing an increase of only 0.6 percentage points and no increase in seats (Nohlen & Stöver, 2010). The SPÖ, while it had wanted to persist in the parliamentary term, improved its vote share from 34.9% to 38.1% and gained six seats, increasing its plurality in the parliament. While in this case the election results did not end as expected for either party¹², the election was called at a moment when extant theories of endogenous elections would not have predicted.

4.3 Government party experiences a positive shock to its expected electoral benefits and both its coalition partner and the opposition party experience negative shocks

In the cases above one party in government experienced a positive shock and one other party in parliament experienced a negative shock. However, it could be that the negative impact of a shock is dispersed over multiple parties. How can elections occur in this scenario?

Just as before, in order for an election to occur the party that experienced the positive effects of the economic shock cannot be the party that preferred elections to the status quo before the economic uptick. Hence, even when the electoral impact of the economy is dispersed across all parties it remains analogous the situations above in which the party that experienced the negative economic shock is also the party that preferred elections prior to the shock. As such, the same conditions apply.

¹²Müller (1996) attributes this to the ÖVP's decision to imply a willingness to coalesce with the FPÖ should an agreement be impossible with the SPÖ during the campaign is what led the ÖVP to experience a much smaller increase in support than it had anticipated.

4.3.1 Germany 1983

The December 1982 dissolution of the German Bundestag by the newly installed coalition government of the CSU/CDU with the FDP roughly fits the general case of one government party benefitting at the expense of both the opposition and its coalition partner. In October 1982 the FDP abandoned their coalition with the SPD under increased strain between the two parties as an economic downturn had made the coalition between a Liberal (FDP) and Social Democratic (SPD) party increasingly difficult. Both parties had experienced a fall in popularity. Unfortunately, the abandonment of their coalition partner further harmed the FDP in the eyes of many voters since they had campaigned under the promise of governing with the SPD. There was a felt need to go to the voters to approve of the government.

The new coalition with the conservative CDU/CSU was a more cohesive one on economic policy; the fiscal prudence and monetarist policies espoused by the government were viewed as the reasonable response to economic crisis (Kaase, 1983). While the CDU/CSU could have possibly gained a majority in the Bundestag had they insisted on calling elections immediately, the possibility that their coalition partner might not meet the 5% threshold to gain entry in parliament led them to call the election for 6 March 1983, giving the new coalition nearly 6 months to prove itself before the election. The confidence vote that Chancellor Kohl put before parliament was defeated when the CDU/CSU and FDP parliamentarians abstained.

The election resulted in the CDU/CSU gaining more than 4 percentage points in the 1983 election over their 1980 result, with 48.8% of second ballot votes. Its coalition partner lost 3.6% of its vote share relative to the prior election, but still remained well above the 5% threshold, while the opposition SPD lost nearly 5 percentage points, falling from 42.9% of the vote to 38.2%.

4.4 The opposition party experiences a positive shock to its expected electoral benefits from an economic bust and one government party experiences a negative shock

Is it possible that an economic downturn could lead to early elections? The literature on opportunistic elections has not examined this question empirically.¹³ A government would not want to call an early election when things are going poorly after all. However, in multiparty contexts one government party may be harmed much more significantly than its partner by an economic downturn. As such, it is not trivial to assume that an economic downturn cannot precipitate an early election. The following examples demonstrate the conditions under which bad economic times can produce early elections.

4.4.1 Unaffected government party preferred election to the status quo prior to the shock

If prior to the shock the only party that preferred elections to the status quo was the partner of the governing party that experienced the negative shock to its electoral value, then new coalition agreements or elections are possible if the shock to o is large enough to tip it from preferring the status quo to preferring elections. Obviously, the governing party that experienced the negative shock will prefer the status quo over elections even more strongly than it did before the shock. Prior to the shock the parties' preferences are given as follows

$$cg_i^j + s_i \geq b_i - E_i$$

$$(1 - c)g_j^i + s_j < b_j - E_j$$

$$s_o \geq b_o - E_o$$

¹³To my knowledge, only Samuels & Hellwig (2010) have explored differences in economic conditions preceding elections forced by the opposition versus the government as an aside in their exploration of measures of accountability. Palmer & Whitten (2000) state that they identify 35 elections that were outside of the government's control, however they do not describe how the identification of these elections affects their sample or results.

In order for the shock to induce new negotiations, it must be large enough to change the out party's preferences for elections. If this is the case then the following represent the preferences of the parties for the status quo relative to new elections

$$\begin{aligned} cg_i^j + s_i &> b_i - E_i - h \\ (1 - c)g_j^i + s_j &< b_j - E_j \\ s_o &< b_o - E_o + h \end{aligned}$$

The equations representing the preferences of the two parties directly affected by the shock, i and o , can be rewritten as

$$h = b_i - E_i - cg_i^j - s_i + \delta_i \text{ and } h = s_o - b_o + E_o + \delta_o$$

Under these circumstances j makes no offers when

$$b_j - E_j > \max \left\{ \left(1 - \left(c - \frac{\delta_i}{g_i^j} \right) \right) g_j^i + s_j - K_j, \left(1 - \frac{\delta_o}{g_o^j} \right) g_j^o + s_o - K_j \right\}$$

When the net expected electoral benefits to j are larger than either the value from an increased share of power with its current coalition partner, i , after paying negotiation costs or the value of a new coalition with o , then j will allow elections to proceed. Notice that the value of j 's alternatives are dependent upon the strength of the other parties' preferences for or against elections. The more that o prefers elections to the status quo the smaller j 's electoral benefits need to be; the more valuable a coalition with j is to o or i (and vice versa), the larger the value of elections need to be in order for them to proceed. Likewise, the more that i dislikes elections relative to the status quo, the larger j 's valuation of elections needs to be in order for them to go forward.

In order for i to make no offers and allow elections to proceed it must be the case that there exists no acceptable offer that makes i better off than an election. This is given by

$$c_i^j < c - \frac{\delta_i}{g_i^j} \text{ and } c_i^o < c - \frac{\delta_i}{g_i^o}$$

This can be rearranged to

$$\begin{aligned} \delta_i &< \min \{ (c - c_i^j)g_i^j + K_j, cg_i^j - c_i^o g_i^o + K_i \} \text{ or} \\ \delta_i &< \min \{ (c - 1 + \frac{b_j - E_j - s_j}{g_j^i})g_i^j + K_j, cg_i^j - (1 + \frac{\delta_o}{g_o^j})g_i^o + K_i \} \end{aligned}$$

i will not attempt to forestall a poorly timed election when the difference between the status quo and alternative coalitions (net of negotiation costs) is greater than the difference between its new value of elections and its indifference point (δ_i).

4.4.2 Negatively affected government party preferred elections to the status quo before the shock

We know that in order for there to be new negotiations that at least two of the parties must prefer elections to the status quo. This means that the shock must be large enough to move the gaining opposition party from preferring the status quo to preferring elections but not so large as to swing the negatively effected government party from preferring elections to preferring the status quo. This requires that h fulfill the following two conditions

$$h < b_i - E_i - cg_i^j - s_i \text{ and } h > s_o - b_o + E_o$$

We can rewrite these inequalities as equalities by including the term δ for each equation.

$$h = b_i - E_i - cg_i^j - s_i - \delta_i \text{ and } h = s_o - b_o + E_o + \delta_o$$

Suppose that j has to decide whether and to whom to make an offer. Under what circumstances will j choose to make no offers, allowing elections to proceed?

In order for j to be unwilling to make any offers to its potential coalition partners, there cannot exist any possible agreement that would make j better off than the status quo. Given that the status quo is preferable to elections for j , this means that any potential coalition makes j worse of than elections. This leads us to the conclusion that j makes no offers when

$$b_j - E_j > \max\{c_j^o g_j^o + s_j - K_j, c_j^i g_j^i + s_j - K_j\}$$

$$b_j - E_j > \max\{(1 - \frac{\delta_o}{g_o^o})g_j^o + s_j - K_j, (1 - c - \frac{\delta_i}{g_i^j})g_j^i + s_j - K_j\}$$

These are the same conditions that were required for j to make no offers as in 4.4.1 when j had preferred elections to the status quo prior to the shock.

In order for i to make no offers, knowing that j will make no subsequent offers

$$\delta_i > \max\left\{(1 - c - \frac{b_j - E_j - s_j}{g_j^i})g_i^j - K_i, (1 - \frac{\delta_o}{g_o^o})g_i^o - cg_i^j - K_i\right\}$$

These conditions differ from those in the previous case when j had preferred elections to the status quo. When j supported an early election (4.4.1) the relevant consideration for i was whether the losses from an election were less than those of forming a new coalition. In this case, i must consider whether the benefits of an election exceed those of a new coalition agreement.

4.5 The opposition party experiences a positive shock to its expected electoral benefits and both government parties experience negative shocks

This case is equivalent to the one immediately preceding it. If elections are to occur when two parties are negatively affected by an economic shock one of them has to have preferred elections to the status quo prior to the shock. The identity of this party (whether it is party i or j) is unimportant as this model makes no assumptions about these parties.¹⁴

4.6 Both government parties experience positive shocks to their expected electoral benefits from an economic boom and the opposition party experiences a negative electoral shock

The previous cases were based on the premise that one party in government benefits from or is harmed by economic shocks. This assumption is largely following the Ministerial Responsibility formulation of accountability. However, the Cabinet Responsibility theory of democratic accountability argues that voters hold governments as a whole to account for policy outcomes. This is based on the premise that governing parties have veto powers on policies, ensuring that any policy that is implemented has been approved, or at least not

¹⁴Full proofs are available from the author upon request.

disapproved, by all members of a coalition. As such, all are responsible for outcomes and should share the credit and blame.

Above we saw that elections were a possibility only when one party preferred elections to the status quo prior to any shock and that an additional party come to prefer elections after the shock. This was the only way that condition **A** could be true false before the shock and true following it. While the general circumstances of one government party's preference ordering over elections relative to the status quo could all be considered through the lens of cabinet accountability,¹⁵ there are distributions of electoral effects that follow cabinet responsibility models of economic voting not covered above.

What are circumstances then are unique to this distribution of shock effects? The only two cases that differ substantially from those described above are 1) when all parties preferred the status quo to elections and the economic shock leads to both government parties changing their preference ordering to elections being preferred to the status quo, and 2) when the opposition had previous preferred elections to the status quo and the shock results in all three parties preferring elections to the status quo.

4.6.1 All parties preferred the status quo to elections before the shock

In all of the previous examples at least one party needed to prefer elections to the status quo before the economic shock in order for elections to be possible. In this case the preference orders of all parties before the economic shock are

$$\begin{aligned} cg_i^j + s_i &\geq b_i - E_i \\ (1 - c)g_j^i + s_j &\geq b_j - E_j \\ s_o &\geq b_o - E_o \end{aligned}$$

If the shock makes elections a possibility given that there was a status quo government it must lead to the following preference orders after the election are given by

¹⁵This is not true when one government party benefitted at its partner's expense.

$$\begin{aligned}
cg_i^j + s_i &< b_i - E_i + h_i \\
(1 - c)g_j^i + s_j &< b_j - E_j + h_j \\
s_o &> b_o - E_o - (h_i + h_j)
\end{aligned}$$

These can be rearranged to define h in terms of the extent to which a party prefers elections to the status quo, δ

$$\begin{aligned}
h_i &= cg_i^j + s_i - b_i + E_i + \delta_i \\
h_j &= (1 - c)g_j^i + s_j - b_j + E_j + \delta_j \\
h_i + h_j &= cg_i^j + s_i - b_i + E_i + \delta_i + (1 - c)g_j^i + s_j - b_j + E_j + \delta_j = b_o - E_o - s_o + \delta_o
\end{aligned}$$

If δ_i and δ_j are both greater than zero then condition **A** is true.

In order for elections to occur it must be the case that both government parties continue to prefer elections to any acceptable alternative offer they could make (condition **B** is true). Before the shock we know that the parties could not have negotiated a settlement with one another that made them better off than the status quo. Now that both have an outside option (the election) that they prefer to the value of the status quo, they cannot negotiate a mutually preferable agreement between themselves. Thus the only consideration is whether either can form a better agreement with an opposition party that strictly prefers the status quo to elections.

j will prefer elections to making an offer to o when the difference between its expected electoral benefits and its indifferent point exceeds the difference between the value of a coalition with the opposition in which j holds all power¹⁶ and the value of the status quo, minus its negotiating costs.

$$\delta_j > g_j^o - (1 - c)g_j^i - K_j$$

Analogously, i will make no offers when it's benefits from elections beyond its point of indifference between elections and the status quo is given by

¹⁶In this case if j were to make an offer to the opposition it would be $c_j^o \leq 1 + \frac{\delta_j}{g_j^o}$. However, since no party can hold more than all power in the cabinet the upper limit is $c_j^o = 1$.

$$\delta_i > g_i^o - cg_i^j - K_i$$

When both government parties prefer elections to the status quo so strongly that forming a minority government with the opposition party providing parliamentary support (net of the value of its current coalition and its negotiation costs), neither will make any offers and elections will ensue.

4.6.2 The opposition preferred elections to the status quo prior to the shock

If the opposition preferred elections prior to the shock there are three potential outcomes of the shock that can lead to elections. The first is that the out party's preferences reverse so that it comes to prefer the status quo over elections while the government parties come to prefer elections to the status quo. This results in precisely the set of circumstances described in the previous example (4.6.1) and need not be repeated.

The second way that a shock benefiting both government parties that harms the opposition could lead to elections would be if the opposition's preference ordering for elections relative to the status quo remained unchanged after the shock and one of the government parties comes to prefer elections. This is equivalent to the situation described in 4.1.1 and again need not be rehashed.

The only unique set of preferences that can result from this distribution of shock effects is thus where the shock results in all parties preferring elections to the status quo, thus satisfying condition **A**. Further, because both government parties preferred the status quo to any acceptable alternative offer before the shock and that all parties now prefer elections to the status quo, no party is able to make an offer to another that would induce it to forego elections because it would require it to make an offer that makes it worse off than it would have been under any of the previously acceptable offers that were worse than the now unacceptable status quo. Thus, condition **B** is also satisfied.

4.7 One government party and the opposition party both experience positive shock to their expected electoral benefits from an economic boom or bust and the remaining government party experiences a negative shock

Finally, consider the case in which two of the parties - one currently in government and the other in opposition - experience expected electoral gains from an economic shock while the other governing party expects to be punished at the polls. Does this distribution of economic shock effects lead to any unique circumstances that need to be considered?

There are four ways that an economic shock with electoral implications as described above could lead to elections. The first is that the negatively impacted party preferred elections to the status quo and continues to do so after the shock. If these initial conditions were present then either of the positively affected parties would need to prefer elections to the status quo after the shock. If the opposition party prefers elections after the shock then this is the same situation as described above in Section 4.2.1. If the coalition partner prefers elections after the shock then this is effectively equivalent to the circumstances described in Section 4.2.2.

If both positively effected parties come to prefer elections to the status quo after the shock then either all three parties prefer elections to the status quo or the negatively affected party's preference order reverses so that it prefers the status quo to elections. These two cases are trivially different from those described in the previous section and will be treated briefly below.

4.7.1 All three parties prefer elections to the status quo after the shock

In this case the only difference from above is that the negatively affected party j is also an offering party. As such it must continue to prefer elections to any alternative agreement. The conditions under which j would prefer elections to an alternative agreement are given

by

$$b_j - E_j - h > c_j^i g_j^i + s_j - K_j$$

$$b_j - E_j - h > c_j^o g_j^o + s_j - K_j$$

This can be simplified to

$$\delta_j > \max\{(c_j^i + c - 1)g_j^i - K_j, c_j^o g_j^o - (1 - c)g_j^i - K_j\}$$

Given that both i and o prefer now prefer elections any offer to either would require more governmental power than they could have demanded prior to the shock. Only when condition **B** was not true before the shock can elections be avoided when all parties prefer elections to the status quo. If **B** did not hold, then there may exist acceptable offers that would make j better off than elections which were not feasible prior to j experiencing the negative effects of the economic shock.

If condition **B** was true before the shock (there existed no alternative offers that were preferable to an early election) there are no offers that can make any offering party better off than an election.

4.7.2 Negatively affected party prefers the status quo to elections after the shock

In order for j to make no offer to either i or o it must be the case that the price of a new coalition, either in terms of the value of such a coalition or the costs of negotiating it, make a poorly timed election more attractive than continuing on with the parliament. This will be the case when

$$\delta_j < \min\{(1 - c)g_j^i - c_j^o g_j^o + K_j, (1 - c - c_j^i)g_j^i + K_j\}$$

Likewise, i will make no offers when

$$\delta_i > \max\{c_i^o g_i^o - c g_i^j - K_i, (c_j^i - c)g_i^j - K_i\}$$

When the electoral harm inflicted on j is not enough to change its preferences over elections relative to the status quo, it will increasingly choose elections to making a coalition

offer as its value of elections approaches its point of indifference with maintaining the status quo.

5 Discussion

The results above provide illustrations of how the diffusion of economic shocks on parties' electoral prospects can lead to "opportunistic" elections in which governing parties end up electoral losers. The extant empirical literature on opportunistic election timing has focused on those cases in which strong premiers are able to call elections when the time is best (or not worst) for their party. However, when the decision to call elections requires the coordination of multiple parties, this basic logic becomes much more complicated. The way that economic outcomes are attributed to different political actors differs significantly from the single party majority government case. When in coalition, governing parties cannot automatically assume that they will be given credit for good outcomes, or blamed for bad, as they could if ruling alone without the need for opposition support. Instead, all, some, or none of the government parties may be attributed responsibility for an economic outcome.

The findings in this paper indicate that there are avenues through which to explore additional empirical implications of the economic surfing and economic voting arguments in political environments with dispersed power. It is convenient to think about the scenarios above in terms of two prominent models of cabinet decision making: ministerial or cabinet responsibility. If voters generally view government parties as either jointly or individually responsible then both the incentives to call early elections and the likely aggregate voting relationships will differ. When voters attribute responsibility to a single party in government (e.g., the prime minister's party) then we would expect the economic vote to be quite weak for the government as a whole. This might induce junior partners in a coalition to support the opposition in a call for early elections when the economy is performing poorly. Conversely,

if governments are held jointly accountable for economic outcome we ought to see more strongly pro-cyclical relationships between economic performance and both when elections are called and how governments as a whole fare in them.

Because expectations of election results figure so prominently in these results (b), expectations of future economic outcomes also warrant discussion. While ? uses realized future economic performance as a measure of governments' economic expectations to predict the likelihood of an election being called, it is not immediately clear how well this strategy would translate into the distributions of economic shocks on electoral expectations described here. In coalition governments when one party is likely to benefit or be harmed much more than its partners we would need to know both what the parties economic expectations are as well as how they expected to benefit or suffer from those future economic outcomes. How to incorporate economic expectations explicitly into an empirical investigation of election timing's effects on economic voting in coalition governments is thus not straightforward either theoretically or empirically.

6 Conclusion

This paper has demonstrated analytically the various conditions under which economic outcomes can precipitate early elections. Unlike existing theoretical work, it explicitly considers how voter attributions of responsibility for economic outcomes affects the likelihood of opportunistic elections. While the basic finding that when a majority of parliamentarians, as represented by their parties, prefer elections to any alternative configuration of power elections are called is not novel, the empirical implications are. A more fine-grained approach to the electoral incentives that parties face when deciding to hold early elections is merited. When government parties rise and fall together the literature's expectation that opportunistic elections will be held when the prime minister has strong powers over parliamentary

dissolution. However, when government parties are differentially affected by macroeconomic performance, different combinations of parties in favor of dissolution may occur, hindering or being hindered by an otherwise powerful prime minister. Under these alternative circumstances, the economic preconditions leading to early elections may vary significantly from the literature's expectations. Furthermore, to whom voters attribute responsibility for economic outcomes shapes both who supports early elections and who is likely to benefit at the polls, creating party specific economic voting relationships.

While early opportunistic elections are feasible in all nearly parliamentary systems¹⁷ the ease with which they occur will vary widely. The extant literature's focus on systems that generally produce single party majority governments is obviously the case in which we would most expect governments to capitalize on an unexpected economic upturn by calling snap elections. Most parliamentary systems, however, do not produce such governments, even though early elections are frequent in these countries. By making small changes to Lupia and Strøm's model of coalition termination, this paper investigates instances in which multi-party governments end in early elections. Because changes in electoral benefits are considered to be zero sum, we can see how good economic performance can lead to worsening electoral performance for parties in government (e.g., under assumptions of ministerial responsibility when one government party benefits at its partner's expense) and how poor economic performance can precipitate early elections (e.g., when an unscathed coalition partner joins forces with the opposition to call early elections).

While there are a number of ways that economic performance can lead to early elections, empirical investigation of how voters attribute credit and blame across countries is needed. Future research in economic voting should account for both how the macroeconomy affects the decision to call elections and the identity of the parties that want the elections. The weakness of comparative economic voting models at the national (as opposed to individual

¹⁷Notable exceptions are Norway and Switzerland.

level) may be the result of a failure to appropriately consider endogenous election timing's effect on what economic performance is observed prior to elections and the appropriate parties to look at for the electoral boost.

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