

## **Trade and the Timing of Elections**

MARK ANDREAS KAYSER\*

Do trade-transmitted international business cycles affect the timing of national elections? This article shows that export expansions do not differ substantively from booms in aggregate output in inviting opportunistic governments to call elections, especially as their terms mature. Further analysis confirms two ancillary implications of this relationship: (a) that clusters of countries tend to hold elections in periods of international economic expansion and (b) that national election cycles, much like business cycles, have become more correlated over time, most prominently in Europe. The findings in this article raise implications for continued economic integration: freer movement of goods, services and capital may imply more correlated business cycles and, by extension, election cycles.

‘When you think economics, think elections; When you think elections, think economics.’  
Edward Tufte<sup>1</sup>

Politicians, journalists and scholars alike commonly believe that those governments that can call elections while the economy is expanding, do so. Economic expansions – or anticipated contractions – invite early elections in the majority of parliamentary democracies that permit them. Several studies confirm that governments time elections to coincide with the performance of their national economies.<sup>2</sup> Yet, given high levels of international economic integration, especially among the advanced economies of Western Europe, is it possible for governments to distinguish between domestically and externally generated expansions? Or, alternatively, do foreign economic expansions influence the timing of domestic elections? This article argues the latter: internationally transmitted economic cycles influence national election timing.

There is no doubt that advanced industrial economies are highly integrated into the international economy. Exports now constitute over half of gross domestic product (GDP) in the most trade-exposed countries; governments have ceded or struggled to maintain monetary autonomy in an era of flexible exchange rates and mobile capital; exchange rates have been carefully managed (and now fixed) in many regions such as the European Union;

\* Department of Political Science, University of Rochester. The author wishes to acknowledge constructive comments from Kathleen Bawn, Neal Beck, Melissa Chiu, Bill Clark, Geoffrey Garrett, Miriam Golden, David Karol, Tasos Kalandrakis, Luke Keele, John Londregan, Harvey Palmer, Ronald Rogowski and Alastair Smith; and also to thank Tanya Bagashka and Subhasish Ray for valuable research assistance, and Nuffield College, Oxford, for their support for part of this research via a Postdoctoral Prize Research Fellowship. All errors are irrefutably the author’s. Previous versions of this article have been presented at UCLA, Yale, Princeton and New York University.

<sup>1</sup> Edward Tufte, *Political Control of the Economy* (Princeton, N.J.: Princeton University Press, 1978), p. 65.

<sup>2</sup> Harvey D. Palmer and Guy D. Whitten, ‘Government Competence, Economic Performance and Endogenous Election Dates’, *Electoral Studies*, 19 (2000), 413–26; Steven D. Roper and Christopher Andrews, ‘Timing an Election: The Impact on the Party in Government’, *American Review of Politics*, 23 (2002), 305–18; Alastair Smith, ‘Election Timing in Majoritarian Parliaments’, *British Journal of Political Science*, 33 (2003), 397–418.

and at the same time international capital flows of portfolio and direct investment have reached record levels. By most indices, by the late 1990s international economic integration had surpassed its previous pre-First World War apex.<sup>3</sup> In Western Europe observers have even declared the emergence of a region-wide business cycle.<sup>4</sup> Such levels of integration have spurred considerable interest in the policy consequences of economic interdependence – primarily on how the international economy may or may not constrain national economic, social welfare and labour policy – but little research has emerged on the consequences for politics *per se*. This article argues that international economic integration does matter for at least one political process: the opportunistic timing of elections. The argument is simple. In economically integrated countries, internationally generated economic fluctuations do not differ from their domestically generated counterparts in inviting opportunistic elections. Once about half of their maximum terms have passed,<sup>5</sup> governments, believing that economic performance affects the vote, time elections to capitalize on exceptional booms or pre-empt anticipated downturns. Concern about the domestic or foreign provenance of an expansion does not enter their timing calculus.

Until rather recently, opportunistic election timing itself has been largely neglected, only considered in the context of a refinement to the political business cycle<sup>6</sup> or as a residual in the government stability and duration literature.<sup>7</sup> More current interest in election timing *per se*, however, has begun to redress this shortcoming. We now know that opportunistic election timing, especially in the latter part of a government's term, (a) prevails in the majority of advanced industrial democracies and, given the popularity of parliamentary type arrangements, most likely in the majority of all democracies,<sup>8</sup> (b) occurs under both single-party<sup>9</sup> and coalition<sup>10</sup> governments, (c) varies in government strength and prime

<sup>3</sup> Michael D. Bordo, Barry Eichengreen and Douglas A. Irwin, 'Is Globalization Today Really Different from Globalization a Hundred Years Ago?' in Susan M. Collins and Robert Z. Lawrence, eds, *Brookings Trade Forum 1999* (Washington, D.C.: Brookings Institution, 1999).

<sup>4</sup> Michael J. Artis and Wenda Zhang, 'International Business Cycles and the ERM: Is There a European Business Cycle?' *International Journal of Finance and Economics*, 2 (1997), 1–16; Michael J. Artis and Wenda Zhang, 'Further Evidence on the International Business Cycle and the ERM: Is There a European Business Cycle?' *Oxford Economic Papers*, 51 (1999), 120–32.

<sup>5</sup> See Mark Andreas Kayser, 'Who Surfs, Who Manipulates? The Determinants of Opportunistic Election Timing and Electorally Motivated Economic Intervention', *American Political Science Review*, 99 (2005), 17–28.

<sup>6</sup> Examples are Takatoshi Ito and Jin Hyuk Park, 'Political Business Cycles in the Parliamentary System', *Economic Letters*, 27 (1988), 233–8; and Abdur R. Chowdury, 'Political Surfing over Economic Waves: Parliamentary Election Timing in India', *American Journal of Political Science*, 37 (1993), 1100–18.

<sup>7</sup> See Paul Warwick, *Government Survival in Parliamentary Democracies* (Cambridge: Cambridge University Press, 1994).

<sup>8</sup> This article identifies thirteen of twenty-four OECD members in 1990 as premier-timing; Przeworski *et al.* list thirty-seven of fifty-nine democracies in 1990 as parliamentary, a government form that typically provides governments with great leeway in choosing when to dissolve parliament for elections (Adam Przeworski, Michael Alvarez, José Antonio Cheibub and Fernando Limongi, *Democracy and Development: Political Institutions and Material Well-Being in the World, 1950–90* (Cambridge: Cambridge University Press, 2000)).

<sup>9</sup> For example, Nathan S. Balke, 'The Rational Timing of Parliamentary Elections', *Public Choice*, 65 (1990), 201–16; Roper and Andrews, 'Timing an Election'.

<sup>10</sup> Daniel Diermeier and Randolph T. Stevenson, 'Cabinet Terminations and Critical Events', *American Political Science Review*, 94 (2000), 627–40; Arthur Lupia and Kaare Strøm, 'Coalition Termination the Strategic Timing of Elections', *American Political Science Review*, 89 (1995), 648–65.

ministerial dissolution autonomy,<sup>11</sup> (d) reduces government popularity,<sup>12</sup> and (e) responds to different macroeconomic variables under left-wing and right-wing governments.<sup>13</sup> In short, institutions and partisanship matter but opportunistic election calling happens.

The occurrence of opportunistic election timing, however, does not necessarily make for simple empirical testing. Seemingly mundane estimation problems like determining the direction of causality between economic performance and election timing pose a difficulty. Scholars who endogenize both election timing and economic manipulation have found that causality runs in both directions,<sup>14</sup> albeit sometimes only towards timing.<sup>15</sup> The use of exports as the measure of cross-border influence in this article is explicitly intended to preclude concerns about reverse causality. Barring pre-election currency devaluations, which would self-defeatingly reduce short-term real income,<sup>16</sup> there is no way by which governments can spur trade expansions quickly enough to justify endogeneity concerns in quarterly data.<sup>17</sup> In short, because they allay concerns about reverse causality, exports seem an ideal tool to use in predicting opportunistic elections as a function of one transmitter of international economic cycles.

Another way to establish an effect is through its consequences. One such consequence of opportunistic election timing in response to internationally transmitted economic cycles is the greater temporal clustering of elections among economically open countries with governments politically and constitutionally able to time their own elections. Already in 1978, Edward Tufte noted a temporal clustering of elections among a small sample of industrial democracies but, reversing causality, he worried that exogenously occurring election clusters could cause politically induced cycles in the international economy.<sup>18</sup>

<sup>11</sup> Kaare Strøm and Stephen M. Swindle, 'Strategic Parliamentary Dissolution', *American Political Science Review*, 96 (2002), 575–91.

<sup>12</sup> Smith, 'Election Timing in Majoritarian Parliaments', but see André Blais, Elizabeth Gidengil, Niel Nevitte and Richard Nadeau, 'Do (Some) Canadian Voters Punish a Prime Minister for Calling a Snap Election?' *Political Studies*, 52 (2004), 307–23.

<sup>13</sup> Palmer and Whitten, 'Government Competence, Economic Performance and Endogenous Election Dates.'

<sup>14</sup> Two examples, both for Japan, are Thomas F. Cargill and Michael M. Hutchinson, 'Political Business Cycles with Endogenous Election Timing: Evidence from Japan', *Review of Economics and Statistics*, 73 (1991), 733–9; and Takatoshi Ito, 'The Timing of Elections and Political Business Cycles in Japan', *Journal of Asian Economics*, 1 (1990), 135–56.

<sup>15</sup> Chowdhury, 'Political Surfing over Economic Waves'.

<sup>16</sup> By raising the price of imports relative to domestic goods devaluations create an expansionary substitution effect, but this is outweighed by contractionary income effects, especially in the short term. See Pierre-Richard Agenor and Peter Montiel, *Development Economics* (Princeton, N.J.: Princeton University Press, 1996). Devaluations reduce real wealth held in the local currency and more critically, shift income from wage earners who are likely to spend it to profit recipients who are not. For a similar outcome within the context of a rational political business cycle model in which devaluations, understood as a tax on money balances, are delayed until after elections, see Ernesto Stein and J. M. Streb, 'Political Stabilization Cycles in High Inflation', *Journal of Development Economics*, 56 (1998), 159–80; and Ernesto Stein and J. M. Streb, 'Elections and the Timing of Devaluations' (Washington, D.C.: Working Paper No. 396, Inter-American Development Bank, Research Department, 1999). Theory aside, empirical work shows that devaluations occur most frequently early in a term and very rarely shortly before elections. See, for example, Sebastian Edwards, 'The Political Economy of Inflation and Stabilization in Developing Countries', *Economic Development and Cultural Change*, 42 (1994), 235–66; or Jeffrey Frieden, Piero Ghezzi and Ernesto Stein, 'Politics and Exchange Rates: A Cross-Country Approach to Latin America' (Washington, D.C.: Working Paper No. R-421, Inter-American Development Bank, Research Department, 2000).

<sup>17</sup> Export credits, insurance and financing, as well as trade agreements, can all boost long-term export growth but are all too unwieldy to ensure export expansion prior to impending elections.

<sup>18</sup> 'With the synchronization of electoral calendars in large capitalist democracies, we have a recipe for an international boom and bust cycle' (see Tufte, *Political Control of the Economy*, chap. 3, especially p. 69).

Thompson and Zuk soon refuted this idea,<sup>19</sup> yet with the partial exception of Ito no one has considered the converse possibility, that international economic fluctuations might cause election timing.<sup>20</sup> Of course, national differences in international economic exposure, institutions and political circumstances imply an upper bound on election clustering, but greater synchronization, demonstrated later in this article, nevertheless provides circumstantial support for the international genesis of some elections and implies consequences for international politics.

Foremost among these consequences is the possibility of international cycles of conflict and co-operation. If governments are less amenable to international compromise preceding elections but more so afterwards, greater election synchronicity may create windows of opportunity for international agreements when multiple states are safely removed from election concerns as well as periods of intransigence prior to elections in which multiple states prioritize domestic interests.<sup>21</sup> The abundance of states timing elections endogenously in Europe raises especially strong implications for the negotiation of European Union reforms and policy.

The remainder of this article proceeds as follows. The following section examines the institutional and political prerequisites for what I term 'premier timing' – i.e. the ability of a government to set its own election date – and identifies a sample of thirteen Organization for Economic Cooperation and Development (OECD) countries. Note that premier-timing countries are a distinct subset of endogenous-timing countries, the better known category in which election dates are politically determined, regardless of means. With the aid of Cox hazard estimation, I then test whether exports affect election timing. As expected, the influence of export expansion on election timing rises over the parliamentary term. The following section presents evidence of important secondary effects: (a) that, all things equal, the number of elections among premier-timing countries rises with their mean export growth, and (b) that election cycle correlation has risen among the most economically integrated states, those of Western Europe. The last section discusses implications and concludes.

#### PREMIER TIMING

Not all governments are able to call their own elections. Both constitutional provisions and political norms constrain political behaviour, allowing opportunistic election calling in some states but preventing it in others. I construct the sample for this study by selecting the subset of the twenty-four member states of the OECD in 1990 that possess the institutional arrangements necessary for opportunistic election calling. The OECD is a natural universe of cases with which to work because it includes the most highly integrated industrialized economies that conveniently also collect a similarly defined array of economic data. The fact that this group also includes most of the major military powers and economies also magnifies the importance of possible election clustering for

<sup>19</sup> William R. Thompson and Gary Zuk, 'American Elections and the International Electoral-Economic Cycle: A Test of the Tufté Hypothesis', *American Journal of Political Science*, 27 (1983), 464–84.

<sup>20</sup> Ito finds a surprising positive association between elections in the United States and economic growth in Japan. See Takatoshi Ito, 'International Impacts on Domestic Political Economy: A Case of Japanese General Elections', *Journal of International Money and Finance*, 10 (1991), S73–89.

<sup>21</sup> Putnam and Bayne describe such a phenomenon among the G7. See Robert D. Putnam and Nicholas Bayne, *Hanging Together: Cooperation and Conflict in the Seven-Power Summits* (Cambridge, Mass.: Harvard University Press, 1988).

international relations. Excluding countries that do not permit incumbents to set election dates pares the sample down to the thirteen countries identified in Table 1.<sup>22</sup>

This sample constraint, that incumbents must be able to time their own elections, requires greater explanation. The most obvious implication is the elimination of countries with fixed election dates; this effectively censors all presidential systems (United States and Switzerland) and non-presidential systems with fixed election dates (Norway and Sweden). I exclude Sweden, a parliamentary democracy that allows early dissolution of parliament, because any parliament chosen by early elections can only serve out the remainder of the previous body's term. This is such a disincentive to early elections that none have been called since the implementation of the 1975 constitution.

Previous studies have termed elections held at legally required fixed intervals 'exogenous elections' in order to distinguish them from 'endogenous elections', those whose dates are at least partly determined by domestic political processes. As this definition suggests, considerable variation exists among endogenous timing countries. Countries in which early elections require a failed vote of confidence – such as Germany – or are subject to approval by a politically relevant head of state – such as Belgium – are combined in the same category with countries where prime ministers can call snap elections on a whim – such as the United Kingdom.

TABLE 1 *Thirteen Premier-Timing Countries*

Country	Max. Term (years)	Mean $\Delta$ export*	
		(elec. qtr)	(no elec.)
Australia	3	0.12	2.54
Austria	4	8.10	3.53
Canada	5	7.49	2.90
Denmark	4	3.06	2.29
Greece	4	3.34	3.94
Iceland†	4	28.00	5.12
Ireland	5	4.60	4.42
Italy	5	4.51	3.62
Japan	4	7.88	3.23
Netherlands	4	-0.27	3.66
New Zealand	3	1.14	2.89
Spain	4	16.16	4.33
United Kingdom	5	8.18	2.88

*Sources for term lengths: Parliaments of the World: A Reference Compendium* (New York and Berlin: DeGruyter, 1976); George Thomas Kurian, *The World Encyclopedia of Parliaments and Legislatures* (Washington, D.C.: Congressional Quarterly Press, 1997); and national constitutions.

\*1967:1–1998:4: percentage change in exports over previous quarter, showing the contrast between quarters containing an election and those without.

†Iceland has gone through huge cycles in fishing hauls and exports. Quarterly dummies and country-clustered robust standard errors should adjust for this.

<sup>22</sup> Three OECD members – Greece, Spain and Turkey – allow strategic election timing but have imperfect democratic records. Stable democracy in Greece and Spain since the mid-1970s allows their inclusion. Full military rule from 1980–83 and the continuing influence of the military in government disallows Turkey.

I therefore propose a further typological refinement: premier v. non-premier timing. Premier timing requires that the incumbent executive have the *de jure* and *de facto* ability to initiate dissolution and early elections either directly or through a parliamentary majority whereas the non-premier category includes countries in which early elections are limited to extraordinary circumstances or election dates are set by any actor other than the government. Power over dissolution is held by the head of state in many parliamentary democracies but where the president, governor-general or monarch's role is primarily ceremonial – as is often the case – I have coded the country as premier timing. An excellent contrast in the roles of the head of state can be made between the United Kingdom, where the monarch has had only a ceremonial role in parliamentary dissolution, and Belgium, where the politically empowered monarch rejected a government's resignation as recently as 1985.<sup>23</sup> Thus, the United Kingdom is included and Belgium is not.

In limiting the sample to premier-timing countries, I also remove all countries in which dissolution can only occur in extraordinary circumstances, such as following a vote of no confidence or a constitutional amendment. Germany has perhaps the most unusual system: dissolution may only follow the defeat of a vote of confidence introduced by the chancellor, i.e. the government must engineer its own defeat in order to call early elections. While this arrangement technically leaves the ability to time elections strategically within the chancellor's grasp, the extremely odd scenario of the governing coalition publicly voting against confidence in itself is usually sufficient to prevent such an event from occurring.<sup>24</sup>

One final and more complicated subset of countries remains to be considered: semi-presidential systems. Duverger, in 1980, first identified semi-presidential systems as governments where the president is popularly elected and holds considerable powers, while a premier and cabinet, subject to parliamentary confidence, perform executive functions.<sup>25</sup> The hybrid nature of semi-presidential systems thus allows them to be either premier-timing or non-premier-timing countries depending on whether rival or co-operative parties hold the two top offices and the division of power between the president and prime minister. Single-party control of both the presidency and premiership could

<sup>23</sup> King Baudouin refused Premier Wilfried Martens's bid for governmental resignation after a cabinet session failed to resolve a split in his Christian Democrat–Liberal coalition. The monarchy continues to matter in Belgian politics. Belgium is additionally excluded because of recent co-ordination with Luxembourg to hold elections concurrently with those for the European Parliament.

<sup>24</sup> Early elections actually occurred twice in post-war Germany prior to Gerhard Schröder's early re-election bid in 2005. Helmut Kohl engineered exactly such a failed vote of confidence in himself on 17 December 1982 and invoked Article 68 of the German Grundgesetz to dissolve parliament and call early elections. This followed unique circumstances, however, and is unlikely to be repeated. Kohl had recently come to power via a constructive vote of no confidence and sought a popular mandate. The main opposition (SPD) believed that voter disapproval of such political manoeuvring would benefit them and thus did not oppose early elections. The Federal Constitutional Court later found this use of the vote of confidence legal but restricted its use. The non-partisan Federal president could also have refused the request for dissolution but did not because of opposition support. A later attempt by Kohl to move up Federal elections by seven weeks in the fall of 1990 to capitalize on reunification euphoria was opposed by the SPD and failed. An early election also occurred in 1972 after the SPD/FDP Bundestag majority eroded. Chancellor Brandt, with agreement from the CDU/CSU and President Heinemann, called a vote of confidence knowing in advance that the opposition would be able to defeat it. It is important to note that both early elections could not have occurred without the co-operation of both the opposition and the federal president.

<sup>25</sup> Maurice Duverger, 'A New Political System Model: Semi-Presidential Government', *European Journal of Political Research*, 8 (1980), 165–87. Shugart and Carey later term such systems as premier-presidential (Matthew S. Shugart and John M. Carey, *Presidents and Assemblies: Constitutional Design and Electoral Dynamics* (Cambridge: Cambridge University Press, 1992), p. 23).

allow for collusion over election timing even when the power of dissolution may not formally originate with the premier; similarly, cohabitation by rival parties precludes favourable election timing and may even allow inopportune timing. Five of the remaining OECD countries are semi-presidential – Austria, Finland, France, Iceland and Portugal; I classify those countries that behave like parliamentary democracies with a weak president as premier timing.<sup>26</sup>

#### EXPORTS AND ELECTIONS

Having identified the appropriate sample, I now consider how best to test for international economic influences on election timing. Interest rates are an intuitively appealing means of measuring the transmission of international economic influences. The international co-movements in national discount rates generated by capital mobility and formal exchange rate arrangements during much of the sample period suggest a role for regional exchange rate arrangements such as the European Monetary System's exchange rate mechanism in producing election clustering.<sup>27</sup> To the same degree that interest rate co-movements support an international business cycle, they may also create synchronized incentives for strategic election timing.

Rate movements are nevertheless problematic for measuring cross-border effects on election timing: changes in domestic interest rates do not capture cross-border influences; changes in other countries' rates are causally distant from domestic reactions and subject to questions of which countries' rates to use. Equally as problematic, interest rate hikes

<sup>26</sup> Duverger also identified Ireland as semi-presidential, a classification that I reject on the grounds advanced by Shugart and Carey: the Irish president has no constitutional powers and exerts no political influence (see Shugart and Carey, *Presidents and Assemblies*, p. 71). I include Austria because its president fails to exercise political influence despite constitutional powers. The primary function of the Austrian president is to name prime ministers but this power has been largely useless in a system that has produced grand coalitions for much of the post-war period. The long-standing domination of Austrian politics by the ÖVP/SPÖ duopoly further eroded this power and probably will again after the recent implosion of the Freiheit party. Somewhat ambiguously, the Austrian constitution provides the premier with the power to dissolve parliament after 'consultation' with parliament.

Finland is a president-dominant system in which the president has reserve powers over foreign policy and government formation. The large number of small parties competing in Finland's fragmented political landscape further enhances the president's powers. The abundance of small parties provide her with the *de facto* ability to include or exclude most parties from government almost regardless of election results – Kekkonen excluded the Finnish Conservative party from every coalition he named after 1966 – and precludes the need for early elections. Frequent cabinet crises and government resignations also rarely leave the premier in a position to consider election timing. Thus, Finland is excluded.

In Iceland, like Austria, the president is surprisingly acquiescent to the prime minister and parliament. This weakness is also reflected in the fact that no partisan candidate has ever sought the office. Arend Lijphart attributes this to the unusual ease by which the constitution can be amended – by a pure majority rule within parliament. See Arend Lijphart, *Democracies: Patterns of Majoritarian and Consensus Government in Twenty-One Countries* (New Haven, Conn.: Yale University Press, 1984), p. 189. An assertive president is likely to have his formal powers curtailed if she were ever to try to use them. Thus Iceland functions quite similarly to the Danish constitutional monarchy on which its post-independence constitution is modelled and is included in the sample. The strength and independence of the presidency in France and Portugal disqualifies them from inclusion.

<sup>27</sup> The imposition of narrow bands of allowable exchange rate fluctuation among participating currencies in the European Exchange Rate Mechanism (ERM) in 1979 (2.25 per cent; 6 per cent for Italy) also tied European interest rates more closely together than normal pressures of capital mobility and investment would dictate. As a result, interest rates of ERM members (Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg and the Netherlands) co-varied, encouraging simultaneous economic expansions or slowdowns among members and even some closely tied non-members.

are a lagging indicator of economic expansion, most often increasing *after* periods of election-inviting growth. Demanding that cause precede effect leaves only rate reductions as an, albeit long-lead, source of election opportunism. Rate cuts, however, most often indicate a weakening economy in need of several reductions before economic activity again accelerates. Although interest rate co-movements almost certainly undergird the international transmission of business cycles, no clear and reasonably immediate causal path exists to measure their effect on election calling.

Trade, however – or more precisely, exports – is more promising. As exports are by national income accounting identity a component of GDP,<sup>28</sup> they provide a direct and immediate measure of cross-border influence on domestic output. Exports also have the virtue of being resistant to reverse causation. Short of devaluing the national currency, it is unlikely that incumbent governments could influence foreign demand for imports before elections. Currency devaluation, however, diminishes living standards and raises inflation – a dubious fillip to re-election prospects – and, given price stickiness, devaluation is unlikely to expand exports quickly enough to induce reverse causation in quarterly data. Accordingly, I employ change in quarterly exports ( $\Delta exports$ ) as the key predictor in this analysis.

Also consider how exports can spread business cycles and elections under this trade mechanism. Economic expansion in a given country increases imports from trade partners, transmitting booms and election-calling incentives from one state to another. Large booms or anticipated downturns, often the observational equivalent, therefore provide an incentive for multiple governments to call elections before the opportunity sours. Naturally, as a government's remaining term wanes, the threshold for what constitutes a sufficient election-calling incentive diminishes together with the remaining calling opportunities and term time that would be surrendered by dissolution. Governments, therefore, wish to call elections in the last best period possible.

#### HAZARD ANALYSIS

Election timing can be modelled with multiple methods. In the analysis below, I choose Cox hazard estimation for its ease in right censoring non-opportunistic elections without biasing estimation and its ability to accommodate time-varying covariates with partial likelihood estimation.<sup>29</sup> I estimate the hazard of elections in two identical progressions of

<sup>28</sup>  $GDP \equiv C + I + G + NX$  defines gross domestic product as the sum of consumption ( $C$ ), investment ( $I$ ), government spending ( $G$ ) and net exports ( $NX$ ). Expressing net exports explicitly and representing exports with  $EX$  and imports with  $IM$  produces  $GDP = C + I + G + EX - IM$ ; imports, however, are composed of domestic consumption of foreign goods and services ( $C_f$ ), investment ( $I_f$ ), and government spending ( $G_f$ ) so that  $GDP = C + I + G + EX - (C_f + I_f + G_f)$  which, with some rearranging, becomes  $GDP = (C - C_f) + (I - I_f) + (G - G_f) + EX$ ; Understanding domestic demand, noted with the subscript  $d$ , as the difference of total and foreign demand then yields  $GDP = C_d + I_d + G_d + EX$  which I re-express as  $GDP = GDP_d + EX$ . Thus gross domestic product is readily decomposed into domestic ( $GDP_d$ ) and foreign ( $EX$ ) demand for domestically produced goods and services.

<sup>29</sup> Discrete-time logit, as we should expect, yields nearly identical results. Cf. Nathaniel Beck, Jonathan Katz and Richard Tucker, 'Taking Time Seriously: Time-Series-Cross-Section Analysis with Binary Dependent Variables', *American Journal of Political Science*, 42 (1998), 1260–88. Cox hazard models can more easily accommodate time-varying covariates than can fully parametric proportional hazard models, because they require no distributional assumptions about the underlying baseline hazard. The genius of Cox models is that no such modelling assumption is necessary. In its simplest form, excluding time-varying covariates, Cox models estimate hazard as  $h(t) = \lambda_0(t)e^{\beta_1x_1 + \dots + \beta_kx_k}$  where  $\lambda_0$  is the baseline hazard. Thus the natural log of the hazard is just the

model specifications, each with a different failure event. The first series of models, presented in Table 2, considers all early elections; the second series of models, presented in Table 3, employs only those early elections that I have coded as opportunistic. *Early elections* comprise all elections that do not fall in the final quarter (i.e., three months) of a parliament's maximum constitutional tenure. As final quarter elections are induced by constitutional maximum term provisions they are clearly not opportunistic. *Opportunistic elections*, as coded here, include all early elections that were not induced (a) by votes of no confidence, (b) by coalition splits, or (c) by the failure of minority governments to win investiture or sufficient outside support to govern. The data appendix explains the coding more fully. Reconstructing the motives of governments for calling elections is a difficult process that inevitably introduces measurement error, so I employ both objectively coded *Early elections* and subjectively coded *Opportunistic elections* in parallel analyses.

Both analyses, except where explicitly noted, employ quarterly economic and political data from all thirteen OECD premier-timing countries covering the period from the first quarter of 1967 (1967:1) – the start date for several IMF economic time series – to 1998:4. An appropriate initial observation date is 1967 because it allows ample time for any possible synchronization from the initial wave of post-war elections to dissipate. All models treat parliaments, defined as the periods between elections regardless of coalition composition, as subjects and use one of the two failure events. I circumvent concerns about left truncation by including only those governments that began in or after the first quarter of the 1967:1 to 1998:4 observation window. One single-quarter parliament as well as non-democratic periods in Greece and Spain are omitted, leaving 124 parliaments with ninety *Early election* and sixty *Opportunistic election* failure events. Of course, different countries in the sample have (a) different maximum term lengths (CIEPs) that could bias hazard estimates and (b) country-specific variances in election timing beyond those explained by the model that could introduce heteroscedasticity. I therefore stratify all models by CIEP<sup>30</sup> and cluster robust standard errors on country. Finally, ties are resolved via the Breslow method.<sup>31</sup>

Table 2 presents the hazard coefficients and robust standard errors for five models using the first failure event, *Early elections*. The analysis proceeds as follows: I begin with the most parsimonious reasonable specification testing for the effect of percentage changes in exports, interacted with time in office, on the hazard of elections; I then progressively add variables to address rival explanations and potential sources of omitted variable bias. If incumbents maximize both time in office and the probability of re-election, calling an election in the last best period possible, then an interaction of *time* and  $\Delta exports$  is the theoretically appropriate model. Non-interacted time, of course, is picked up by the

(Footnote continued)

log of the baseline hazard, call this  $\gamma(t)$ , plus  $\beta X$ . Now if  $\gamma(t) = \gamma$  we have reproduced the exponential model;  $\gamma(t) = \gamma t$ , the Gompertz model; and  $\gamma(t) = \gamma \log t$ , the Weibull model. This is why Cox models require no *a priori* assumptions about the form of the baseline hazard.

<sup>30</sup> Stratifying the sample in a Cox model, as I do, is equivalent to running separate regressions with the constraint that the coefficients remain equal. Differences between strata are thus attributed to the respective underlying baseline hazards.

<sup>31</sup> The Breslow method implicitly assumes that ties really occur at discrete time and has consequently been found to bias coefficient estimates slightly downward. See, for a more complete explanation, Paul D. Allison, *Survival Analysis Using the SAS System* (Cary, N.C.: SAS Institute, 1995). Ties are not sufficiently common in the present data for this to constitute a major concern. Moreover, the expectation of a slight downward bias should only strengthen confidence in significant findings.

TABLE 2 *Early Elections and Exports: Cox Hazard Estimation*

	2.1	2.2	2.3	2.4	2.5
	Base	Economic controls	Political controls	Qtr	Europe
<i>Δexports</i>	-0.052** (0.026)	-0.054* (0.031)	-0.055* (0.032)	-0.055* (0.033)	-0.071** (0.035)
<i>Δexports × time</i>	0.005** (0.002)	0.006** (0.002)	0.006** (0.002)	0.006** (0.003)	0.008*** (0.003)
<i>Exports/GDP</i>		-0.006 (0.014)	-0.006 (0.016)	-0.005 (0.015)	0.005 (0.011)
<i>ΔGDP<sub>t-1</sub></i>		-0.086 (0.054)	-0.087 (0.054)	-0.085 (0.055)	-0.115 (0.077)
<i>ΔGDP<sub>t-1</sub> × time</i>		0.009** (0.004)	0.009** (0.005)	0.009** (0.005)	0.012* (0.006)
<i>Newleader</i>			-1.849** (0.738)	-2.221*** (0.819)	-1.190 (0.752)
<i>Newleader × time</i>			0.167*** (0.048)	0.203*** (0.060)	0.107* (0.058)
<i>Scandal</i>			-0.035 (0.191)	-0.032 (0.170)	-0.055 (0.277)
<i>Quarter 2</i>				-0.794* (0.451)	
<i>Quarter 3</i>				0.342 (0.327)	
<i>Quarter 4</i>				-0.349 (0.450)	
Subjects	125	122	122	122	80
Time at risk	1395	1350	1350	1350	905
Failures	90	89	89	89	56
Wald $\chi^2$	8.45**	19.36***	276.05***	150.15***	86.35***

Notes: Failure event is early elections. Coefficients are not exponentiated. All models are stratified by CIEP. Robust standard errors, clustered on country, in parentheses. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

baseline hazard. The risk of an increase in exports inducing elections should increase as a government's remaining term wanes.

The base specification in Model 2.1 quickly disposes of the null hypothesis about trade: the interaction of the (seasonally adjusted) percentage growth in exports with the number of quarters since the last election is positive and significant. The effect that an increase in exports has on the hazard of an election occurring increases as a parliamentary term matures. Export expansions are initially negatively associated with election hazard when time in office equals zero but in the tenth quarter in office, export expansions begin to increase the hazard of an early election. This roughly matches the conventional wisdom about early elections: parliamentary dissolutions early in a term are often due to weak governments and poor circumstances; those governments strong enough to survive the

initial period then wait until the second half of a term to look for an opportunity to call elections in a period of strength. Although these results are encouraging, the absence of obvious control variables warrants caution.

The first controls are economic: percentage growth in gross domestic product (GDP) and the export exposure of a country (exports/GDP). Intuitively, growth in GDP should have a similar effect to that of exports, albeit lagged as domestic commerce is recorded at the transaction time rather than when the goods cross a border.<sup>32</sup> As we are interested in the effect of export shocks in election calling, it is necessary to control for shocks to growth originating elsewhere. The second economic control, export exposure, the proportion of national income attributable to foreign demand, is a necessary control for countries' expected responsiveness to export shocks. Export shocks probably have greater effect on the overall economy in highly export dependent countries than in relatively more autarchic neighbours and consequently offer a stronger stimulus for opportunistic elections.

As expected, when interacted with parliamentary time-in-office in Model 2.2, percentage growth in lagged GDP significantly increases the early election hazard. GDP booms are associated with a significant increase in the hazard of early elections in the latter part of a term.<sup>33</sup> Similarly reassuring, as GDP obviously exceeds the value of exports, the coefficient for the GDP interaction is larger. The inclusion of GDP growth, in fact, slightly increases the strength of the export interaction. Inclusion of export exposure (*Exports/GDP*), which remains insignificant, also does not lessen the time-mediated effect or significance of export shocks. In short, the effect of export expansion on the risk of early elections is robust to the inclusion of GDP growth and export exposure controls.

The overall relationship between export expansion, time since the last election, and early election hazard is best demonstrated graphically. Figure 1 plots the election hazard predicted by coefficients and baseline hazard nearly identical to those in Model 2.2 for a hypothetical country with all covariates other than change in exports set at their sample means. I actually use the coefficients and baseline hazard from the more fully specified Model 2.4, but the interpretation is identical.<sup>34</sup> The steep rise in the predicted election hazard in the figure's upper right-hand corner preceded by an exceptionally flat relationship highlights the effect of time and trade. Export expansion raises election hazard in approximately the final half of an incumbent's term but has no effect prior to that. As mandatory elections approach, however, this model predicts a strong positive effect for export expansion on the risk of elections. Conversely, holding the hazard of an early election fixed, the export growth threshold for any given hazard of early elections diminishes as a term matures. Given an expiring term and imminent mandatory polls, most governments will accept even modest economic improvement as an impetus for calling

<sup>32</sup> As discussed in the System of National Accounts (UN, 1968, §6.131 – 6.135, revised 1982) and IFS (§7, introduction to monthly volume) data descriptions, balance of payment export data is taken from customs sources which record transactions as they cross a border. This represents a substantial lag relative to domestic demand data which is recorded at the time of transaction when ownership changes hands. National Account export figures would circumvent this time inconsistency but would entail losing nearly 40 per cent of the quarterly observations in the panel. Customs based trade data are more complete as missing export data can be inferred from the import data of trade partners, as is often done with IMF Direction of Trade Statistics (DOTS) data.

<sup>33</sup> An open question is what role electorally motivated economic manipulation may play. Unlike foreign demand (i.e., exports), which is largely insulated from pre-election manipulation, domestic demand is susceptible to government macroeconomic influence.

<sup>34</sup> As Cox hazard models do not assume a functional form hazard, I extract a baseline hazards at each quarter from Model 2.4, plot it with coefficient effects, and assemble them into Figure 1.

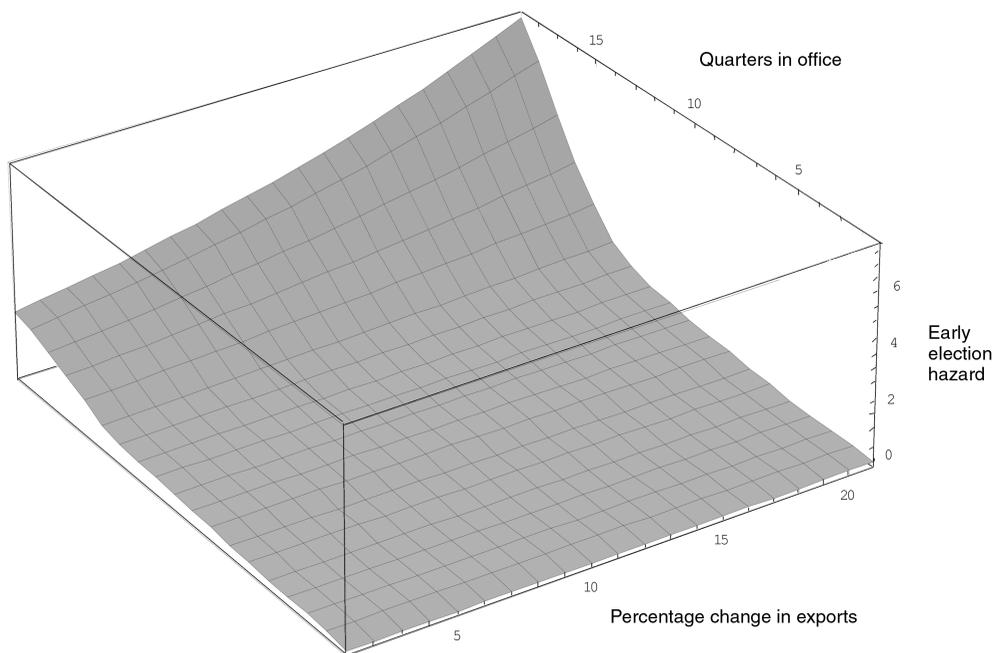


Fig. 1. Election hazard, time and exports (Model 2.4)

elections. Thus, a one standard deviation increase in export growth above its mean – i.e., an increase in export growth from 2.8 to 11.3 per cent – corresponds to only a 4.3 per cent increase in the risk of an early election when a parliament still has half its term to run (quarter 10), but a 34.4 per cent increase in a more mature parliament (quarter 15), and a 56.5 per cent increase in an aged parliament (quarter 18).<sup>35</sup> Exceptional booms, obviously, have even larger effects.

Election timing is also an inherently political act that should respond to political events. Model 2.3 adds two theoretically relevant political determinants of election calling to the previous model. The first, *Newleader* is a dummy that indicates a change of prime minister in the current or previous two quarters. New leaders seeking legislative influence can benefit from a popular mandate derived from elections. The temptation to turn to elections should also be greater for leaders who come to power relatively late in a parliamentary term when a smaller remainder of the present term is risked via elections. Thus I also interact *Newleader* with time elapsed. The second political covariate is *Scandal*, the subjectively coded political importance of scandals (3 = major abuse of office involving major government or governing party figures; 2 = minor abuse by a major figure or major abuse by a minor figure; 1 = minor abuse by a minor figure). I depreciate scandals by one unit each quarter, so a large scandal, for example, can influence election calling for three quarters. When multiple scandals occur in proximity to one another, I aggregate their scores. Scandal, surprisingly, seems to have no significant effect on the hazard of early elections, but I suspect substantial measurement error. The presence of a new leader, in

<sup>35</sup>  $\Delta h = [e^{(0.006\delta - 0.055\delta)} - 1]100$ .

contrast, substantially and significantly increases early election hazard as a term progresses. The effect of exports remains robust to these political controls.

An additional source of bias in the estimated effect of exports could be the absence of controls for seasonal effects independent of economic output. A disproportionate number of early elections fall in the second (32) and fourth (36) quarters relative to the first (17) and third (12).<sup>36</sup> If second and fourth quarters also enjoy above average export growth – despite that fact that export data are seasonally adjusted –  $\Delta exports$  could be biased upwards. This, in fact, does not occur: adding quarter dummies in Model 2.4 actually raises the export interaction coefficient, albeit only in the fourth decimal place. The GDP interaction and all other covariates save *Newleader* also remain largely unchanged. The coefficient of the *Newleader* interaction increases by approximately 25 per cent when controlling for quarter, possibly suggesting that voters – and hence new leaders – discount expected seasonal booms.<sup>37</sup> Most importantly, however, late-term export growth remains a persistently robust predictor of elections.

As an additional test, I replicate Model 2.3 on a subsample of eighty European parliaments.<sup>38</sup> The European countries – which exclude the two premier-timing countries with three-year CIEPs, Australia and New Zealand – have, on average, longer maximum term lengths which increase their risk of calling early elections;<sup>39</sup> they also trade more as a proportion of GDP and experience greater export volatility, two features that provide larger incentives for opportunistic election calling. We therefore should expect exports to induce a greater risk of early elections within Europe. They do: export shocks in European countries are associated with a higher risk of early elections as a parliament matures than in the full sample.

We have seen from the above that export expansions are robustly associated with a rising hazard of early elections as parliaments mature. Early elections, however, do not necessarily constitute opportunistic elections. Early elections often can and do occur for non-opportunistic reasons such as votes of no confidence or coalition splits – phenomena that should, ideally, be employed in defining a more precise failure event. With the aid of newspaper reports and other records (see details in the Appendix), I construct precisely such a variable – *Opportunistic elections* – that indicates the subset of early elections that were not induced by votes of no confidence, coalition splits or the failure of minority governments to win outside support. Identifying the true intention of a premier in dissolving parliament for elections is, of course, inevitably subjective. A prime minister, for example, might anticipate a coalition crisis and prefer to call an early election despite unfavourable external conditions. Such an election would nevertheless be coded as opportunistic. Despite these concerns, however, this relatively subjective measure may encompass less – or at least different – measurement error than the more objective early election failure event employed above.

<sup>36</sup> The seven additional early elections here are from parliaments that began before the observation window (six) or from one-quarter parliaments censored from the risk set (one).

<sup>37</sup> This interpretation of voters' behaviour (but not leaders' inferences) finds support in Harvey D. Palmer and Guy Whitten, 'The Electoral Impact of Unexpected Inflation and Economic Growth', *British Journal of Political Science*, 29 (1999), 623–39.

<sup>38</sup> More specifically, I include all parliaments from the nine European premier-timing states – Austria, Denmark, Greece (post 1974:4), Iceland, Ireland, Italy, the Netherlands, Spain (post 1979:1), and the United Kingdom – that began after 1 January 1967.

<sup>39</sup> Kayser, 'Who Surfs, Who Manipulates?'

TABLE 3 *Opportunistic Elections and Exports: Cox Hazard Estimation*

	3.1	3.2	3.3	3.4	3.5
	Base	Economic controls	Political controls	Quarter controls	Europe
<i>Δexports</i>	− 0.061*** (0.022)	− 0.052** (0.023)	− 0.053** (0.025)	− 0.054** (0.024)	− 0.049** (0.022)
<i>Δexports × time</i>	0.006*** (0.002)	0.005*** (0.002)	0.005*** (0.002)	0.005*** (0.002)	0.006*** (0.001)
<i>Exports/GDP</i>		− 0.014 (0.023)	− 0.015 (0.026)	− 0.014 (0.024)	0.005 (0.018)
<i>ΔGDP<sub>t−1</sub></i>		− 0.199* (0.114)	− 0.206* (0.118)	− 0.214* (0.112)	− 0.276 (0.169)
<i>ΔGDP<sub>t−1</sub> × time</i>		0.018** (0.009)	0.018** (0.009)	0.019** (0.008)	0.024* (0.013)
<i>Newleader</i>			− 0.71 (1.056)	− 1.092 (1.289)	0.239 (0.996)
<i>Newleader × time</i>			0.075 (0.076)	0.113 (0.102)	− 0.046 (0.087)
<i>Scandal</i>			− 0.157 (0.217)	− 0.142 (0.209)	− 0.212 (0.450)
<i>Quarter 2</i>				− 0.971 (0.641)	
<i>Quarter 3</i>				0.320 (0.419)	
<i>Quarter 4</i>				− 0.297 (0.594)	
Subjects	125	122	122	122	80
Time at risk	1395	1350	1350	1350	905
Failures	60	59	59	59	32
Wald $\chi^2$	15.54***	32.14***	51.49***	139.56***	357.97***

*Notes:* Failure event is opportunistic election. Coefficients are not exponentiated. All models are stratified by CIEP. Robust standard errors, clustered on country, in parentheses. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

Table 3 replicates the five model specifications from Table 2 with opportunistic rather than early elections as the failure event. Restricting the set of elections from the previous analyses reduces the number of opportunistic elections from ninety to sixty in the general sample and from fifty-six to thirty-two in Europe. Despite this substantial change in the failure coding, few differences emerge in the results: (a) the interaction of export changes with parliamentary time in office remains largely unchanged in the magnitude of its effect but now becomes uniformly significant at the 1 per cent level across all five models; (b) aggregate growth roughly doubles its interaction strength, reaching a magnitude consistent with its size relative to exports; both GDP and its effect on election calling now exceed their export counterparts by about a factor of four; and (c) the new leader dummy – which yielded a significant effect in two out of the three models in Table 2 – no longer even approaches statistical significance under the new failure event, suggesting that the

earlier result was probably obtained because new minority governments soon collapsed. No other noteworthy differences emerge, emphasizing the central finding of consistency; regardless of whether objective early elections or more subjectively coded opportunistic elections were employed, export expansions, like expansions in general, remain a robust predictor of election timing.

#### ELECTION CLUSTERING

National election processes have conventionally been considered a domestic matter. The results presented above, however, contest this view. Not only do domestic economic expansions increase the risk of elections at home but, as booming economies transmit their growth to neighbouring states via trade, in trade partners as well. National elections in premier timing countries are partly induced by foreign economic fluctuations. If trade-transmitted economic booms are indeed inviting opportunistic elections, we should expect several empirically testable ancillary relationships – most notably, international election clustering and a growing correlation of election cycles among the most economically integrated states. Both of these patterns emerge.

I test for the first expected relationship – concurrent elections – with a series of Poisson regressions predicting the number of elections that fall in a given quarter. More precisely, the models predict one of two dependent variables: (1) the number of *Early elections*, i.e., those elections that do not fall in the final quarter of the maximum term and (2) the number of *Opportunistic elections*, i.e. those elections that qualify as opportunistic using the same rules as above. The regressors are calculated as either sums (*Scandals*, *Newleaders*) or means ( $\Delta exports$ ,  $\Delta GDP_{t-1}$ ,  $Exports/GDP$ ) of their country values with one exception: *Scandals* simply sums the number of countries that have a scandal in the given quarter (not the magnitudes). Two new covariates also appear: *Elapsed*, unnecessary in the earlier duration models, now records the average proportion of maximum terms that have passed and  $Elections_{t-1}$ , is the lagged dependent variable (early elections for the first three models, opportunistic elections for the final three). The election count data, somewhat unusually, raise theoretical concerns about possible negative autocorrelation as well as heteroscedasticity. Negative autocorrelation could arise from the lower likelihood, shown in the previous hazard models, of governments calling elections at the beginning of a new parliament. A large number of elections in a given quarter could therefore reduce the number of elections in the subsequent quarter. The rather mild – and negative – autocorrelation, however, recommends against a Poisson autoregressive model.<sup>40</sup> Heterogeneity in election-calling across countries suggests possible overdispersion of the data. Summary statistics reassure us, however, that the count means exceed their variances, albeit only by a slight margin. I therefore proceed with a common Poisson and mitigate the mild autocorrelation and heteroscedasticity problems by including a lagged dependent variable and clustering robust standard errors by year.

Table 4 suggests that export booms are indeed associated with election clustering. Mean export growth among the premier-timing countries is positively and significantly associated with both the number of early and opportunistic elections. The most fully specified model for each dependent variable reports a significant effect for export growth robust to the inclusion of relevant covariates. The substantive effect is also not negligible.

<sup>40</sup> Patrick Brandt and John T. Williams, 'A Linear Poisson Autoregressive Model: The Poisson AR(p) Model', *Political Analysis*, 9 (2001), 164–84.

TABLE 4 *Poisson Regression*

	Early Elections			Opportunistic Elections		
	4.1 Base	4.2 Controls	4.3 Quarters	4.4 Base	4.5 Controls	4.6 Quarters
Constant	-2.269*** (0.696)	-4.725*** (0.953)	-5.397*** (1.044)	-3.514*** (0.764)	-6.250*** (1.175)	-7.208*** (1.414)
<i>Elapsed</i>	4.474*** (1.342)	5.870*** (1.312)	6.311*** (1.227)	6.206*** (1.503)	7.962*** (1.560)	8.569*** (1.602)
<i>Elections</i> <sub><i>t</i>-1</sub>	-0.082 (0.143)	0.001 (0.133)	0.229* (0.131)	-0.029 (0.166)	0.058 (0.168)	0.361** (0.158)
$\Delta$ <i>exports</i>	0.040** (0.018)	0.037* (0.019)	0.037** (0.017)	0.051** (0.024)	0.050* (0.027)	0.054** (0.026)
$\Delta$ <i>GDP</i> <sub><i>t</i>-1</sub>		0.105*** (0.037)	0.148*** (0.057)		0.100** (0.044)	0.150* (0.085)
<i>Exports/GDP</i>		0.069** (0.030)	0.064** (0.029)		0.077*** (0.025)	0.073** (0.029)
<i>Newleader</i>		0.057 (0.091)	0.067 (0.072)		0.013 (0.086)	0.030 (0.061)
<i>Scandals</i>		-0.172*** (0.061)	-0.148** (0.061)		-0.196** (0.093)	-0.174* (0.100)
<i>Quarter 2</i>			0.147 (0.279)			0.223 (0.494)
<i>Quarter 3</i>			-0.330 (0.277)			-0.449 (0.459)
<i>Quarter 4</i>			0.786*** (0.272)			0.963*** (0.328)
Wald $\chi^2$	24.34***	57.03***	65.67***	24.86***	60.99***	68.67***
BIC	292.08***	299.14***	302.45***	240.97***	249.73***	253.01***
<i>N</i>	127	126	126	127	126	126

Notes: Robust standard errors, clustered on year, in parentheses. Greece and Spain excluded in non-democratic years. \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

Considering Model 4.6, for example, a one standard deviation increase in exports beyond the mean growth – i.e. increasing export growth from 2.9 per cent to 6.8 per cent – increases the expected number of opportunistic elections by a factor of 1.23, all else equal.

The lagged dependent variable is initially statistically insignificant but, contrary to initial expectations, becomes positive and significant in Models 4.3 and 4.6. An increase in the number of elections in a given quarter also increases the number of elections in the subsequent quarter. This suggests that elections may attract elections. Small countries might want to pre-empt an expected negative precedent for their voters by calling national elections before those of a larger rival. John Howard, for example is suspected of calling Australia's 9 October 2004 elections before those of the United States to avoid cross-border anti-incumbent contagion should his Iraq War ally, George Bush, lose in November 2004.<sup>41</sup>

<sup>41</sup> *The Economist*, 4 September 2004, 'Australia calls an election: the truth game'.

Incumbent success in a given country might also encourage incumbents elsewhere. This effect probably exceeds that of the negative autocorrelation because the election clusters remain fairly modest in magnitude.

GDP growth, unsurprisingly, also proves a significant predictor of election count albeit only at the 10 per cent level of significance in Model 4.6. Export exposure (*Exports/GDP*) and *Scandals* perform much better in predicting election clusters than election hazard. Greater export exposure increases election clustering but scandals decrease the expected number of elections. The number of new leaders has no significant effect on the number of elections, early or opportunistic, but the autumn (fourth quarter) proves a popular time.

These findings have strong and novel implications for international political economy. The election clustering noted by Tufte may actually be a result of internationally transmitted business cycles rather than the converse as previously assumed.

#### CONVERGENCE?

Of course, if internationally transmitted expansions invite election clustering, we should also expect an effect over time. Even a mild effect of trade on election clustering should reflect the increase in international trade and economic integration over that last decade. Business cycle convergence should, in short, imply election cycle convergence. Of course, different term lengths (CIEPs) and country-particular events imply an upper bound on election-cycle convergence but the rise in economic interdependence and the emergence of international business cycles nevertheless imply a waxing impetus towards election clustering. Have elections become more synchronized? Nowhere should this trend be stronger than in Europe where the European Union has steadily reduced trade barriers, stabilized exchange rates, lowered barriers to capital mobility and generated an increasingly synchronized European business cycle. Indeed, as Artis and Zhang show, European business cycles converged after the introduction of the European Monetary System's European Rate Mechanism (ERM) in 1979 through the mid-1990s.<sup>42</sup>

To test this, I construct a vector of the number of days from 1 July to the next election for each of each year in each country and then correlate the vectors of each country dyad. Measuring from the middle of each year to the next election provides a common benchmark and an equal number of observations. This approach also offers the simplicity of an election analogue to business-cycle correlation while the standardization employed in the calculation of correlation coefficients facilitates comparison across different variances. Figure 2 plots the twenty-year moving-average election-cycle correlation between six European countries<sup>43</sup> and Austria, a small highly integrated European country with the most strong trade relations with the rest of the sample. A few years after the introduction of the ERM, European election cycles – much like European business cycles – began converging with one another while diverging from that of the United States. In short, as European business cycles converged, so did European election cycles. Of course, these results are more suggestive than conclusive. Interpreted in the context of the other results,

<sup>42</sup> Artis and Zhang, 'International Business Cycles and the ERM: Is There a European Business Cycle?'; and Artis and Zhang, 'Further Evidence on International Business Cycles and the ERM'.

<sup>43</sup> Denmark, Iceland, Ireland, Italy, Netherlands, United Kingdom. This (including Austria) is the complete set of European states that have had democratic governments for the necessary time-series length and are able to time their elections opportunistically. Thus, Spain and Greece are omitted. The value reported at each year represents the mean of six bivariate correlations between the European countries and Austria's cycle over the current and nineteen preceding years. The correlation mean with the United States includes Austria as well.

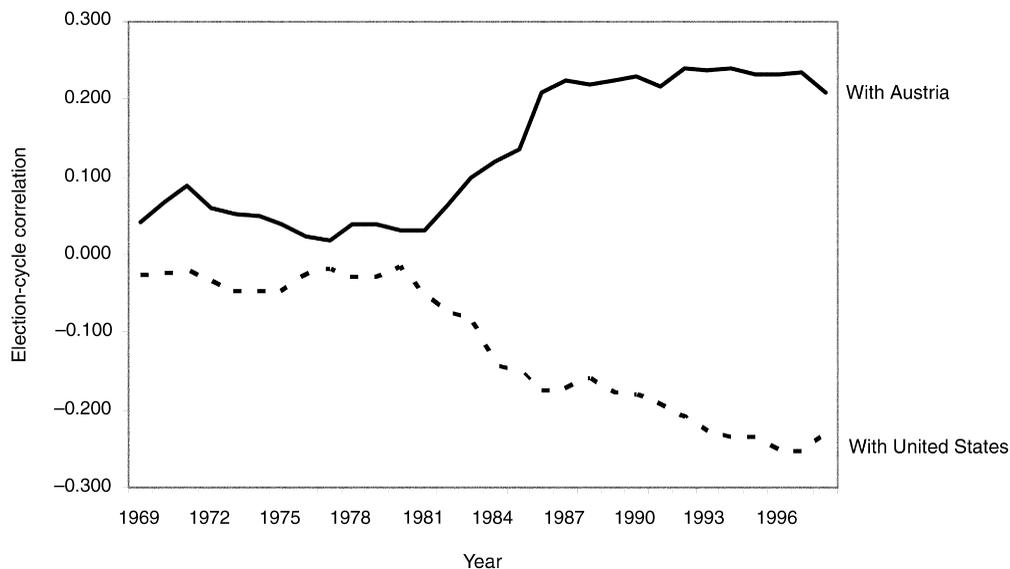


Fig. 2. Election-cycle convergence? Mean election-cycle correlation of seven European countries with given country

Note: Twenty-year moving average – Austria, Denmark, Iceland, Ireland, Italy, Netherlands, United Kingdom. Greece and Spain are omitted because of short democratic histories. No country correlated with itself. Each year represents the end of a twenty-year moving window.

however, they provide reason to suspect that economic trends have influenced clustering, especially in Europe where the necessary institutional and economic conditions are most common.

## CONCLUSION

This article introduces a novel claim about the effect of international economic integration on national politics, namely that international business cycles influence the timing of domestic elections. In doing so, it marshals evidence for several specific claims: (a) that governments time elections in response to economic fluctuations regardless of whether they originate domestically or abroad, (b) that incumbents maximize both their time in office and re-election probabilities, calling elections towards the end of their terms in economically advantageous periods, and (c) that as a term matures, governments become increasingly opportunistic, responding to smaller shocks that they would have foregone earlier in their term. External economic effects on national election timing also imply several secondary effects among premier-timing countries, specifically: (d) that increases in exports increase the temporal clustering of elections and (e) that election cycles among European countries have become increasingly correlated over time. If premier timing governments are indeed as opportunistic in their timing of elections as these results suggest, then the distinction between endogenous-timing (or more precisely, premier-timing) and fixed-timing states may be a far more important institutional dimension than previously thought.

Domestically, not only does premier timing matter for incumbency advantage and governance (credible dissolution threats may empower the government relative to the legislature), but also for the ‘electoral economy’ of a state. Governments that are able to co-ordinate elections with exogenous opportunities may have less of an incentive to manipulate their economies prior to elections.

Internationally, the external economic effects on national election timing raises the prospect of election clustering among the most economically integrated states, most notably those of Western Europe. Unlike the introduction of previous regional exchange rate (and given capital mobility, monetary) regimes, the recent implementation of European economic and monetary union has caused a much documented initial divergence in business cycles.<sup>44</sup> But divergence is expected to give way to renewed business cycle – and this article would add election cycle – convergence in the long run. If states approaching elections behave differently from those removed from immediate re-election concerns, incumbents facing imminent polls should emphasize short-term domestic interests over co-operation with foreign governments. A growing synchronization of election calendars thus could imply international cycles of co-operation and conflict with elections preceded by discord and followed by détente.

By establishing that external economic cycles affect the timing of national elections, this article raises questions about globalization’s political consequences. Many scholars have already questioned the effect of freer flows of goods, services and capital on the ability of governments to set domestic policy; none have examined the effect on the electoral process itself. Institutional variation may be the final mile in predicting globalization’s effects in different countries. Election-calling institutions should not be neglected in this endeavour.

#### APPENDIX

##### *Hazard Analysis Variables*

*ElecErl* – Early elections. Elections that do not fall in the final quarter of a parliament’s maximum tenure. Those that are held in the final quarter of a maximum term are assumed to be induced constitutionally. Omits non-democratic years for Greece and Spain. Coded as failure event. *Source*: Information on election dates from Thomas T. Mackie and Richard Rose, *The International Almanac of Electoral History*, 3rd edn (Washington, D.C.: Congressional Quarterly, 1991), and, for more recent elections, government websites and the International Parliamentary Union.

*ElecOpp* – Opportunistic elections. Elections that (1) do not fall in the final quarter of a parliament’s maximum term and (2) were not induced by votes of no confidence, coalition splits or the failure of minority governments to win investiture or sufficient outside support to govern. Omits non-democratic years for Greece and Spain. Coded as failure event. *Source*: Information on the cause of elections taken from (1) *The Annual Register of World Events* (London: Longmans, various years) (2) *Keesing’s Contemporary Archives* (London: Keesing’s Limited, various years), and (3) various newspaper articles retrieved via *Nexis-Lexis*.

*Δexports* – The percentage change in exports, quarter to quarter, seasonally adjusted by author where not already done so by national data-providing authorities. *Source*: International Monetary Fund (IMF) International Financial Statistics (IFS) data series and, where needed, IMF Direction of Trade Statistics (DOTS) data.

$\Delta GDP_{t-1}$  – Percentage change in gross domestic product, quarter to quarter, lagged one quarter. *Source*: IMF IFS quarterly data. Approximately one-third of observation quarters are missing data in which case

<sup>44</sup> cf. *The Economist*, 2 October 2004, ‘Economic focus: growing apart’.

I impute quarterly data from annual GDP time series setting the first quarter figure equal to annual GDP/ $x$  where  $x = r^3 + 4r^2 + 6r + 4$  and  $r$  is the mean quarterly GDP growth rate for the extant 1,059 observations, 2.27 per cent. All models have been run with an imputed dummy to verify that these data do not affect results.

*Exports/GDP* – Exports divided by gross domestic product, all in US dollars converted at current exchange rates. *Source*: IMF IFS data.

*Newleader* – Dummy variable indicating a change of prime minister within the same parliament in the present or previous two preceding quarters. *Source*: Hein Goemans, Kristian Skrede Gleditsch, Giacomo Chiozza and Jinhee L. Choung, *Archigos: A Database on Political Leaders, Version 1.5*, University of Rochester and University of California, San Diego, 2004.

*Scandal* – Variable indicating political scandal. Coding: (3) scandal involving major government or governing party member. Major abuse of power or neglect of responsibilities leading to severe consequences or potential consequences; (2) minor abuse by major government figure or major abuse by minor government figure; (1) minor abuse or failure by minor government figure. Scandals are discounted by one point each quarter and are cumulative. *Sources*: (1) *Annual Register of World Events*, (2) Louis Allen, ed., *Political Scandals and Causes Célèbres since 1945: An International Reference Compendium* (Harlow, Essex: Longman Current Affairs, 1991), and (3) *Lexis-Nexis*.

*Time* – quarters since last election.

#### *Poisson Regression Variables*<sup>45</sup>

*ElecEarly* – The sum of early elections in the thirteen premier-timing countries for the given quarter. Greece and Spain excluded from exposure count in non-democratic years. Early elections are those that do not fall in the final quarter of a parliament's maximum term.

*ElecOpp* – The sum of opportunistic elections in the thirteen premier-timing countries for the given quarter. Greece and Spain excluded from exposure count during non-democratic years. Opportunistic elections (1) do not fall in the final quarter of a parliament's maximum term and (2) were not induced by votes of no confidence, coalition splits or the failure of minority governments to win investiture or sufficient outside support to govern.

*Elapsed* – Time since last election (TSLE) divided by the maximum constitutional inter-election period (CIEP), i.e. the proportion of the maximum term that has elapsed. *Elapsed* reports the mean for the thirteen premier-timing countries.

*Elections<sub>t-1</sub>* – the number of elections, of all types, in the previous quarter.

*Δexports* – mean percentage change in exports, quarter to quarter, seasonally adjusted.

*ΔGDP<sub>t-1</sub>* – mean percent change in gross domestic product, quarter to quarter, lagged.

*Scandals* – number of scandals. Sum of a scandal dummy.

*Newleader* – number of countries with a new leader within a parliament in the current or two preceding quarters.

<sup>45</sup> See Hazard Analysis Variables section for data sources.

TABLE A1 *Descriptive Statistics*

Variable	Hazard variables				
	N. Obs.	Mean	St. Dev.	Min	Max
<i>Δexports</i> , per cent	1,484	2.84	8.45	− 33.90	60.50*
<i>Exports/GDP</i> , per cent	1,438	22.84	11.42	7.87	78.16
<i>ΔGDP</i> , per cent	1,482	2.93	4.55	− 6.50	61.18*
<i>Newleader</i>	1,488	0.10	0.30	0.00	1.00
<i>Scandal</i> , magnitude	1,488	0.16	0.58	0.00	6.00
Variable	Poisson variables				
	Obs	Mean	St. Dev.	Min	Max
<i>Early elections</i> , sum per quarter	128	0.77	0.85	0.00	4.00
<i>Opportunistic elections</i> , sum per quarter	128	0.53	0.72	0.00	4.00
<i>Δexports</i> , mean per cent	127	2.90	3.86	− 7.20	12.51
<i>Exports/GDP</i> , per cent	128	22.54	2.53	16.38	29.79
<i>Elapsed</i> , mean proportion of terms elapsed	128	0.42	0.08	0.22	0.59
<i>ΔGDP</i> , mean per cent	126	2.93	1.93	0.39	9.34
<i>Scandals</i> , sum	128	1.13	1.14	0.00	5.00
<i>Newleader</i> , sum	128	1.16	0.99	0.00	4.00

\*Iceland has experienced huge volatility in fishing hauls and exports.



Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.