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Engineering Good Times: Fiscal Manipulation in a Global Economy

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In a global economy, a country's international economic ties affect both how desirable pre-electoral fiscal manipulation is to the government, and how costly it is to the government to engage in such manipulation. Governments are more likely to engage in pre-electoral fiscal manipulation when the country's exchange rate is flexible and the domestic economy is highly open to international trade, and when the exchange rate is fixed and the domestic economy is relatively closed to international trade. This argument is tested empirically through a quantitative analysis of changes in government debt in twenty OECD countries from 1974 to 2008.

Scholars have long argued that governments are more likely to be re-elected in good times than in bad. More contentious is what, if anything, incumbents can do to engineer 'good times'. One of the tools most commonly attributed to the government for manufacturing good times prior to an election is fiscal manipulation – spending more or taxing less. Whether governments manipulate fiscal policy depends upon the domestic institutional, political and economic context of each election, as has been demonstrated through many single country and cross-national studies.[1] With the exception of Clark and Hallerberg, who analyse the role of the exchange rate on pre-electoral fiscal manipulation, the key variables in these studies have been domestic, with little attention paid to how international variables may affect fiscal manipulation.[2]

In a global economy increasingly characterized by cross-border trade and capital flows, governments' choices are shaped by their countries' exposure to the international economy. In particular, a government's decision to engage in pre-electoral fiscal manipulation is mediated by their country's exposure to international volatility and international competition. While exposure to international volatility increases governments' incentives to engage in pre-electoral fiscal manipulation, concerns that fiscal manipulation will erode the country's international competitiveness reduce governments' incentives to manipulate fiscal policy prior to an election.

A country's exposure to international economic volatility may increase as its trade openness increases and as its exchange rate becomes less flexible. Thus, governments may face a greater incentive to engage in pre-electoral fiscal manipulation if their country has a

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[1] For a recent review of the literature on pre-electoral fiscal manipulation, see Robert J. Franzese Jr, 'Electoral and Partisan Cycles in Economic Policies and Outcomes', *Annual Review of Political Science*, 5 (2002), 369–422.

[2] William R. Clark and Mark Hallerberg, 'Mobile Capital, Domestic Institutions, and Electorally Induced Monetary and Fiscal Policy', *American Political Science Review*, 94 (2000), 323–46.

fixed exchange rate or if their country is heavily engaged in trade. Conversely, when under a fixed exchange rate, governments' concern about eroding international competitiveness through a fiscal expansion may increase as trade increases. These competing incentives suggest that pre-electoral fiscal manipulation is more likely to occur when the country's exchange rate is flexible and the economy is highly open to trade, and when the exchange rate is fixed and the economy is relatively closed to trade. This argument is tested empirically through a quantitative analysis of changes in government debt in twenty OECD countries from 1974 to 2008.

PRE-ELECTORAL FISCAL MANIPULATION AS A TOOL TO ENSURE ECONOMIC GOOD TIMES

Governments that oversee strong economic growth are more likely to be re-elected than governments facing re-election under a weak economy.[3] This finding, coupled with governments' desire for re-election, has led scholars to expect governments 'to turn on the spigot surely and swiftly and fill the trough so that it counts with the electorate'.[4] Whether governments can manufacture favourable economic conditions prior to an election has been the subject of debate within the political business cycle (PBC) literature.[5] Early PBC models posited naïve voters who rewarded governments for electoral year expansions.[6] These first generation models, while significant for identifying an important political rationale for governments' economic policy making, were deemed unrealistic. Rather than modelling governments exploiting myopic voters, second generation PBC analyses have spotlighted the importance of favourable economic conditions in voters' perception of government performance.[7] In an environment of asymmetric information where voters cannot identify government competence, pre-electoral economic conditions act as a signal of government competence. By producing an election-year expansion, governments demonstrate their governing ability. Under these models, the absence of an election-year expansion may signal low government competence.

For both first- and second-generation PBC models, governments have strong incentives to engage in pre-electoral fiscal manipulation. Recent analyses have focused on institutional characteristics that affect governments' ability or incentive to engage in pre-electoral fiscal manipulation. Governments may be institutionally constrained in their ability to manipulate the economy. Most broadly, governments' ability to engage in pre-electoral fiscal manipulation may diminish as the number of political actors involved in policy making increases. As Franzese argues, 'problems of bargaining, agency, coordination, and collective action will dampen, or otherwise complicate, electioneering, especially in so far as these entities serve

[3] Raymond M. Duch and Randolph T. Stevenson, *The Economic Vote: How Political and Economic Institutions Condition Election Results* (Cambridge: Cambridge University Press, 2008).

[4] Edward R. Tufte, *Political Control of the Economy* (Princeton, N.J.: Princeton University Press, 1978), p. 10.

[5] This literature has focused on two strategies for economic expansion: monetary policy and fiscal policy. Of the two, fiscal manipulation appears to be more effective. See Allen Drazen, 'The Political Business Cycle After 25 Years', *NBER Macroeconomics Annual*, 15 (2000), 75–117. This review focuses on political budget cycles.

[6] William Nordhaus, 'The Political Business Cycle', *Review of Economic Studies,* 42 (1975), 169–90; Tufte, *Political Control of the Economy*.

[7] Kenneth Rogoff and Anne Sibert, 'Elections and Macroeconomic Policy Cycles', *Review of Economic Studies*, 55 (1988), 1–16; Kenneth Rogoff, 'Equilibrium Political Business Cycles', *American Economic Review*, 80 (1990), 21–36; Suzanne Lohmann, 'Rationalizing the Political Business Cycle: A Workhorse Model', *Economics & Politics*, 10 (1998), 1–17.

different constituents'.[8] Saporiti and Streb present this argument more formally, arguing that PBCs are unlikely when the executive does not have unilateral control over fiscal policy.[9] Thus, as the number of veto players involved in policy making increases, governments should be less likely to engage in pre-electoral fiscal manipulation.[10]

In particular, this argument extends to cabinet composition. Pre-electoral fiscal manipulation should be most likely in a single-party cabinet where one party has control over budgetary decision making. A single-party minority government may have even greater incentive to engage in fiscal manipulation than a majority government, as their electoral position is more precarious.[11] Coalition governments, in which multiple parties within the cabinet control policy making, should generally be less able to engage in pre-electoral fiscal manipulation and have less incentive to do so as it may be more complex to claim the credit.[12]

Similarly, budgetary rules that limit discretionary control over fiscal policy also limit the government's ability to engage in pre-electoral fiscal manipulation. In a study of PBCs in the American states, Rose finds that states with balanced budget requirements are less likely to engage in pre-electoral fiscal manipulation.[13] In an analysis of budget procedures in the nations of the European Union, Hallerberg, Strauch and von Hagen find that deficit spending is constrained when budget decisions are delegated to less politicized actors.[14] Thus, pre-electoral fiscal manipulation should be less likely when there is less political influence in the budget process.

An election-year expansion is more effective in garnering votes if voters are unable to detect the government's manipulation. As voters' ability to observe fiscal policy increases, voters will be less likely to reward pre-electoral fiscal manipulation, thus reducing governments' incentive to engage in fiscal electioneering. As a result, Alt and Lassen argue that increased fiscal transparency leads to smaller political budget cycles.[15]

Governments' incentive to engage in pre-electoral fiscal manipulation also depends on their desire to remain in office. Bernhard and Leblang argue that incumbents with

[8] Franzese, 'Electoral and Partisan Cycles in Economic Policies and Outcomes', p. 384.

[9] Alejandro Saporiti and Jorge M. Streb, 'Separation of Powers and Political Budget Cycles', *Public Choice*, 137 (2008), 329–45.

[10] Eric C. C. Chang, 'Electoral Incentives and Budgetary Spending: Rethinking the Role of Political Institutions,' *Journal of Politics*, 70 (2008), 1086–97.

[11] Minority governments must get expenditures approved in parliament, and therefore, if opposition parties act to constrain government spending, minority governments might spend less. This depends in part on the bargaining position of the minority governing party and whether opposition parties would actually constrain spending. To the extent that opposition parties can be bought off, this may be another reason why manipulation is greater under single-party minority governments.

[12] For coalition governments, multiple veto players only act as a constraint on manipulation if the coalition partners are in disagreement over an election-year expansion. Kathleen Bawn and Frances Rosenbluth ('Short versus Long Coalitions: Electoral Accountability and the Size of the Public Sector', *American Journal of Political Science*, 50 (2006), 251–65) and Torben Persson, Gerard Roland and Guido Tabellini ('Electoral Rules and Government Spending in Parliamentary Democracies', *Quarterly Journal of Political Science*, 2 (2007), 155–89) present models in which coalition governments have higher expenditures than other types.

[13] Shanna Rose, 'Do Fiscal Rules Dampen the Political Business Cycle?' *Public Choice*, 128 (2006), 407–31.

[14] Mark Hallerberg, Rolf Strauch and Jurgen von Hagen, 'The Design of Fiscal Rules and Forms of Governance in European Union Countries', *European Journal of Political Economy*, 23 (2007), 338–59.

[15] James E. Alt and David Dreyer Lassen, 'Transparency, Political Polarization, and Political Budget Cycles in OECD Countries', *American Journal of Political Science*, 50 (2006), 530–50.

a higher cost of losing power are more likely to inflate the economy prior to an election.[16] In particular, incumbents in majoritarian systems, in which a small electoral loss can result in a large seat loss and in which the opposition have very little policy influence, have a greater incentive to inflate the economy. Conversely, governments in proportional representation systems have less incentive to engage in economic electioneering.

Governments' ability to engage in fiscal manipulation may also be constrained by their country's exchange rate regime. Clark and Hallerberg argue that in a world of perfect capital mobility, governments engage in fiscal expansion prior to an election only under a fixed exchange rate, never under a flexible exchange rate.[17] This argument depends crucially upon the role of perfect capital mobility. If capital is viewed as partially rather than fully mobile, a view that is more reflective of the reality of the last few decades, exchange rate flexibility does not render fiscal manipulation fully ineffective but may reduce its effectiveness. Empirically, studies of pre-electoral fiscal manipulation in the United States and Britain demonstrate that fiscal manipulation does occur in countries with flexible exchange rates.[18]

In sum, governments have an incentive to engage in pre-electoral fiscal manipulation because their prospects for re-election improve with the strength of the economy. Previous analyses have shown that governments are more likely to engage in electioneering when they are institutionally less constrained, the costs of losing office are high, and the exchange rate is fixed. Despite the widespread understanding that the international economic environment has a substantial influence on countries' economic performance, with the exception of Clark and Hallerberg, prior studies have primarily analysed domestic determinants of governments' incentives to engage in fiscal manipulation. In this article, I seek to redress this balance, and in the following sections examine how a country's trade and exchange rate ties influence governments' incentives to manipulate the economy prior to an election.

PRE-ELECTORAL FISCAL MANIPULATION AND INTERNATIONAL VOLATILITY

In a global economy increasingly characterized by cross-border trade and capital flows, governments' choices are shaped by their countries' exposure to the international economy. In this section, I argue that greater exposure to international economic volatility through trade openness or a fixed exchange rate increases the uncertainty of economic good times prior to an election. Greater economic uncertainty increases governments' incentives to manufacture favourable economic conditions prior to an election.[19]

Trade openness acts as a conduit for international economic volatility. As Kose, Prasad and Terrones note, 'while there appears to be a general consensus that openness to trade

[16] William T. Bernhard and David Leblang, 'Democratic Institutions and Exchange-Rate Commitments', *International Organization*, 53 (1999), 71–97.

[17] As Clark and Hallerberg, 'Mobile Capital', p. 326, fn. 11, note, 'the reasoning is that fiscal expansion (or any other increase in autonomous expenditure) leads to an increase in both income and interest rates. When capital is mobile, the rise in interest rates attracts capital, which leads to a currency appreciation. When the exchange rate is fixed, the central bank has to expand the money supply to offset the effects of the capital inflow on the exchange rate. Thus, under fixed exchange rates and mobile capital, a fiscal expansion induces a reinforcing monetary expansion.'

[18] For a summary of PBCs in the United States, see Drazen, 'The Political Business Cycle After 25 Years'. For Britain, see Thomas Sattler, Patrick T. Brandt and John R. Freeman, 'Democratic Accountability in Open Economies', *Quarterly Journal of Political Science,* forthcoming.

[19] Mark Andreas Kayser, 'Trade and the Timing of Elections', *British Journal of Political Science*, 36 (2006), 437–57, posits a similar link between countries' trade ties and elections, arguing that trade-transmitted economic fluctuations affect opportunistic election timing.

flows stimulates domestic growth, it is also the case that such openness increases the vulnerability to external shocks.'[20] Theoretically, the effect of trade openness on overall domestic volatility is indeterminate. By increasing market size for a country's output, trade may reduce demand volatility. Conversely, by encouraging specialization, trade makes countries more vulnerable to specific demand shocks. More generally, trade openness exposes countries to volatility in their terms of trade – the unit price of a country's exports relative to the unit price of its imports. High levels of trade do not necessarily lead to greater terms of trade volatility,[21] but in the absence of trade, such volatility would have no impact on the economy.[22] Empirically, scholars have found a positive association between trade openness and domestic volatility.[23] In particular, increased exposure to terms of trade volatility resulting from greater trade, rather than the trade flows themselves, appears to be the causal explanation for this relationship.[24] As a result, while trade openness may increase long-run economic growth, by exposing the economy to terms of trade volatility, trade openness may also increase domestic volatility. Domestic volatility, in turn, has long been shown to have a strong negative effect on economic growth.[25]

High trade openness, by increasing the economy's exposure to international volatility, increases uncertainty about the strength of the economy prior to an election, and concomitantly increases the government's electoral uncertainty. As a result, as trade increases, the government's incentive to engage in a fiscal expansion to improve their re-election chances also increases. Whether governments can increase fiscal expenditures in the face of trade openness is a large debate. Some scholars suggest that trade openness and public expenditures are negatively correlated (the efficiency hypothesis), while others argue that trade openness and public expenditures are positively correlated (the compensation hypothesis).[26] The compensation hypothesis posits that governments in countries that are highly open to trade will maintain high levels of public expenditures to cushion the domestic economy

[20] M. Ayhan Kose, Eswar S. Prasad and Marco E. Terrones, 'How Do Trade and Financial Integration Affect the Relationship between Growth and Volatility?' *Journal of International Economics*, 69 (2006), 176–202, p. 177.

[21] See Edward D. Mansfield and Eric Reinhardt, 'International Institutions and Terms of Trade Volatility' (unpublished manuscript, available at http://userwww.service.emory.edu/~erein/research/ToT.pdf. 2008), for a review of the relationship between trade and terms of trade volatility.

[22] Norman Loayza and Claudio Raddatz, 'The Structural Determinants of External Vulnerability', *World Bank Economic Review,* 21 (2007), 359–87, find that increased trade magnifies the output impact of terms of trade shocks, particularly negative ones, while Jean-Louis Combes and Tahsin Saadi-Sedik, 'How Does Trade Openness Influence Budget Deficits in Developing Countries?' Working Paper WP/06/03 (Washington, D.C.: International Monetary Fund, 2006), find that the negative effect of terms of trade volatility on budget deficits increases in trade openness.

[23] Dani Rodrik, 'Why Do More Open Economies Have Bigger Governments?' *Journal of Political Economy*, 106 (1998), 997–1032; William Easterly, Roumeen Islam and Joseph E. Stiglitz, 'Shaken and Stirred: Explaining Growth Volatility', in Boris Pleskovic and Nicholas Stern, eds, *Annual World Bank Conference on Development Economics 2000* (Washington, D.C.: World Bank) 2001, 191–212.

[24] Eduardo A. Cavallo, 'Output Volatility and Openness to Trade: A Reassessment', *Economia*, 9 (2008), 139–52, finds that after controlling for terms of trade volatility, trade is negatively associated with output volatility.

[25] Garey Ramey and Valerie A. Ramey, 'Cross-Country Evidence on the Link between Volatility and Growth', *American Economic Review*, 85 (1995), 1138–51; Viktoria Hnatkovska and Norman Loayza, 'Volatility and Growth', in Joshua Aizenman and Brian Pinto, eds, *Managing Economic Volatility and Crises* (Cambridge: Cambridge University Press, 2005).

[26] The terms 'efficiency' and 'compensation' are from Geoffrey Garrett, 'Capital Mobility, Trade, and the Domestic Politics of Economic Policy', *International Organization,* 49 (1995), 657–87.

from adverse international shocks.[27] The role of public expenditures in this view is to act as a stabilizing force to smooth and redistribute aggregate income. Thus, under the compensation hypothesis, as trade increases, public expenditures will increase.

Alternatively, proponents of the efficiency hypothesis argue that while high levels of trade may increase the government's desire to cushion the economy, they reduce the government's ability to do so. This occurs because increased trade openness increases the economy's exposure to international competitive pressures. As competitive pressures increase, domestic producers are forced to produce goods more competitively. To do so, domestic producers must reduce their costs, and one key mechanism to do this is to reduce their tax burden. As a result, increased trade forces governments to reduce taxes, reducing their tax revenue and leading to a reduction in public expenditures. Thus, under the efficiency hypothesis, as trade increases, public expenditures will decrease.[28]

While empirical support for both arguments has been mixed due to differences in definitions, samples and methodology, recent research finds stronger support for the compensation hypothesis than for the efficiency hypothesis. Taken as a whole, the empirical results from this research agenda suggest that governments in countries that face higher levels of international volatility do appear to spend more money, but that when governments do so depends on the type of international volatility the country faces,[29] that governments do so within constraints,[30] and that they target where to increase expenditures.[31]

These analyses have focused on the long-run relationship between trade openness and public expenditure. However, when a government considers manipulating fiscal policy prior to an election, its time horizon is quite short. The short time horizon involved in pre-electoral fiscal manipulation further calls into question the explanatory power of the efficiency hypothesis. Since the efficiency hypothesis relies on the long-run effect of public expenditures on domestic competitiveness, as the time horizon for increased public expenditures

[27] This argument was first expressed by David R. Cameron, 'The Expansion of the Public Economy: A Comparative Analysis', *American Political Science Review*, 72 (1978), 1243–61, and presented most famously by Rodrik, 'Why Do More Open Economies Have Bigger Governments?' It has been refined by subsequent analyses to delineate more clearly the source of the international uncertainty (Geoffrey Garrett and Deborah Mitchell, 'Globalization, Government Spending and Taxation in the OECD', *European Journal of Political Research,* 39 (2001), 145–78; Jude C. Hays, Sean D. Ehrlich and Clint Peinhardt, 'Government Spending and Public Support for Trade in the OECD: An Empirical Test of the Embedded Liberalism Thesis', *International Organization,* 59 (2005), 473–94, the type of government expenditure that is the most likely to increase (Brian Burgoon, 'Globalization and Welfare Compensation: Disentangling the Ties that Bind', *International Organization*, 55 (2001), 509–51; Alexander Hicks and Christopher Zorn, 'Economic Globalization, the Macro Economy, and Reversals in Welfare: Expansion in Affluent Democracies, 1978–94', *International Organization*, 59 (2005), 631–62, and what role partisan, institutional and regime differences might have on the government's decision (Geoffrey Garrett, *Partisan Politics in the Global Economy* (Cambridge: Cambridge University Press, 1998); Duane Swank, *Global Capital, Political Institutions, and Policy Change in Developed Welfare States* (Cambridge: Cambridge University Press, 2002); Alicia Adserà and Carles Boix, 'Trade, Democracy, and the Size of the Public Sector: The Political Underpinnings of Openness', *International Organization*, 56 (2002), 229–62.

[28] William Greider, *One World, Ready or Not: The Manic Logic of Global Capitalism* (New York: Simon & Schuster, 1997); Thomas L. Friedman, *The Lexus and the Olive Tree: Understanding Globalization* (New York: Anchor, 2000); and Walter Korpi and Joakim Palme, 'New Politics and Class Politics in the Context of Austerity and Globalization: Welfare State Regress in 18 Countries', *American Political Science Review,* 97 (2003), 425–46.

[29] Burgoon, 'Globalization and Welfare Compensation'; Hays *et al*., 'Government Spending'.

[30] Garrett, 'Capital Mobility'.

[31] Hicks and Zorn, 'Economic Globalization'.

declines, any constraints on expenditures imposed by trade openness will also decline. Thus, in the short run, increased trade, by increasing the economy's exposure to terms of trade volatility, increases the government's desire to manipulate fiscal policy in the run up to an election, while constraints on the government's ability to do so are not as binding.

A country's exchange rate also acts as a conduit for international economic volatility. As the inflexibility of a country's exchange rate increases, international shocks are imported into the domestic economy. As Edwards and Levy-Yeyati note, a flexible exchange rate acts as a 'shock absorber'.[32] The logic for this argument stems from Meade's and Friedman's arguments that in an economy typified by some degree of price rigidity, i.e., all economies in practice, flexible exchange rates allow prices to adjust more quickly to international shocks.[33] This means that such shocks result in lower volatility in the domestic market when the exchange rate is flexible than when it is fixed. As Broda notes, reducing the importation of international volatility 'has become one of the least disputed arguments in favour of flexible exchange rate regimes'.[34]

For governments, this means that the likelihood that an adverse economic shock will hurt the domestic economy increases as exchange rate inflexibility increases. Solidifying this concern for governments, empirical studies have found that countries with fixed exchange rates experience higher growth volatility. Broda and Edwards and Levy-Yeyati demonstrate that flexible exchange rates insulate economies from terms of trade shocks much better than fixed exchange rates.[35] Similarly, di Giovanni and Shambaugh demonstrate that international interest rate shocks are more likely to reduce domestic growth in countries with a fixed exchange rate.[36] Therefore, I expect that the increased volatility imported into the economy through a fixed exchange rate will increase governments' desire to engage in pre-electoral fiscal manipulation.

In sum, this section argues that, all else equal, the more exposed the country is to international volatility, either through trade openness or through a fixed exchange rate, the more uncertain the government will be about the strength of the economy prior to an election, and thus, the greater the government's incentive to engage in pre-electoral fiscal manipulation. However, as will be elaborated in the following section, the government's desire to generate a fiscal expansion to dampen the potentially deleterious effects of international volatility may be offset by concerns over the economy's international competitiveness.

PRE-ELECTORAL FISCAL MANIPULATION AND INTERNATIONAL COMPETITIVENESS

Under a flexible exchange rate, an increase in government spending is associated with both an increase in domestic output and consumption, and a depreciation of the country's

[32] Sebastian Edwards and Eduardo Levy-Yeyati, 'Flexible Exchange Rates as Shock Absorbers', *European Economic Review*, 49 (2005), 2079–105.

[33] James Meade, *The Theory of International Economic Policy, Volume 1: The Balance of Payments* (Oxford: Oxford University Press, 1951); Milton Friedman, *The Case for Flexible Exchange Rates: Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), pp. 157–203.

[34] Christian Broda, 'Terms of Trade and Exchange Rate Regimes in Developing Countries', *Journal of International Economics*, 63 (2004), 31–58, p. 31.

[35] Christian Broda, 'Coping with Terms-of-Trade Shocks: Pegs versus Floats', *American Economic Review*, 91 (2001), 376–80; Edwards and Levy-Yeyati, 'Flexible Exchange Rates'.

[36] Julian di Giovanni and Jay C. Shambaugh, 'The Impact of Foreign Interest Rates on the Economy: The Role of the Exchange Rate Regime', *Journal of International Economics*, 74 (2008), 341–61.

real exchange rate.[37] Greater domestic output and consumption suggests that under a flexible exchange rate, pre-electoral fiscal manipulation may generate economic gains for voters, while a real exchange rate depreciation suggests that the country's exports remain competitive internationally – at least in the short term.[38] As a result, under a flexible exchange rate, pre-electoral fiscal manipulation appears to be an effective tool for generating economic good times without sacrificing international competitiveness.

This prediction stands in stark relief to Clark and Hallerberg's prediction that governments will not engage in fiscal manipulation when the exchange rate is flexible.[39] Under the Mundell–Fleming model, which assumes perfect capital mobility (and hence international asset market flexibility), a fiscal expansion under a flexible exchange rate leads to an increase in domestic output, consumption and interest rates, which attracts foreign investment, and leads to a currency appreciation. This currency appreciation is expected to hurt the country's international competitiveness, which reduces output, consumption and interest rates, perfectly offsetting the fiscal expansion. However, empirical analyses find that under a flexible exchange rate, fiscal expansion tends to increase consumption, which is not offset by increased interest rates or investment.[40] With respect to the Mundell–Fleming model, these findings may reflect rigidities in international asset markets, which mitigate the positive relationship between increases in government consumption, interest rates and international capital flows.[41]

Increased consumption and the concomitant real exchange rate depreciation following an increase in government expenditure under a flexible exchange rate is theoretically puzzling within the new open economy macroeconomics (NOEM) framework, as well.[42]

[37] Evidence for real exchange rate depreciation under a flexible exchange rate regime in response to a fiscal shock is found in Soyoung Kim and Nouriel Roubini, 'Twin Deficit or Twin Divergence? Fiscal Policy, Current Account, and Real Exchange Rate in the U.S.', *Journal of International Economic*s, 74 (2008), 362–83; Tommaso Monacelli and Roberto Perotti, 'Fiscal Policy, the Trade Balance and the Real Exchange Rate: Implications for International Risk Sharing' (working paper, Universitá Bocconi, 2006); and Morten Ravn, Stephanie Schmitt-Grohe and Martín Uribe, 'Explaining the Effects of Government Spending Shocks on Consumption and Real Exchange Rate' (National Bureau of Economic Research, Working Paper No. 13328, 2007); Augustín Bénétrix and Philip R. Lane, 'Fiscal Shocks and the Real Exchange Rate' (Institute for International Integration Studies Discussion Paper No. 286 (Dublin, 2009).

[38] Bénétrix and Lane, 'Fiscal Shocks', find that this real exchange rate depreciation may be relatively short-lived. The real exchange rate depreciates in the first two years after an increase in government spending and appreciates thereafter, but remains below its initial level.

[39] Clark and Hallerberg, 'Mobile Capital'.

[40] For evidence of the positive relationship between government and private consumption, see Jordi Galí, J. David López-Salido and Javier Vallés, 'Understanding the Effects of Government Spending on Consumption', *Journal of the European Economic Association*, 5 (2007), 227–70; and Andrew Mountford and Harald Uhlig, 'What are the Effects of Fiscal Policy Shocks?' (National Bureau of Economic Research, Working Paper No. 14551, 2008). For evidence of the weak relationship between government consumption and interest rates, see Roberto Perotti, 'Estimating the Effects of Fiscal Policy in OECD Countries' (Centre for Economic Policy Rules, Discussion Paper No. 4842, 2005).

[41] As Amartya Lahiri, Rajesh Singh and Carlos A. Vegh, 'Optimal Exchange Rate Regimes: Turning Mundell–Fleming's Dictum on its Head', in Carmen Reinhart, Andres Velasco and Carlos A. Vegh, eds, *Money, Crises, and Transitions: Essays in Honor of Guillermo Calvo* (Cambridge, Mass.: MIT Press, 2008), demonstrate, the automaticity of monetary adjustment under the Mundell–Fleming model reflects the assumption of asset market flexibility. More broadly, Roel Beetsma, 'A Survey of the Effects of Discretionary Fiscal Policy', *Rapport till Finanspolitiska rådet 2008/2* (Stockholm: Swedish Fiscal Policy Council, 2008), discusses how international asset market segmentation generates results in conflict with the Mundell–Fleming model.

[42] For a review of new open economy macroeconomics, see Philip R. Lane, 'The New Open Economy Macroeconomics: A Survey', *Journal of International Economics*, 54 (2001), 235–66.

Within the NOEM framework, an increase in government consumption should generate a negative wealth effect as actors account for the increased tax bill that will result from increased government expenditures. Based on this framework, a fiscal shock should *decrease* rather than increase consumption. As Beetsma documents, there currently exists no theoretic consensus as to why increased government expenditure is positively correlated with increased consumption.[43] Competing explanations for this outcome focus on why private consumption remains high in the face of increased government consumption, citing demand inelasticity, which mitigates the negative effect of increased government consumption on private consumption,[44] high inter-temporal elasticity of consumption, which weakens the negative effect of an increase in actors' future tax bills,[45] and the presence of 'rule-of-thumb' actors who consume all of their wages in each period, neither saving nor borrowing inter-temporally, and therefore do not change their consumption decisions based on government consumption.[46]

Under a fixed exchange rate, an increase in government spending is associated with a real exchange rate appreciation.[47] An appreciated real exchange rate hurts the tradable sector because their goods become more expensive relative to foreign goods, making it more difficult for exporters to sell their goods abroad and for import-competing goods to compete effectively against imports. Thus, a real exchange rate appreciation is associated with a deterioration of a country's current account as exports fall and imports rise. As a result, while pre-electoral fiscal manipulation may improve the country's short-term aggregate economic performance, it may also come at the cost of a deterioration of the country's international competitiveness.

A real exchange rate appreciation may be an unwelcome externality of a fiscal expansion under a fixed exchange rate, but if it does not occur until after the election, it may not affect the government's decision to engage in fiscal manipulation.[48] However, in their analysis of the effect of a fiscal shock on the real exchange rate in eleven countries belonging to the European Monetary Union from 1970 to 2006, Bénétrix and Lane find that the real exchange rate appreciation associated with an increase in government expenditure under a fixed exchange rate occurs very quickly and is relatively long-lived.[49] Although Bénétrix and Lane's analysis is not limited to pre-electoral expansions, their results parallel the finding that under fixed exchange rates, currencies are often overvalued prior to an election, leading to a much greater likelihood of a post-election devaluation.[50]

[43] Beetsma, 'A Survey'.

[44] Ravn *et al.*, 'Explaining the Effects of Government Spending Shocks'.

[45] Monacelli and Perotti, 'Fiscal Policy'.

[46] Galí *et al.*, 'Understanding the Effects of Government Spending on Consumption'.

[47] Roel Beetsma, Massimo Giuliodori and Franc Klaassen, 'The Effects of Public Spending Shocks on Trade Balances and Budget Deficits in the European Union', *Journal of the European Economic Association*, 6 (2007), 414–23; Bénétrix and Lane, 'Fiscal Shocks'.

[48] Similarly, lowering interest rates or expanding the money supply to increase economic output generates higher inflation. However, it is generally assumed that post-election inflation does not constrain pre-electoral monetary expansion. See Alberto Alesina and Nouriel Roubin with Gerald D. Cohen, *Political Cycles and the Macroeconomy* (Cambridge, Mass.: MIT Press, 1997).

[49] While Beetsma, Giuliodori and Klaassen, 'The Effects of Public Spending Shocks', find a later onset for exchange rate appreciation, this may reflect the inclusion of flexible exchange rate regimes in their sample.

[50] S. Brock Blomberg, Jeffry A. Frieden and Ernesto Stein, 'Sustaining Fixed Rates: The Political Economy of Currency Pegs in Latin America', *Journal of Applied Economics*, 8 (2005), 203–25; Hector E. Schamis and Christopher R. Way, 'The Politics of Exchange Rate-Based Stabilization', *World Politics,*

This suggests that when considering a fiscal expansion under a fixed exchange rate, governments may face a trade-off between increasing economic performance and protecting their country's competitiveness.

A deterioration of the country's international competitiveness is only likely to influence the government's decision to engage in pre-electoral fiscal manipulation if the tradable sector is politically important. When the country's trade flows are low, a loss of competitiveness has very little impact on the economy or on voters' decision making.[51] As trade increases, the tradable sector will become increasingly important to the government. As pre-electoral fiscal manipulation hurts an increasingly large segment of the economy, the benefit that the government accrues from its fiscal expansion will be offset as domestic producers lose international competitiveness.[52] Taken to the extreme, rather than increasing the government's chances of re-election, in an economy marked by high trade openness, pre-electoral fiscal manipulation may hurt the government's chances of re-election. Thus, I expect that when governments take into account the effect of a fiscal expansion on international competitiveness the likelihood, the government will engage in pre-electoral fiscal manipulation decreases as both the inflexibility of the exchange rate and trade openness increase.

TRADE OPENNESS, EXCHANGE RATE REGIMES AND PRE-ELECTORAL FISCAL MANIPULATION

The previous two sections explored the relationship between pre-electoral fiscal manipulation and exposure to international volatility and international competition, respectively. While exposure to international volatility increases governments' incentives to engage in pre-electoral fiscal manipulation, concerns about international competitiveness reduce governments' incentives to manipulate fiscal policy prior to an election. A country's exposure to international economic volatility increases as its trade openness increases, or as its exchange rate becomes less flexible. Thus, governments face a greater incentive to engage in pre-electoral fiscal manipulation if their country has a fixed exchange rate, or if their country is heavily engaged in trade. Conversely, when under a fixed exchange rate, governments' concern about eroding international competitiveness through a fiscal expansion increases as trade increases. The interaction of these two competing incentives generates three hypotheses.

(F'note continued)

56 (2003), 43–78. This empirical regularity has led Ernesto H. Stein and Jorge M. Streb ('Elections and the Timing of Devaluations', *Journal of International Economics*, 63 (2004), 119–45) and Ernesto H. Stein, Jorge M. Streb and Piero Ghezzi ('Real Exchange Rate Cycles Around Elections', *Economics & Politics*, 17 (2005), 297–330) to develop formal models in which the government signals its competence by slowing the rate of currency devaluation below its sustainable level prior to the election. Marco Bonomo and Cristina Terra ('Elections and Exchange Rate Policy Cycles', *Economics & Politics*, 17 (2005), 151–76) develop a model where the government engages in a pre-electoral fiscal expansion in order to generate a real exchange rate appreciation that helps consumers and hurts the tradable sector, thus signalling to voters that the government has not been captured by the tradable sector.

[51] In fact, for consumers, a real exchange rate appreciation makes foreign goods cheaper, increasing their ability to purchase imports. For voters in the tradable sector, I assume their concentrated interests as producers outweigh their diffuse interests as consumers. If these voters care more about their increased purchasing power, then they are unlikely to punish the government for a pre-electoral real exchange rate appreciation.

[52] Bonomo and Terra ('Elections and Exchange Rate Policy Cycles') highlight the costliness of a real exchange rate appreciation for the tradable sector. Based on their model, as the political importance of the tradable sector increases, governments will manufacture smaller real exchange rate appreciations.

As discussed in the previous section, when the exchange rate is flexible, pre-electoral fiscal manipulation does not erode a country's international competitiveness in the short term. Therefore, for governments under a flexible exchange rate, concerns about their country's competitiveness do not act as a constraint on fiscal manipulation. As a result, when the exchange rate is flexible, the likelihood that the government engineers a fiscal expansion prior to the election should increase as the economy becomes more exposed to international volatility. As trade increases, the economy is more exposed to international volatility. Thus, under a flexible exchange rate, governments become more likely to engage in pre-electoral fiscal manipulation as trade openness increases, all else equal. This leads to Hypothesis 1:

HYPOTHESIS 1: When the exchange rate is flexible, pre-electoral fiscal manipulation is more likely as trade openness increases.

When the exchange rate is fixed, a fiscal expansion is associated with an erosion of international competitiveness through a real exchange rate appreciation. However, when the economy is closed to trade, a deterioration of the country's competitiveness is not politically salient and therefore should not adversely affect the government's re-election chances. As a result, when trade is low, the likelihood that the government engineers a fiscal expansion prior to the election should increase as the economy becomes more exposed to international volatility. As the inflexibility of the country's exchange rate increases, the domestic economy is more exposed to international volatility. Thus, when trade openness is low, governments become more likely to engage in pre-electoral fiscal manipulation as the inflexibility of the exchange rate increases, all else equal. This leads to Hypothesis 2:

HYPOTHESIS 2: When trade openness is low, pre-electoral fiscal manipulation is more likely under a fixed exchange rate than under a flexible exchange rate.

In contrast, when a country is highly open to trade, the erosion in a country's competitiveness generated by a fiscal expansion under a fixed exchange rate is quite politically salient. With greater trade, the proportion of the country's production exposed to international competition is higher. Thus, as trade openness increases, the loss of competitiveness resulting from pre-electoral fiscal manipulation hurts a larger percentage of voters, who are less likely to vote in favour of the government. As a result, all else equal, when under a fixed exchange rate, governments should be less likely to engage in pre-electoral fiscal manipulation as trade openness increases.[53] This leads to Hypothesis 3:

HYPOTHESIS 3: When the exchange rate is fixed, an increase in trade openness reduces the likelihood of pre-electoral fiscal manipulation.

[53] Technically, the association between trade and pre-electoral fiscal manipulation is less positive under a fixed exchange rate than under a flexible exchange rate. This implies that the rate of increase in pre-electoral fiscal manipulation as trade increases is smaller under a fixed than under a flexible exchange rate. Whether increasing trade under a fixed exchange rate absolutely decreases pre-electoral fiscal manipulation depends on how important competitiveness is to the government with respect to offsetting volatility. When the government is relatively more concerned about competitiveness (as is assumed in Hypothesis 3), increasing trade reduces the likelihood that the government will engage in pre-electoral fiscal manipulation.

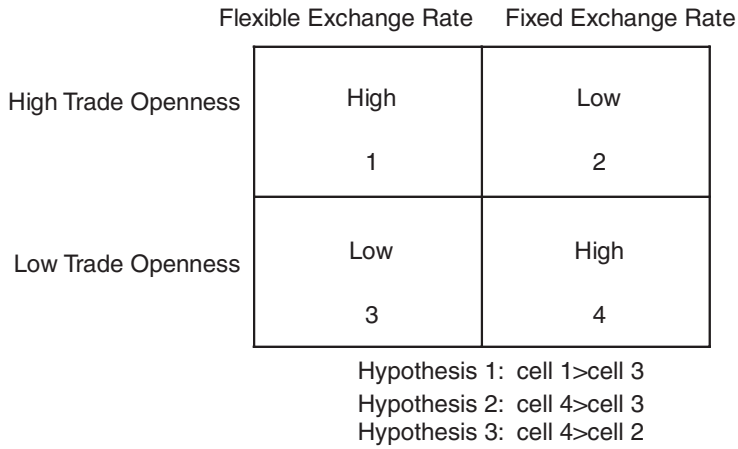

Fig. 1. Likelihood of pre-electoral fiscal manipulation as trade openness and exchange rate regime vary

Taken together, these three hypotheses suggest that governments are more likely to engage in pre-electoral fiscal manipulation when the exchange rate is flexible and trade openness is high, and when the exchange rate is fixed and trade openness is low. Governments are less likely to engage in pre-electoral fiscal manipulation when the country's exchange rate is fixed and trade openness is high, and when the exchange rate is flexible and trade openness is low. This is outlined graphically in Figure 1.

EMPIRICAL ANALYSIS

The three hypotheses presented above are explored in this section with a quantitative analysis of pre-electoral fiscal manipulation in twenty OECD countries from 1974 to 2008. The results are consistent with the hypotheses: pre-electoral fiscal manipulation is most likely when the exchange rate is fixed and trade openness is low, and when the exchange rate is flexible and trade openness is high. The magnitude of these effects, however, appears to vary over time.

The baseline model is similar to Clark and Hallerberg's analysis.[54] This model was chosen for two reasons. First, Clark and Hallerberg's findings represent the alternative hypothesis for this project – that governments engage in pre-electoral fiscal manipulation when the exchange rate is fixed and not when the exchange rate is flexible. Secondly, Clark and Hallerberg adopt a well-accepted array of controls for fiscal policy analyses. The estimation technique is ordinary least squares regression with panel corrected standard errors.[55]

[54] Clark and Hallerberg, 'Mobile Capital'. I replicate Clark and Hallerberg's results in the Appendix published by Cambridge University Press at http://www.journals.cambridge.org/jps. I thank William R. Clark, Mark Hallerberg, Jakob de Haan and Jan-Egbert Sturm for their data.

[55] Linear regression with panel corrected standard errors represents a valuable combination that gains explanatory leverage from cross-national and cross-temporal data, while correcting for possible spatial and temporal correlation of errors. However, because the results may be a function of this specific estimation technique, either through the inclusion of panel-corrected standard errors, or through the exclusion of country and year controls, five alternative model specifications are tested. The first is a random effects model. The second and third add year and country dummies, respectively. The fourth includes both year and country dummies. The fifth is an Arellano–Bond linear dynamic panel data model

The proxy for fiscal manipulation is *Change in Gross Government Debt as a Percentage of Gross Domestic Product*.[56] This measure assumes that increases in government expenditure, or decreases in taxes, will be reflected in an increase in government debt. One drawback of this measure is that, to the extent that governments can target fiscal expenditures, fiscal manipulation may be less evident in such an aggregate measure. Thus, using an aggregate measure for fiscal manipulation should reduce the likelihood of observing a significant level of fiscal manipulation, making it more difficult to find support for the argument. Another potential drawback is that this measure may be inversely correlated with the strength of the economy. To control for this, *Change in Unemployment* is included as a proxy for the strength of the economy.[57] The lagged dependent variable (*Change in Government Debt as a % of GDP, lagged*) is included to control for temporal stickiness in the government's fiscal stance.[58] Finally, government debt also reflects *Debt Service Costs*. As the cost of servicing the government's debt increases, government debt increases as well, all else equal.[59]

The independent variables of interest are *Election*, *Exchange Rate* and *Trade*. *Election* is a dichotomous variable coded 1 in a year in which a regular election occurs, and 0 otherwise, where an election is coded as regular when it occurs either in the last 10 per cent or the last six months of the constitutional inter-election period.[60] The logic behind limiting the analysis to regular elections is that, all else equal, fiscal manipulation is less likely when an election is early than when it occurs at the end of its constitutional inter-election period. There are two reasons for this. First, to the extent that governments call early elections when the economy is doing well, or more specifically, when there is a belief that the economy will do less well later on, there is less need to manipulate the economy.[61] Secondly, given that many early elections occur unexpectedly, there

(F'note continued)
with robust standard errors. All five alternative models provide support for the argument. To ensure that the results are not sensitive to country outliers, I exclude each country individually. All robustness tests are presented in the Appendix at http://www.journals.cambridge.org/jps.

[56] Economic variables are from Organisation for Economic Cooperation and Development, *Economic Outlook* (Paris: Organisation for Economic Cooperation and Development, various years), unless otherwise specified.

[57] Results are similar if level of unemployment or GDP growth is used.

[58] The data are differenced to control for temporal trending. To assess whether these data are sufficiently de-trended, I run Prais–Winsten and Cochrane–Orcutt generalized least squares regressions to test for the presence of a unit-root. These models provide support for the argument, and based on the Durbin–Watson statistics (close to 2 in value), there is no evidence of a unit root either in the original or the transformed series.

[59] Defined by Clark and Hallerberg as 'the change in the real interest rate minus the change in the growth rate times the gross deficit in the previous year', where the growth rate used was nominal. I recreate this measure using real GDP growth, as this seems more consistent with the change in real interest rates. The analysis is robust to the inclusion of either transformation.

[60] Election data were collected from Binghamton University's Center on Democratic Performance Election Results Archive http://www.binghamton.edu/cdp/era/; the International Foundation for Election Systems Election Guide http://www.electionguide.org/; the International Institute for Democracy and Electoral Assistance http://www.idea.int/index.cfm; and various national election sources. For a discussion on identifying regular elections, see Kaare Strøm, Wolfgang C. Müller and Torbjörn Bergman, *Delegation and Accountability in Parliamentary Democracies* (Oxford: Oxford University Press, 2003).

[61] Mark Andreas Kayser, 'Who Surfs, Who Manipulates? The Determinants of Opportunistic Election Timing and Electorally Motivated Economic Intervention', *American Political Science Review*, 99 (2005), 17–27; Alastair Smith, *Election Timing* (Cambridge: Cambridge University Press, 2004).

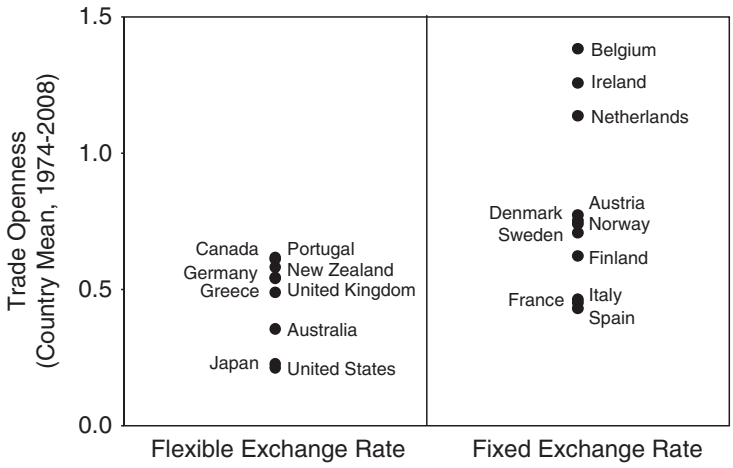

Fig. 2. Trade openness and exchange rate regime by country

should be less fiscal expansion prior to an early election as there is less time to plan for the election.[62]

Flexible Exchange Rate is a dichotomous variable coded 1 if a country has an officially declared flexible exchange rate and 0 otherwise, as reported to the IMF.[63] *Trade* is (Exports + Imports)/Gross Domestic Product.[64] Figure 2 presents a graphical representation of countries' trade openness and exchange rate flexibility.

Model 1 in Table 1 presents the baseline model for this analysis. When the effect of a country's trade and exchange rate ties on fiscal manipulation is not taken into account, there is no evidence that an election is associated with an increase in government debt. Similarly, government debt is not correlated with a country's exchange rate regime. Government debt is negatively associated with trade flows and is positively associated with government debt in the previous year, unemployment and debt service costs.

Model 2 includes an interaction between *Election* and *Flexible Exchange Rate* to test the alternative hypothesis that governments engage in pre-electoral fiscal manipulation when the exchange rate is fixed and not when it is flexible. If so, then *Election* should be positive and significant, while *Election* x *Flexible Exchange Rate* should be negative. This is not the case. Although *Election* is positive, it is highly insignificant. Based on these results, there is no evidence of pre-electoral fiscal manipulation under a fixed exchange rate.

Model 3 tests the argument that governments' decision to engage in pre-electoral fiscal manipulation is dependent on their country's trade ties and exchange rate regime. To do

[62] Five alternative election measures are presented in the Appendix at http://www.journals.cambridge.org/jps.

[63] International Monetary Fund, *Exchange Arrangements and Exchange Restrictions*, (Washington, DC: International Monetary Fund, various years).

[64] These data are from Organisation for Economic Cooperation and Development, *National Accounts* (Paris: Organisation for Economic Cooperation and Development, various years). Four alternative measures for *Trade* are presented in the Appendix at http://www.journals.cambridge.org/jps. First, Imports and Exports as a percentage of GDP are both used, with similar results to *Trade*. Secondly, two globalization indices from Axel Dreher, Noel Gaston and Pim Martens, *Measuring Globalization: Gauging its Consequences* (New York: Springer, 2008), are used. These results are similar to those found when using *Trade,* but are less statistically significant. The results provide support for the article's focus on trade, rather than economic globalization more broadly.

TABLE 1 *Pre-Electoral Fiscal Manipulation as Exchange Rate Regime and Trade Openness Vary*

	Model 1	Model 2	Model 3	Model 4
Election	−0.17	0.39	3.26*	3.19*
	(0.41)	(0.54)	(1.27)	(1.60)
Election x Trade			−3.52*	−3.48†
			(1.46)	(2.03)
Election x Flexible Exchange Rate		−1.30	−5.06**	−6.94**
		(0.80)	(1.81)	(2.14)
Election x Trade x Flexible Exchange Rate			5.38†	11.01**
			(3.26)	(4.03)
Trade	−1.40*	−1.40*	−0.48	−1.18
	(0.62)	(0.62)	(0.71)	(0.90)
Flexible Exchange Rate	−0.20	0.02	1.55*	1.19
	(0.38)	(0.39)	(0.69)	(0.88)
Trade x Flexible Exchange Rate			−2.54*	−2.76
			(1.24)	(1.69)
Change in Govt Debt, Lagged	0.39**	0.39**	0.39**	0.42**
	(0.05)	(0.05)	(0.05)	(0.06)
Change in Unemployment	1.55**	1.54**	1.52**	1.49**
	(0.21)	(0.21)	(0.21)	(0.22)
Debt Service Costs	0.05**	0.04**	0.04**	0.04**
	(0.01)	(0.01)	(0.01)	(0.01)
Constant	1.43**	1.33*	0.59	1.17
	(0.62)	(0.53)	(0.60)	(0.74)
Overall Adjusted R^2	0.37	0.37	0.38	0.41
Observations	594	594	594	440

Notes: †$p < 0.1$, *$p < 0.5$, **$p < 0.01$; standard errors in parentheses.

so, Model 3 includes a three-way interaction between *Election*, *Flexible Exchange Rate* and *Trade*. Since Model 3 tests an interactive effect, the size and significance of these results are difficult to ascertain from the regression results. To gauge support for the hypotheses more precisely, Panel A in Figure 3 graphically displays the marginal effects of *Election* under fixed and flexible exchange rates as *Trade* varies.[65]

Recalling Hypothesis 1, the marginal effect of an election under a flexible exchange rate should increase as trade openness increases. This argument does not receive strong support in Model 3. The marginal effect of an election under a flexible exchange rate when trade openness is high is not significantly different from the marginal effect of an election when trade openness is low. The most that can be concluded from these results is that pre-electoral fiscal manipulation is less likely under a flexible exchange rate when trade openness is low – an effect that is not significant as trade openness increases. In contrast, when the analysis is limited to 1974–2000 (Model 4), there is strong support for Hypothesis 1. As shown in Figure 3 Panel B, under a flexible exchange rate, the

[65] Countries under a fixed exchange rate tend to have higher levels of trade than countries with a flexible exchange rate. To account for this, the absolute range of *Trade* assessed in Figure 3 differs under fixed and flexible exchange rates – *Trade* ranges from the 5th to the 95th percentile under the respective exchange rate samples.

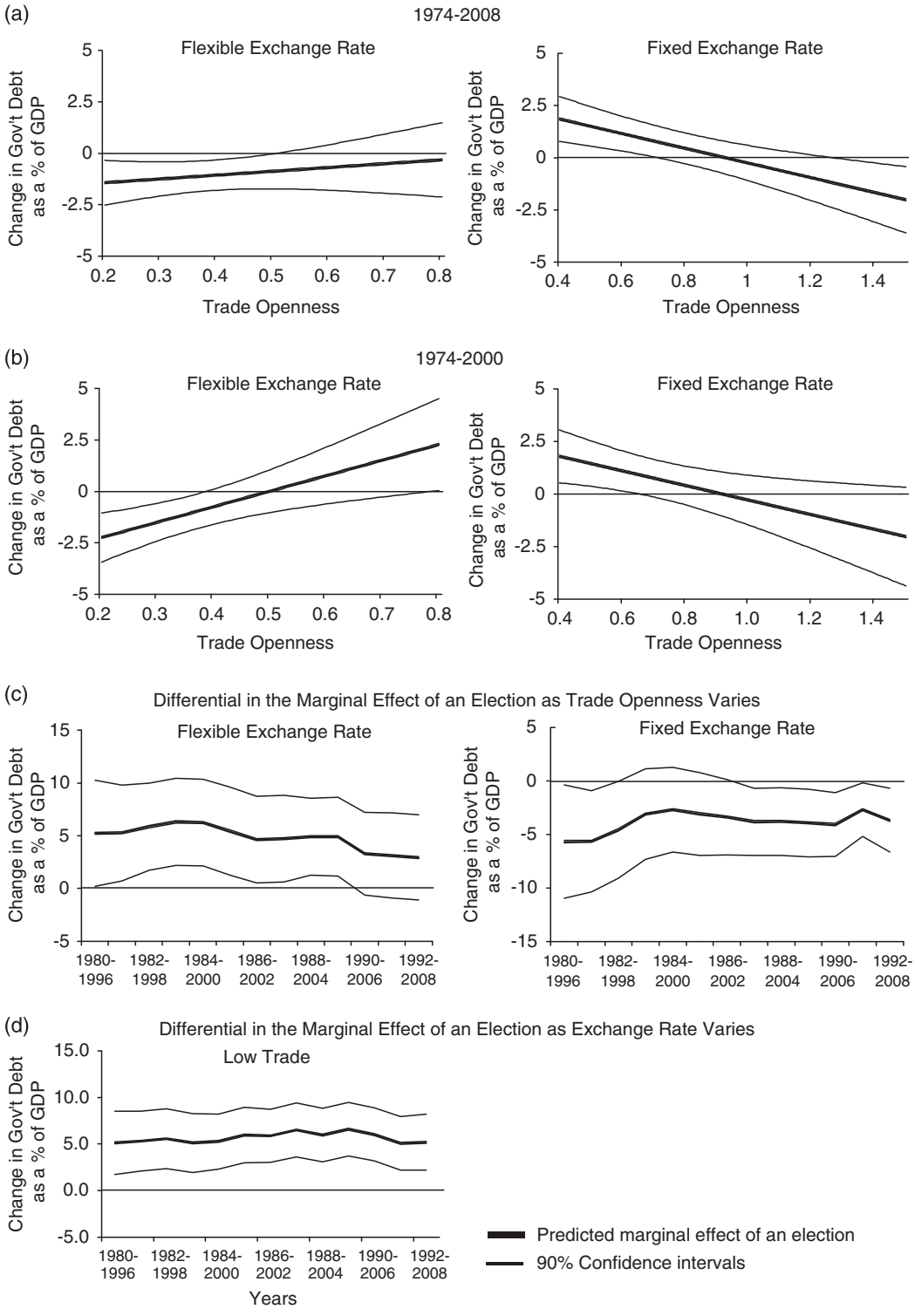

Fig. 3. Marginal effect of an election as exchange rate and trade openness vary

marginal increase in government debt in an election year as trade openness increases from its 5th (0.2) to its 95th (0.8) percentile is 4.5 percentage points of gross domestic product (GDP), an effect that is substantively large and statistically significant.

The difference between these two samples is surprising and raises questions about the robustness of these results to alternative temporal samples. To address this question, I adopt an analysis of a moving sub-sample of years to assess how support for these hypotheses varies over time. This analysis is composed of thirteen regressions of seventeen-year sub-samples from 1980 to 2008, i.e. the first regression includes 1980–96, the second covers 1981–97, and the thirteenth includes 1992–2008. Seventeen years represents half of the temporal range included in the thirty-five year dataset. The 1974–79 period is excluded from the sub-sample analysis due to the small number of observations for which data are available in this period. To assess support for Hypothesis 1 in this sub-sample analysis, in Figure 3 Panel C, I present the difference in the marginal effect of an election under a flexible exchange rate as *Trade* varies from its 5th to its 95th percentile. This difference is positive and statistically significant even in the smaller samples for the periods from 1980 to 2005, though the effect is weaker and is not significant at conventional levels in the three most recent sub-samples (those ending in 2006, 2007 and 2008). These results suggest that the positive relationship between trade openness and pre-electoral fiscal manipulation under a flexible exchange rate may be eroding over time, although this decline is not statistically significant in this sample. However, the decline may be consistent with Hellwig and Samuels's and Duch and Stevenson's findings that as globalization increases, voters' assessments of government performance appear less tied to their evaluation of economic performance.[66] If so, governments may be less likely to engage in pre-electoral fiscal manipulation over time.

Hypothesis 2 suggests that when trade is low, pre-electoral fiscal manipulation is more likely under a fixed exchange rate than under a flexible exchange rate. Models 3, 4 and the sub-sample analysis all provide support for this hypothesis. This can be seen most clearly in Figure 3 Panel D, which graphically displays the difference between the marginal effect of an election under a fixed exchange rate versus under a flexible exchange rate when trade openness is low (0.2). This difference is always significantly different from 0, and varies from a low of 5.1 percentage points of GDP to a high of 6.6 percentage points of GDP across sub-samples.

Finally, recalling Hypothesis 3, the marginal effect of an election under a fixed exchange rate should decrease as trade openness increases. This hypothesis receives support from both Models 3 and 4. As shown in Figure 3 Panels A and B, under a fixed exchange rate, the marginal effect of an election declines 3.9 and 3.8 percentage points of GDP, respectively, as trade openness increases from its 5th (0.4) to its 95th percentile (1.5), an effect that is substantively large and statistically significant. As the sub-sample analysis demonstrates in Figure 3 Panel C, support for Hypothesis 3 has varied over time. The substantive effect is largest in the earliest sub-samples, but the confidence intervals are also widest in these samples. Starting with the 1983–99 sub-sample, the effect is somewhat smaller but estimated with a higher degree of precision. The negative relationship between trade openness and pre-electoral fiscal manipulation under a fixed exchange rate is statistically significant in nine of the thirteen sub-samples.

These results suggest that governments' decision to engage in pre-electoral fiscal manipulation reflects their country's exposure to international volatility and international

[66] Timothy Hellwig, 'Globalization, Policy Constraints, and Vote Choice', *Journal of Politics,* 70 (2008), 1128–41; Timothy Hellwig and David Samuels, 'Voting in Open Economies: The Electoral Consequences of Globalization', *Comparative Political Studies*, 40 (2007), 283–306; Raymond M. Duch and Randy Stevenson, 'The Global Economy, Competency, and the Economic Veto', *Journal of Politics,* 72 (2010), 105–23.

competition through their trade and exchange rate ties. Pre-electoral fiscal manipulation is greater when the exchange rate is fixed and trade openness is low, and when the exchange rate is flexible and trade openness is high. In contrast, governments are less likely to engage in pre-electoral fiscal manipulation when their exchange rate is flexible and trade flows are low, as the economy is relatively unexposed to international volatility. Governments' decisions not to engage in an election-year fiscal expansion when the exchange rate is fixed and trade openness is high reflect their concerns over eroding their country's international competitiveness.

ALTERNATIVE EXPLANATIONS

The results reported in the previous section provide support for the argument developed in this article. In this section, I consider alternative explanations for these findings. I first consider alternative variables capturing international economic ties, followed by additional domestic factors that may influence the incentives for and constraints on fiscal manipulation.[67] Each alternative hypothesis is assessed through the moving sub-sample analysis described in the previous section. These results are presented graphically in Figures 4, 6 and 7, and are juxtaposed with those reported in Figure 3 Panel C for ease of comparison.[68]

The previous analyses relied on countries' self-identification of their exchange rate regime. However, countries' exchange rate behaviour often deviates from their declared exchange rate regime, and these deviations may systematically reflect their trade ties. If so, then the results reported in the previous section may prove spurious. To address this concern, I have re-run the analysis with two behaviourally-based exchange rate measures. The first is *Exchange Rate (RR)*, an observational measure from Reinhart and Rogoff's coding of exchange rate regimes based upon both how flexible countries say their exchange rate is and how flexible it is in reality. This variable is coded 1 for fixed exchange rates, 2 for limited exchange rate flexibility, and 3 for floating exchange rates.[69] Based on this variable, I have created three dichotomous exchange rate variables, one each for fixed, intermediate and flexible exchange rates. Each of these variables is interacted with *Election* and *Trade*. Based on the results presented graphically in Figure 4 Panel A, Reinhart and Rogoff's behaviourally-determined exchange rate measure produces results that are very similar to those produced with *Flexible Exchange Rate*. The flexible exchange rate results are slightly weaker, while the fixed exchange rate results are slightly stronger.

Secondly, even when countries adopt a nominally flexible exchange rate, they may still attempt to 'shadow' another currency to minimize volatility with a large trading partner. As a result, support for pre-electoral fiscal manipulation when the exchange rate is flexible and trade is high may reflect the shadowing of currencies whose exchange rates are relatively fixed. To assess whether support for pre-electoral fiscal manipulation under a flexible exchange rate is actually support for fiscal manipulation under a fixed exchange

[67] The effect of the Maastricht Treaty as a constraint on pre-electoral fiscal manipulation is also considered in the Appendix at http://www.journals.cambridge.org/jps. Its inclusion does not affect the results.

[68] The regressions are presented in the Appendix at http://www.journals.cambridge.org/jps.

[69] The Reinhart and Rogoff categorization reports five types, of which the fifth type, freely falling, does not appear in this sample. I collapse 'category 3: managed float' and 'category 4: free float' into one floating exchange rate category. This creates three categories, each of which contains roughly one-third of the observations (fixed exchange rate: 26 per cent; intermediate exchange rate: 38 per cent; flexible exchange rate: 36 per cent).

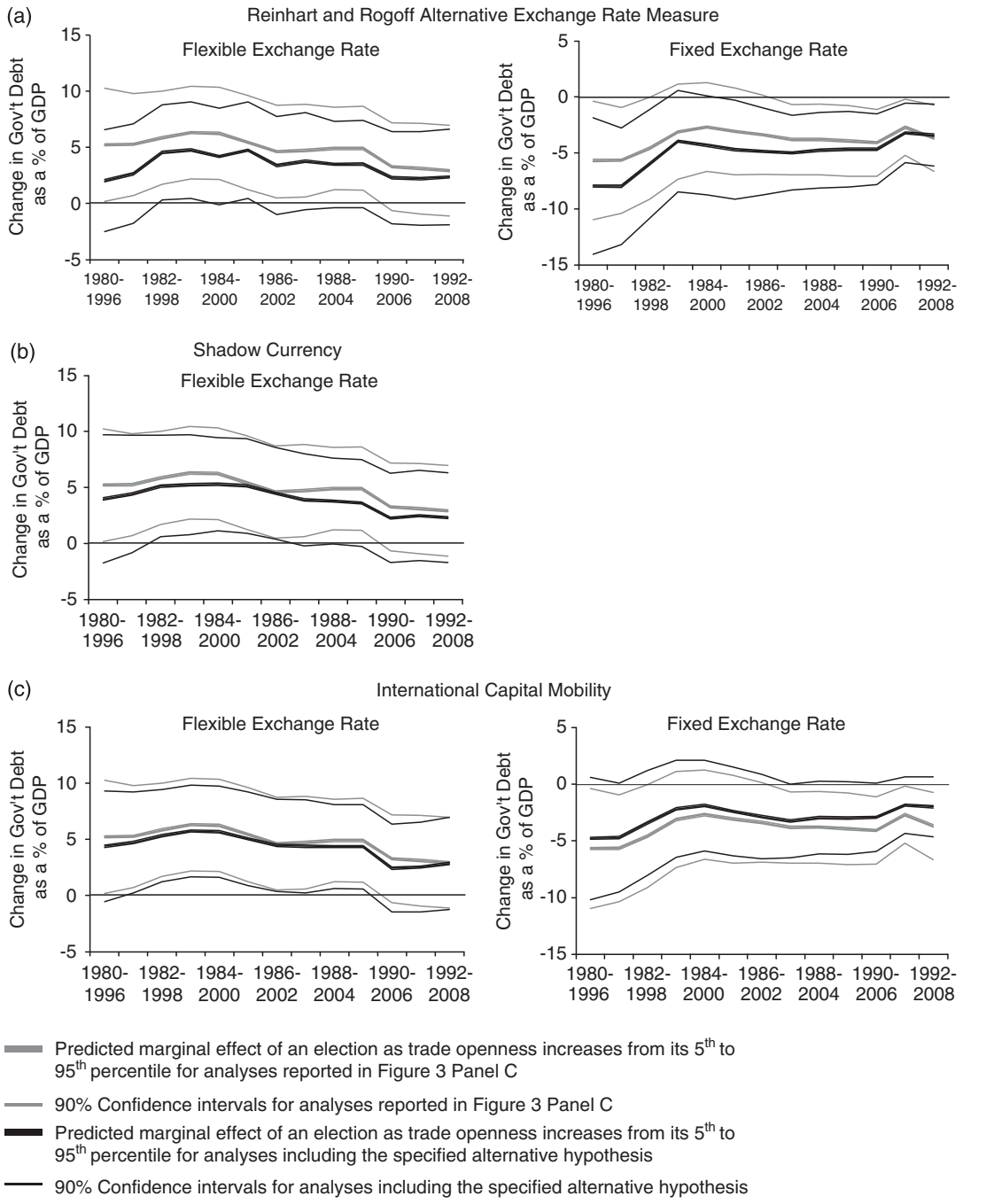

Fig. 4. Marginal effect of an election as exchange rate and trade openness vary, controlling for alternative hypotheses

rate in disguise, I have created *Shadow Currency*, which is coded 1 if the exchange rate is shadowing another currency, and 0 otherwise.[70] To test this alternative hypothesis, I have included an interaction between *Election* and *Shadow Currency* and limit the sample to

[70] This measure was created from country-specific exchange rate studies, as discussed in the Appendix at http://www.journals.cambridge.org/jps.

	Flexible Exchange Rate	Fixed Exchange Rate
High Trade Openness	Capital Openness: 1.95 Partisanship: 0.88 Proportional Representation: 0.50 Minority Government: 0.33 Coalition Government: 0.29	Capital Openness: 1.62 Partisanship: 1.22 Proportional Representation: 1.00 Minority Government: 0.31 Coalition Government: 0.85
Low Trade Openness	Capital Openness: 1.89 Partisanship: 1.29 Proportional Representation: 0.42 Minority Government: 0.26 Coalition Government: 0.48	Capital Openness: 1.42 Partisanship: 0.74 Proportional Representation: 0.75 Minority Government: 0.27 Coalition Government: 0.59

Fig. 5. Mean values for alternative explanatory variables as exchange rate regime and trade openness vary

country-year observations with a flexible exchange rate. If this alternative hypothesis is correct, then the positive differential between the marginal effect of an election under a flexible exchange rate at low and high levels of trade openness should no longer exist once *Election* x *Shadow Currency* is included in the analysis. As can be seen in Figure 4 Panel B, this is not the case. Controlling for the electoral effect of countries shadowing another currency does not significantly erode the increase in pre-electoral fiscal manipulation as trade openness increases under a flexible exchange rate.

In the post-Bretton Woods period, individual countries have attempted to reduce capital mobility, and by weakening the economy's ties with international capital markets, lower capital mobility may increase governments' scope for fiscal policy. If so, then capital mobility may act as a constraint on pre-electoral fiscal manipulation. Figure 5 displays the mean values of Chinn and Ito's *Capital Openness* measure by trade openness and exchange rate.[71] Based on *Capital Openness*, capital mobility appears lowest when the exchange rate is fixed and trade openness is low. Thus, the high pre-electoral fiscal manipulation found under a fixed exchange rate and low trade may reflect lower exposure to international capital mobility rather than lower exposure to international competitiveness concerns. If this alternative hypothesis is correct, then pre-electoral fiscal manipulation may be dependent on variation in countries' capital mobility rather than on variations in trade openness and exchange rate regime.

To test this argument, I have included an interaction between *Election* and *Capital Openness* in the sub-sample analysis. If governments' decision to engage in pre-electoral fiscal manipulation reflects their country's capital mobility rather than their trade and exchange rate ties, then including *Election* x *Capital Openness* will render the *Trade* and *Flexible Exchange Rate* election interactions insignificant. As can be seen in Figure 4 Panel C, this is not the case. Although in recent years countries with higher international capital mobility appear to engage in lower levels of pre-electoral fiscal manipulation, this effect does not erode the positive relationship between trade openness and pre-electoral fiscal manipulation under a flexible exchange rate and the negative relationship between trade openness and pre-electoral fiscal manipulation under a fixed exchange rate.[72]

[71] Menzie Chinn and Hiro Ito, 'A New Measure of Financial Openness', *Journal of Comparative Policy Analysis*, 10 (2008), 309–22. High and low trade categories were created by bifurcating the sample by the median value of *Trade* under fixed and flexible exchange rates. With the exception of the *Flexible Exchange Rate*, all variables displayed in Figure 5 are continuous and are treated as such in the following analyses. Mean values are reported in Figure 5 for descriptive purposes.

[72] The constraining effect of international capital mobility in recent years can be seen in the regression results presented in the Appendix at http://www.journals.cambridge.org/jps.

The argument presented above is predicated upon governments' desire to engineer good times prior to an election. However, engineering pre-electoral good times creates domestic economic distortions. As a result, if the government's goal is to smooth domestic economic performance (as is assumed in the compensation hypothesis literature), rather than induce a pre-electoral fiscal expansion (as is assumed in the political budget cycle literature), then increased international volatility should be as likely to generate a pre-electoral fiscal contraction as an expansion. To test this alternative hypothesis, I have created two new dependent variables, *Fiscal Expansion*, which equals *Change in Government Debt* when *Change in Government Debt* is positive, and 0 otherwise, and *Fiscal Contraction*, which equals *Change in Government Debt* multiplied by -1 when *Change in Government Debt* is negative, and 0 otherwise, which are used in the sub-sample analyses presented graphically in Figure 6 Panels A and B.

If governments care more about engineering pre-electoral good times than about smoothing domestic economic performance, then the results from *Fiscal Expansion* will be stronger than the results from *Fiscal Contraction*. Alternatively, if governments care relatively more about smoothing the domestic economy, then the results from these two alternative dependent variables should be similar. Based on the results presented in Figure 6 Panels A and B, pre-electoral fiscal expansions are more likely when the exchange rate is fixed and trade openness is low, and when the exchange rate is flexible and trade openness is high. In contrast, there is no correlation between a country's trade and exchange rate ties and pre-electoral fiscal contractions. Together, these two analyses provide support for the assumption that governments are concerned about engineering pre-electoral good times, not simply smoothing the economy.

The previous two analyses provide support for the opportunistic use of fiscal policy to engineer a pre-electoral economic expansion, but fiscal opportunism may not be universal across governments. In particular, governments' fiscal policy may reflect their political ideology. If so, then more conservative governments may be less likely to engage in fiscal manipulation. To assess this alternative argument, I have included *Partisanship*, which captures the left–right position of the chief executive's party.[73] This variable is coded 0 if the party is on the left, 1 if the party is in the centre and 2 if the party is on the right. At a descriptive level, this alternative hypothesis has merit. Based on the mean values of *Partisanship* reported in Figure 5, a leftist government orientation appears greatest when the exchange rate is fixed and trade is low, and when the exchange rate is flexible and trade is high. However, based on the results presented in Figure 6 Panel C, controlling for government partisanship does not weaken the positive relationship between trade openness and pre-electoral fiscal manipulation under a flexible exchange rate and the negative relationship between trade openness and pre-electoral fiscal manipulation under a fixed exchange rate.

Political institutions structure governments' incentives to engage in pre-electoral fiscal manipulation. In particular, Bernhard and Leblang argue that the electoral system matters.[74] Incumbents in majoritarian systems, in which a small electoral loss can result in a large seat loss and in which the opposition have very little policy influence, have a greater incentive to engineer pre-electoral good times than incumbents in proportional

[73] Thorsten Beck, George Clarke, Alberto Groff, Phillip Keefer and Patrick Walsh, 'New Tools in Comparative Political Economy: The Database of Political Institutions', *World Bank Economic Review*, 15 (2001), 165–76.

[74] Bernhard and Leblang, 'Democratic Institutions and Exchange-Rate Commitments'.

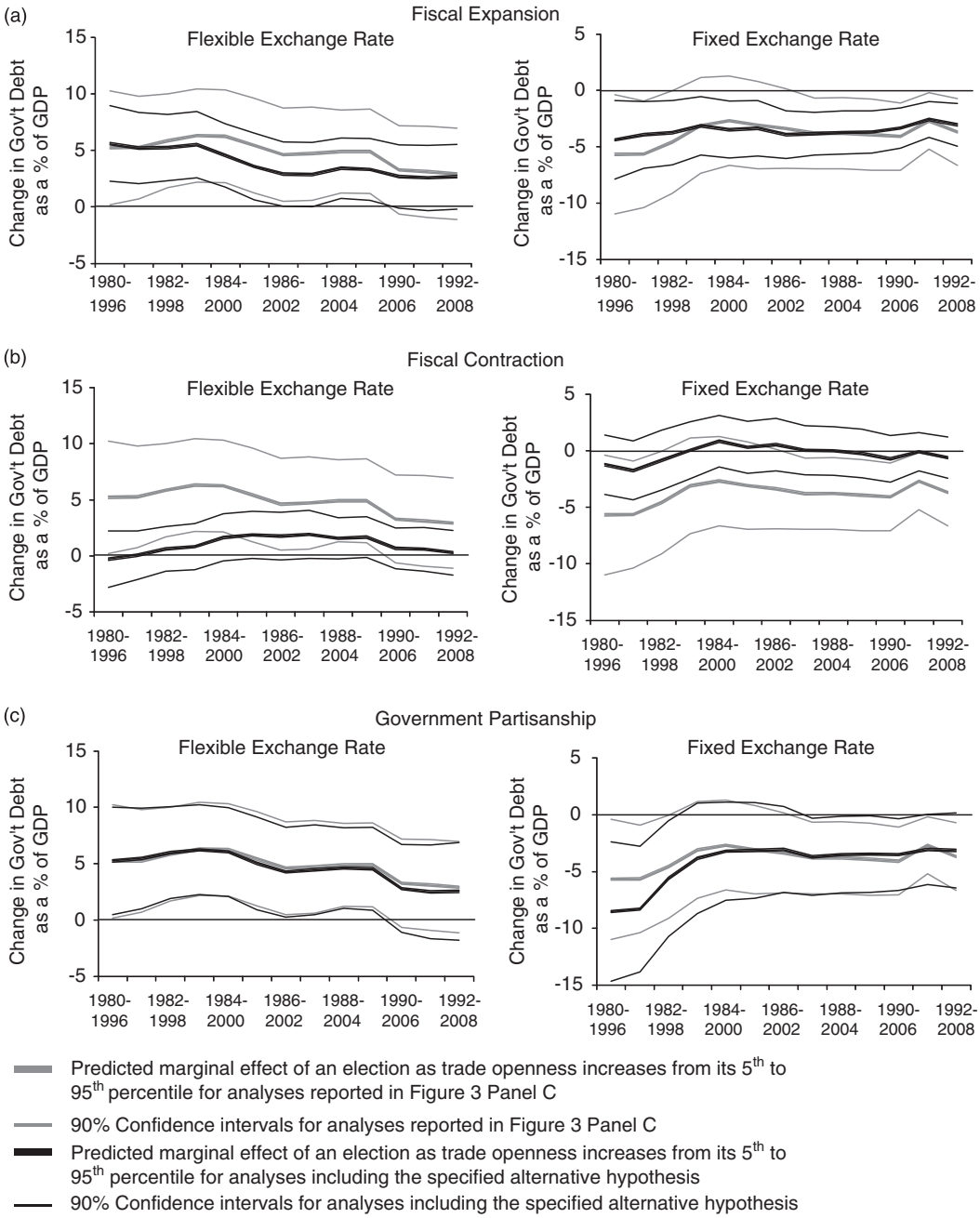

Fig. 6. Marginal effect of an election as exchange rate and trade openness vary, controlling for alternative hypotheses

representation systems. Based on the descriptive statistics in Figure 5, almost all countries with a fixed exchange rate regime have a proportional representation system. To test the hypothesis that governments are less likely to engage in pre-electoral fiscal manipulation under a proportional representation electoral system, I have included an interaction between *Election* and *Proportional Representation* in the analysis presented in Figure 7 Panel A. Based on these results, there is little support for this hypothesis. Controlling for electoral system does not negate the positive relationship between trade openness and

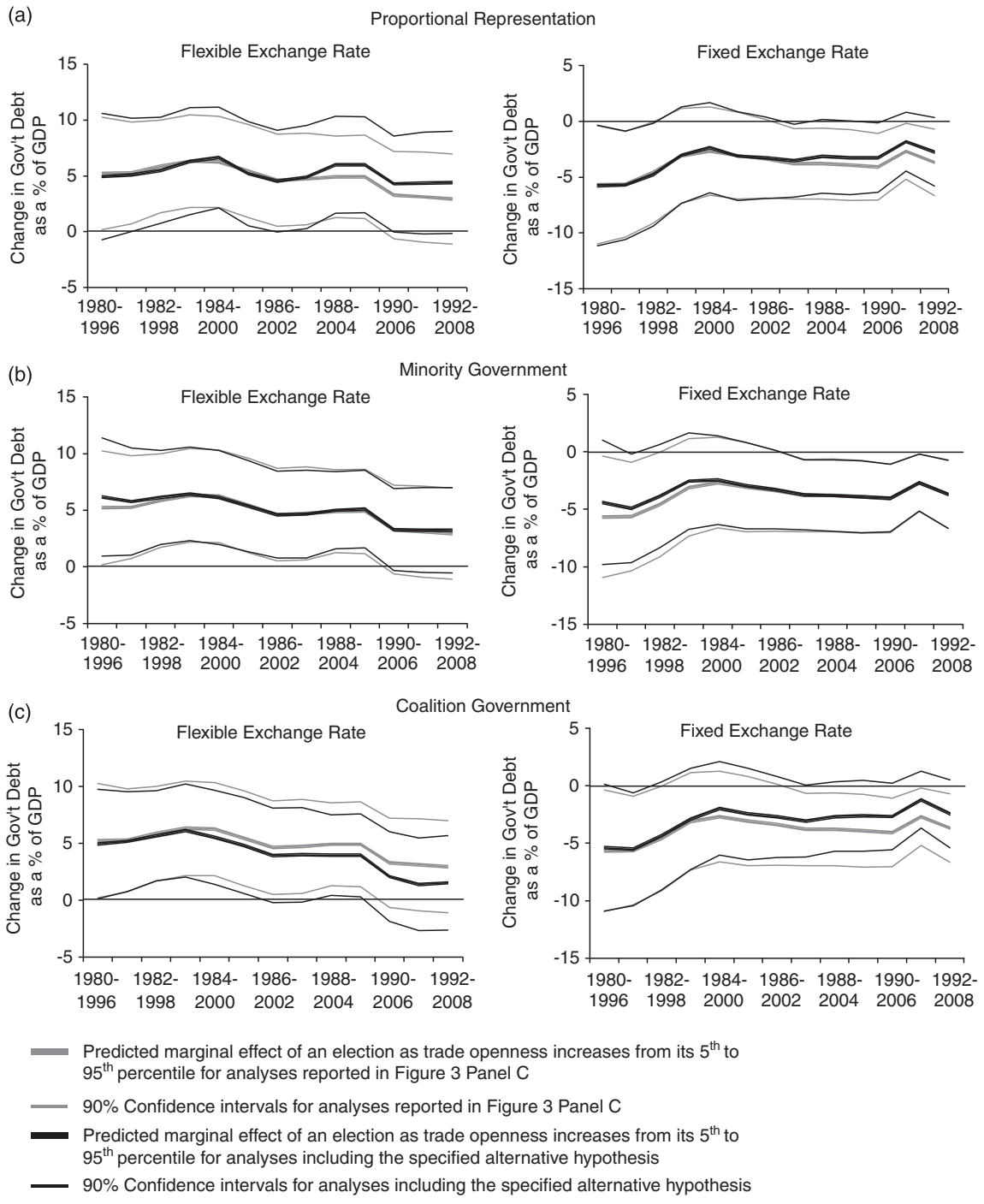

Fig. 7. Marginal effect of an election as exchange rate and trade openness vary, controlling for alternative hypotheses

pre-electoral fiscal manipulation under a flexible exchange rate and the negative relationship between trade openness and pre-electoral fiscal manipulation under a fixed exchange rate.

Cabinet composition may also affect the incentives for pre-electoral fiscal manipulation. Fiscal manipulation may be greater under a minority government, as their precarious

electoral position increases their incentives to engage in a fiscal expansion. In contrast, fiscal manipulation may be lower under a coalition government in which more than one party exercises control over policy making, reducing individual parties' ability both to control fiscal policy opportunistically and to claim credit for economic good times. Based on the descriptive data in Figure 4, there is initial support for these hypotheses: coalition governments appear most commonly under fixed exchange rates and high trade openness (where pre-electoral fiscal manipulation is low), while minority governments are most likely when the exchange rate is flexible and trade is relatively high (where pre-electoral fiscal manipulation is high), although the range of variation is quite low. To test these alternative hypotheses, I have included interactions between *Election* and *Minority Government* and *Coalition Government,* respectively, in the analyses presented in Figure 7 Panels B and C.[75] Based on these results, controlling for the minority status of governments does not affect the relationship between trade, exchange rate regime and pre-electoral fiscal manipulation, although controlling for governing coalitions does somewhat weaken the magnitude of the positive relationship between trade openness and pre-electoral fiscal manipulation under a flexible exchange rate and the negative relationship between trade openness and pre-electoral fiscal manipulation under a fixed exchange rate.

CONCLUSION

Since the end of the Bretton Woods period, governments have been more likely to engineer a pre-electoral fiscal expansion when their exchange rate is fixed and trade openness is low, and when the exchange rate is flexible and trade openness is high. Governments have been less likely to engage in pre-electoral fiscal manipulation when their exchange rate is fixed and trade openness is high, and when the exchange rate is flexible and trade openness is low. These findings provide support for the argument that governments' decisions to engage in pre-electoral fiscal manipulation are mediated by their countries' exposure to international volatility and international competition. These results stand in contrast to Clark and Hallerberg's finding that governments engage in pre-electoral fiscal manipulation when the exchange rate is fixed, and not when the exchange rate is flexible.[76] The difference between these two arguments stems from different assumptions made in each about the nature of capital mobility and the pattern of economic adjustments in reaction to an increase in government expenditure.

Under the Mundell–Fleming model, which assumes perfect capital mobility, a fiscal expansion under a flexible exchange rate leads to an increase in domestic output, consumption and interest rates, which attracts foreign investment, and leads to a currency appreciation. This currency appreciation hurts international competitiveness, which reduces output, consumption and interest rates, perfectly offsetting the fiscal expansion and rendering pre-electoral fiscal manipulation ineffective. In contrast, under a fixed exchange rate, the monetary authority lowers interest rates to prevent a currency expansion, and together the fiscal and monetary expansion increases domestic economic output.

[75] Both variables range from 0 to 1 and represent the proportion of a year the government had minority support in the legislature or was a coalition of multiple parties. Data are from Wolfgang C. Müller and Kaare Strøm, eds, *Coalition Government in Western Europe* (Oxford: Oxford University Press, 1999), as updated in the Comparative Parliamentary Data Archive (http://www.pol.umu.se/ccpd/) as well as with country-specific data collected by the author.

[76] Clark and Hallerberg, 'Mobile Capital'.

The argument developed in this article differs from Mundell–Fleming in two key aspects. First, capital mobility is imperfect. Therefore, a fiscal expansion under a flexible exchange rate is not fully offset and fiscal manipulation remains a viable weapon in a government's arsenal. Secondly, in keeping with the empirical findings of open-economy macroeconomics, a fiscal expansion under a fixed exchange rate is assumed to generate a real exchange rate appreciation. An appreciated real exchange rate erodes international competitiveness, and when the country is highly open to trade, acts as a constraint on pre-electoral fiscal manipulation. These findings suggest that when countries are most exposed to international economic volatility – when their exchange rate is fixed and trade openness is high – governments are least able to engage in pre-electoral fiscal manipulation. In these circumstances, governments have less room to manœuvre than expected under the Mundell–Fleming model. In contrast, governments' room for manœuvre under a flexible exchange rate may be greater than expected. Thus, arguments based on Mundell–Fleming may both underestimate and overestimate governments' room for manœuvre.

The Mundell–Fleming framework is a powerful workhorse for political economic analyses and has provided a simple, elegant framework for incorporating the international economic environment into our understanding of domestic macroeconomic policy making. In particular, it has allowed scholars a better understanding of the trade-offs governments face amongst their choice of macroeconomic policy tools.[77] One of the reasons that the Mundell–Fleming framework has played such an important role in political economic analyses is because it makes such stark assumptions about the world. These assumptions yield clear, empirically testable hypotheses. In the light of the theoretical leverage gained through these assumptions, it is important to assess how closely these assumptions reflect reality. Empirical analyses suggest that capital is not as mobile, and that the real exchange rate does not adjust as easily as is assumed in the Mundell–Fleming model. The argument developed in this article is one example of how relaxing these two assumptions leads to alternative hypotheses. This article is not a call to abandon the Mundell–Fleming framework, but rather is a call to assess more critically how the assumptions embedded within the framework shape the model's predictions. To the extent that these assumptions do not reflect reality, do they yield hypotheses that are also less reflective of reality? When they do, future research in political economy will require moving beyond the Mundell–Fleming framework.[78]

These differences also have an important substantive effect, as can be seen through the two arguments' implications for pre-electoral fiscal manipulation in the Eurozone. To the extent that Eurozone member states are characterized by high levels of trade openness, the argument forwarded in this article suggests that governments will be less likely to engage in pre-electoral fiscal manipulation. This stands in marked contrast to Clark and Hallerberg, which argues that Eurozone members will be more likely to engage in fiscal manipulation.

More broadly for comparative politics, these results highlight the importance of taking into account the international environment in which domestic decisions are undertaken.

[77] For an overview of the Mundell–Fleming framework's contribution to political economic analyses, see William T. Bernhard, J. Lawrence Broz and William R. Clark, 'The Political Economy of Monetary Institutions: An Introduction'; *International Organization,* 56 (2002), 693–723.

[78] See Maurice Obstfeld, 'International Macroeconomics: Beyond the Mundell–Fleming Model', *IMF Staff Papers*, 47 (2001), 1–39, for a discussion of how open-economy macroeconomics has refined the assumptions embedded in the Mundell–Fleming model.

By looking only at domestic characteristics of pre-electoral fiscal manipulation, scholars implicitly assume that the macroeconomic costs and benefits of manipulating fiscal policy remain constant regardless of the country's international ties. In contrast, the analysis in this article demonstrates that a country's international economic ties affect both how desirable pre-electoral fiscal manipulation is to the government, and how costly it is to the government to engage in such manipulation. Understanding these internationally-generated incentives is important for identifying when governments will engage in fiscal manipulation. As Drazen notes in his appraisal of empirical research on the political business cycle, 'there is much less hard evidence than both the theoretical models and the conventional wisdom about the prevalence of 'election-year economics' would suggest.'[79] Without taking into account how countries' international economic ties constrain governments' abilities to engage in fiscal manipulation, scholars will continue to fail to recognize the context-specific nature of pre-electoral fiscal manipulation.

[79] Drazen, 'The Political Business Cycle After 25 Years', p. 76.