

Compensation or Constraint? How different dimensions of economic globalization affect government spending and electoral turnout

John Marshall*

Stephen D. Fisher^{†‡}

September 2013

This paper extends theoretical arguments regarding the impact of economic globalization on policy-making to electoral turnout and considers how distinct dimensions of globalization may produce different effects. We theorize that constraints on government policy that reduce incentives to vote are more likely to be induced by foreign ownership of capital, while compensation through increased government spending is more likely—if at all—to be the product of structural shifts in production associated with international trade. Using data from twenty-three OECD countries, 1970-2007, we find strong support for the ownership-constraint hypothesis where foreign ownership reduces turnout, both directly and—in strict opposition to the compensation hypothesis—indirectly by reducing government spending (and thus the importance of politics). Our estimates suggest that increased foreign ownership, especially the most mobile capital flows, can explain up to two-thirds of the large declines in turnout over recent decades.

*Department of Government, Harvard University, jlmars@fas.harvard.edu.

[†]Department of Sociology, University of Oxford, stephen.fisher@sociology.ox.ac.uk.

[‡]We are grateful to Mark Franklin for a copy of the aggregate data used in his book; to Nicholas Fawcett and especially Mark Pickup for advice on statistical modelling; and to Yves Dejaeghere, Niles Fernando, Mark Franklin, Torben Iversen, Philipp Rehm, Nils Steiner, Jack Vowles, and participants at presentations at Harvard University and the University of Oxford and the Elections, Public Opinion and Parties 2008 and American Political Science Association 2010 conferences for comments on earlier versions of the paper.

1 Introduction

Industrialized democracies have become increasingly economically interdependent over recent decades with the rise in mobile capital and international trade. As a result of such economic globalization, governments in advanced democracies appear to be both less able to control the economic conditions (and thus the prospects) of their countries, and more cautious in doing so in fear of harming the economic interests of their constituents. Similar arguments have been applied to a variety of policy variables.¹ We argue that if government policy options have become more constrained, then it will matter less to citizens who controls government. In so far as electoral turnout is a function of how much is perceived to be at stake, political participation may have declined as a consequence of globalization. More subtly, we hypothesize that the *globalization of ownership* (direct and portfolio investment) reduces turnout by constraining domestic policy. Policy constraints, however, are expected to be less sensitive to the *globalization of trade* because trade flows are less mobile and sensitive to government policy and arguably less consequential for the domestic economy. If correct, capital mobility is increasingly challenging the essence of democratic accountability and participation.

This paper considers our preferred constraint hypothesis alongside the competing compensation hypothesis, which argues that governments have recognized the social costs of globalization and have compensated globalization's losers by increasing spending on social programs.² If globalization has caused a rise in government social spending, then that may instead encourage higher turnout by increasing the importance of distributive politics.³ Thus economic globalization could bolster turnout if the compensation hypothesis applies and proves to dominate the constraint effect.

It is clear that since the 1960s there has been increasing global integration in industrialized

¹E.g. Hellwig 2008; Hellwig and Samuels 2007; Rodrik 1997; Swank 2005.

²Cameron 1978; Garrett and Mitchell 2001; Rodrik 1998.

³Colomer 1991.

democracies,⁴ while at the same time turnout has declined markedly.⁵ In our sample of twenty-three industrialized countries, 1970-2007, the average country has seen turnout fall by 8.9 percentage points while foreign direct investment (FDI) flows, FDI stock, portfolio equity stock and international trade increased by 13.8, 96.9, 109.7 and 31.1 percentage points respectively (excluding Luxembourg). Even though there is good reason to link the two phenomena, any two trending variables will be correlated.⁶ To avoid this spurious correlation problem we remove trends in turnout for each country and focus upon variation in turnout *within* countries.

Our results strongly support the constraint hypothesis operating through foreign ownership, while international trade has no systematic effect on turnout. Furthermore, contrary to the compensation hypothesis this direct negative effect on turnout is *reinforced* by an indirect effect working through reductions in government spending.

While recent research has also suggested a negative relationship between turnout and a composite index of economic globalization,⁷ its methods do not partial out differential trends across countries or fixed country heterogeneity, so the results may be spurious.⁸ Substantively, the theory expounded here—emphasizing different dimensions of economic globalization having different effects—is new and finds support in our empirical analysis.

Section 2 positions our theoretical argument in the context of previous research. Section 3 describes our data and methods, and is followed by our results in Section 4. Section 5 concludes.

⁴E.g. Dreher, Gaston and Martens 2008.

⁵Blais 2000, 2006; Franklin 2004; Gray and Caul 2000.

⁶Granger and Newbold 1974.

⁷Steiner 2010.

⁸Here, spurious correlation due to trending would negatively bias estimates. Moreover, Steiner does not exclusively examine within-country variation, increasing the risk of omitted variable bias: re-running his models with country fixed effects, no significant globalization relationships held up. Hausman (1978) tests comparing Steiner's OLS (and random-effect) models with fixed-effect models show significant coefficient differences, implying that Steiner's controls are insufficient.

2 Theory and previous research

We broadly define economic globalization as the process of integration into global markets facilitated by reductions in transaction costs. Accordingly, economic globalization constitutes a threat of international economic competition and dependence on foreign markets.

This paper develops the constraint and compensation hypotheses as possible mechanisms through which economic globalization could affect turnout. The constraint mechanism suggests that globalization decreases turnout by reducing perceptions of government efficacy or polarization in the party system. The compensation hypothesis instead posits that governments compensate globalization's losers for the social costs of globalization in the form of public spending; this in turn raises turnout by increasing the role of government and thus the importance attached to voting. Although both mechanisms could operate simultaneously, we will argue that the constraint mechanism dominates any compensation effect—particularly in the case of foreign ownership of capital. While we find the constraint mechanism more theoretically appealing, the widely-cited compensation argument demands consideration.

This section first outlines these arguments and considers how each affects an individual's decision to turn out. We then develop the theory by arguing that a negative effect for economic globalization on turnout is far more likely to arise from foreign ownership, especially the most flexible forms of ownership, than international trade.

2.1 Economic globalization as a constraint

2.1.1 Macroeconomic pressures

The argument that international economic integration has restricted the range of viable domestic policy options in certain policy areas is not new. Economic globalization enhances the influence of the market in the domestic economy; not only are foreign corporations and investors not accountable to the domestic government and its objectives, but domestic equivalents will be less en-

cumbered by government decisions as operations can instead be focused abroad.⁹ Assuming that government objectives emphasize macroeconomic outcomes—because voters care about this,¹⁰ and governments seek future election¹¹—the constraint theory argues that global economic integration restricts economic policy-making options, engendering “race to the bottom” convergence across states competing for a fixed supply of internationally mobile capital.¹² Similar arguments could apply to export competitiveness. The cycle is perpetuated as it becomes the market’s expectation that government will not interfere with the market. As Garrett and Mitchell¹³ succinctly summarize, “Governments are held to ransom by mobile capital, the price is high, and punishment for non-compliance is swift.” These pressures may particularly affect left-wing parties if the median voter is not right-wing,¹⁴ forcing such parties to give up more ground as the party system converges. Alderson¹⁵ finds that social democrat governments have experienced significantly greater capital outflows, especially in the post-1980 era of accelerating globalization.

As international markets pervade the domestic economy, anti-market government intervention becomes costlier as economic success increasingly depends upon the non-withdrawal of foreign capital and trade relations that sustain macroeconomic performance and domestic consumption patterns. Accordingly, governments are forced to cater to foreign constituencies.¹⁶ Political parties and governments in the most integrated polities recognize the constraints of an internationally mobile tax base,¹⁷ and converge upon a narrower set of policy options following the loss of *de facto* government efficacy in the face of financial markets.¹⁸ Underpinning this argument is the assumption that parties seeking government will not commit to polarized policies that are economically

⁹Garrett 2001.

¹⁰E.g. Duch and Stevenson 2010.

¹¹Alesina 1988.

¹²Gordon 1986; Huber and Stephens 2001; Rodrik 1997.

¹³Garrett and Mitchell 2001: 151.

¹⁴Ward, Ezrow and Dorussen 2011.

¹⁵Alderson 2004.

¹⁶Hellwig 2001.

¹⁷Plümper, Troeger and Winner 2009.

¹⁸Hellwig 2008; Hellwig and Samuels 2007; Swank 2005.

suboptimal; accordingly, parties struggle to differentiate their policies.

Several policy domains stand out as particularly constrained by economic globalization. First, governments face pressure to remain competitive by reducing (at least not increasing) the tax burden on potentially mobile firms. Mobile firms are also better placed to avoid high taxation. Importantly, if long-run revenue streams decline then ultimately the scope of government programs must also decline. Second, industrial, product market, labour market and trade regulations affecting the costs of conducting business face significant pressures. Third, discretionary economic policy—both fiscal and monetary—is likely to be constrained. International capital markets come to expect that governments will not pursue radical discretionary policies—and can constrain such policy by the threat of capital flight. For example, the time-inconsistency literature implies that governments may only adjust output from its natural rate to the extent that inflation expectations lag behind policy.¹⁹ Again, mobile capital enhances this constraint where private sector actors are sufficiently flexible to apprehend such policies. Third, social policy options may be constrained, although the discussion below emphasizes that this is empirically uncertain. More generally, Cerny²⁰ suggests that government spending of many varieties faces downward pressure to minimize crowding out of private sector investment. In sum, although economic globalization cannot constrain all governments policy domains and so does not signal the end of politics,²¹ it appears capable of substantially reducing the set of feasible policies in important domains, as well as the capacity to spend.

2.1.2 Deciding to turn out

Although our empirical tests are limited to countries over time, any aggregate association is compelling only if there are theoretical reasons to link macro phenomena to an individual's decision to vote. The hypothesized effect of globalization on turnout is clear in the classical rational voting

¹⁹E.g. Kydland and Prescott 1977.

²⁰Cerny 1997.

²¹See also Mosley 2003.

calculus.²² Individual i 's utility from voting (U_i) is a function of the probability of influencing the outcome of the election (P_i), the expected utility gained from successfully influencing the election²³ (B_i) as well as selective incentives (costs C_i and a generic sense of duty D_i) derived from voting. If and only if $U_i = P_i B_i - C_i + D_i > 0$ will i vote. If perceived government efficacy—manifested in a government's scope for decision-making and control of the economy—falls, i 's potential benefits (operating through B_i) fall and so, *ceteris paribus*, U_i falls. The comparative static implication is that aggregate turnout should decline as the expected benefits of voting wane in the face of economic globalization constraining governments. However, despite successfully identifying some important empirical predictors,²⁴ the classical model has received considerable criticism—much of which revolves around P_i being inconsequentially small.²⁵

The globalization-constraint argument could equally work through alternative turnout mechanisms. Inserting globalization into Aldrich's²⁶ model, we argue that as policy differentials become smaller actors will allocate fewer resources to election campaigns and thereby lower turnout. Globalization similarly reduces the perceived benefits to group leaders of providing selective incentives for their members to turn out,²⁷ and the importance of the election and level of disagreement in “ethical agent”²⁸ turnout models; assuming the costs of getting members to vote are constant, equilibrium turnout will therefore decline. Finally, globalization reduces the differences *between* groups that arise from different policies and also reduces discussion *within* groups as politics becomes less salient, and thus reduces turnout in social network models emphasizing social approval.²⁹

Given this paper's aggregate focus, we do not test which mechanism best captures an individ-

²²Downs 1957; Riker and Ordeshook (1968).

²³Riker and Ordeshook 1968 reconceptualized B_i as *perceived* benefits. This fits better with the globalization thesis, but the argument is essentially identical.

²⁴See Blais 2000, 2006; Geys 2006.

²⁵Aldrich 1993.

²⁶Aldrich 1993.

²⁷Morton 1991.

²⁸Feddersen and Sandroni 2006.

²⁹Abrams, Iversen and Soskice 2010.

ual's turnout decision. However, there is good reason to believe that economic globalization could operate through each of these models to reduce the incentive to vote.

The constraint mechanism assumes that economic globalization does not engender debate motivating people to vote for parties according to their policy positions on globalization. The constraint theory effectively assumes that citizens feel domestic elections are useless as a means for influencing the development of globalization, or that they choose not to try to use their vote in this way, or that they have not considered the relationship between globalization and government policy. While there are certainly anti-globalization social movements and some have influenced particular referendums (e.g. the 2005 French referendum on the proposed EU Constitution) our impression is that national elections have not experienced systematic voter mobilization as a result of (debate over) economic globalization. Burgoon³⁰ finds that a minor backlash can only be detected in OECD countries with very limited welfare provision. Ultimately this is an empirical question and we will only observe a constraint effect in the data if it dominates any reactionary mobilization.

2.1.3 Evidence for the mechanisms underpinning the constraint hypothesis

We now consider evidence for the potential mechanisms underpinning the constraint hypothesis' impact on turnout. Constraints on government might affect turnout indirectly by constraining parties and what they offer to voters, or more directly through citizens' own perceptions of their government's room for manoeuvre. We discuss each of these in turn.

First, whether globalization has led to a reduction in the expected policy benefits from voting depends upon how much economic outcomes constrain party policy preferences once in office. There has been substantial debate as to whether economic and social policy is actually affected by the ideological complexion of the government.³¹ Pontusson and Rueda³² consider differences between mainstream parties in OECD countries using the Comparative Manifesto Project (CMP)

³⁰Burgoon 2009.

³¹Boix 2000; Castles 1998; Huber and Stephens 2001; Iversen 2001; Swank 2002.

³²Pontusson and Rueda 2008.

left-right scale and find that while parties (and the median voter) have generally shifted to the right there are also clear signs of party convergence over the period 1975-1998, with convergence particularly evident in the 1990s—a period of accelerating economic integration.

Directly testing this link in the causal chain, Steiner and Martin³³ create a measure of left-right party dispersion based on CMP items and find that countries with higher levels of economic globalization on the composite KOF index³⁴ are less polarized. Although supportive of the constraint mechanism, we should be cautious using CMP data: manifesto scores only reflect the emphasis put on certain issues not the actual policy proposals,³⁵ produce a systematic centralizing bias when measuring extreme parties,³⁶ and may be insensitive to changing policy constraints and contexts.³⁷

While there may be issues with the measurement of party polarization, it is clear that voters are sensitive to differences between parties: voters tend to prefer parties they are ideologically close to³⁸ and citizens who see little difference between the parties are less likely to vote.³⁹

Second, regardless of perceptions of party positions, if there is a constraint on government it is more likely to have an impact on turnout if it is directly perceived and felt by citizens. Although Vowles⁴⁰ finds no effect of trade or financial integration on perceptions of “Who is in power can make a difference”,⁴¹ other research suggests that voters do think that globalization affects their own economic interests and their governments’ “room for manoeuvre”.

Various studies show that attitudes to globalization policies are sensitive to individual consumption, skills profiles and income.⁴² So there is evidence that citizens are aware of globalisation

³³Steiner and Martin 2012.

³⁴See Dreher, Gaston and Martens 2008.

³⁵Laver and Garry 2000.

³⁶Gabel and Huber 2000.

³⁷Benoit and Laver 2006.

³⁸E.g. Aarts and Wessels 2005.

³⁹Aarts and Wessels 2005; Brockington 2009; Fisher *et al.* 2008.

⁴⁰Vowles 2008.

⁴¹This is likely to be for the same reasons highlighted in the concluding section regarding our analysis of the CSES data.

⁴²Scheve and Slaughter 2001; Pandya 2010.

and believe it has consequences for them. They also think that economic outcomes in their country depend heavily on the global economy.⁴³ In a recent ten OECD country study, Hellwig⁴⁴ shows widespread attribution of national “economic circumstances” to “ups and downs in the world economy”, the more so the more globalized the economy. While most people in the US (by far the least globalized case) held the government responsible, the world economy was the major culprit in the other nine countries and was chosen by a majority of respondents in five cases.

The notion that voters in more globalized economies feel their governments have less power to influence economic outcomes is given further support by studies which show that objective and subjective economic performance is a weaker predictor of support for the incumbent government in more globalized countries.⁴⁵ Moreover those who believe economic circumstances are mostly due to the global economy are least likely to hold their government to account for those outcomes.⁴⁶ Part of the explanation for this is that economic outcomes are more of a mixture of local and global effects in more globalized societies, which voters can identify and account for.⁴⁷ It also seems that voters who believe the government has relatively little economic power are more likely to base their votes on non-economic issues.⁴⁸ It may also be that globalization reduces (clarity of) government responsibility for outcomes as Powell and Whitten⁴⁹ argued some institutional arrangements do.

So there is considerable evidence that many people perceive their governments to be constrained by economic globalization, that the extent to which they do varies with the level of globalization, and this is reflected in the choices of those who vote. We also know that people are less likely to vote if they think it does not matter much who they vote for or who is in power,⁵⁰ as should be more likely where governments are perceived to be and/or actually are more constrained. Thus

⁴³E.g. Freeman 2008

⁴⁴Hellwig 2011.

⁴⁵Hellwig 2001; Hellwig and Samuels 2007.

⁴⁶Hellwig 2011.

⁴⁷Duch and Stevenson 2010; Kayser and Peress 2012.

⁴⁸Hellwig 2008.

⁴⁹Powell and Whitten 1993.

⁵⁰E.g. Fisher *et al.* 2008.

perceptions of globalization-induced government weakness should lead to lower turnout.

Note then that the constraint hypothesis may work without there necessarily being any real constraint, just the perception of constraint correlated with the levels of globalization. Moreover, the constraint hypothesis doesn't actually require that citizens perceive the source of any constraint to be globalisation. The above evidence does suggest that globalization leads to perceptions of constraint from globalization and that perceptions of unresponsiveness of government lead to lower turnout, but a causal mechanism in which voters abstain because of their accurate perceptions of globalization-induced constraint is just one possible mechanism.

While this subsection has identified some evidence for various possible links in various possible causal chain(s) between economic globalization and lower turnout, it has also illustrated data availability and measurement problems in convincingly testing potential mechanisms. Our empirical test focuses on the overall link between globalization and turnout. However, we conclude with a discussion of further work on the micro mechanisms.

2.1.4 Statement of the constraint hypothesis

The preceding arguments entail the constraint hypothesis' central aggregate-level prediction, directly linking globalization to turnout:

H1: Economic globalization reduces turnout.

The constraint hypothesis does not imply "the end of turnout" because there is no level of globalization that totally constrains economic policy and political conflict is not solely based on cleavages constrained by economic globalization. Below we develop this hypothesis by arguing that distinct dimensions of economic globalization affect turnout differently. But first we consider the counter-argument that globalization might have a positive rather than a negative effect on turnout.

2.2 The compensation hypothesis

By contrast, the compensation hypothesis posits that governments respond to public demand for insurance and institute policies rectifying the negatives associated with globalization. Such adverse consequences principally include job insecurity in threatened sectors, greater economic volatility, and rises in income inequality as income accrues to capital and skilled labour in the sectors with a comparative advantage.⁵¹ Neoclassical trade theory predicts that negative effects will be concentrated among unskilled labour in industrialized economies.

Although compensation could be manifested in a variety of policy domains, the literature has primarily examined how trade and financial openness have affected welfare spending in OECD countries. No consensus has yet been achieved. Burgoon⁵² finds that trade and FDI flows increase manifesto support for welfare and education policies among left parties. Looking at aggregated and decomposed welfare spending, the compensation hypothesis finds some support,⁵³ while others argue that both effects occur concurrently affecting policy tools differently.⁵⁴ However, similar samples have also found that spending has *decreased* in more open economies.⁵⁵ The modal spending study fails to discern a clear effect.⁵⁶

The compensation hypothesis could extend to electoral turnout if increased government spending increases electoral turnout. When the government spends more elections may become more salient as voters and group leaders with different preferences over compensation compete over a larger pie and demand different mixes of taxes and spending. Colomer⁵⁷ characterizes this as the “importance of politics”, and his panel analysis of twenty-one countries finds that turnout increases by 0.33 percentage points for every 1 percentage point of gross domestic product (GDP) of addi-

⁵¹Bernauer and Achini 2000; Cameron 1978; Garrett and Mitchell 2001; Hicks and Zorn 2005; Rodrik 1998.

⁵²Burgoon 2012.

⁵³Bernauer and Achini 2000; Rodrik 1997.

⁵⁴Bretschger and Hettich 2002; Burgoon 2001; Margalit 2011.

⁵⁵Garrett 2001; Huber and Stephens 2001.

⁵⁶E.g. Dreher, Gaston and Martens 2008; Iversen and Cusack 2000; Swank 2002, 2005.

⁵⁷Colomer 1991.

tional public expenditure.⁵⁸ Such distributional conflict could stimulate turnout among the winners or losers from increased spending.

Applying the compensation hypothesis to turnout implies the following mediated association at the aggregate level:

H2a: Economic globalization increases government spending.

H2b: Government spending increases electoral turnout.

In theory the constraint and compensation hypotheses could operate simultaneously, in which case we are interested in which effect dominates.

As noted above, a significant literature posits that economic globalization constrains government activity and instead *decreases* spending by increasing competition between countries—the opposite of H2a. This could in turn decrease the importance of politics. Thus we set H2a against an indirect constraint alternative:

H3a: Economic globalization decreases government spending.

H3b/H2b: Government spending increases electoral turnout.

2.3 Dimensions of globalization: *ownership and trade*

Previous studies have typically ignored the possibility that different dimensions of economic globalization may not work equally through the constraint and compensation mechanisms. Empirical applications often use composite measures of globalization that include measures of foreign ownership and international trade, such as the KOF globalization indicator,⁵⁹ or simply include multiple globalization variables without considering differential effects. In this subsection we explicitly consider how two dimensions of economic globalization—the *globalization of ownership*,

⁵⁸An alternative mechanism proposed by Hobolt and Klemmensen (2006) argues that education spending decreases the costs of voting by increasing political information and accentuating partisanship, which ultimately increase turnout. They find cross-country evidence for this and show that welfare spending increases information and partisanship at the individual level.

⁵⁹Dreher, Gaston and Martens 2008.

or foreign ownership of capital, and the *globalization of trade*, or increasing trade dependence—differentially affect economic actors, political actors and voters. We first discuss the mobility and sensitivity of different cross-border transactions, before turning to the differential impact of globalization’s dimensions upon economic performance and political decision-making. We propose a hierarchy where the most flexible forms of foreign ownership have the largest effects on turnout.

2.3.1 Differing flexibility of transactions

Economic flows vary in their potential mobility and sensitivity to changing political and economic contexts. Capital is generally more mobile and sensitive to changes in government policy than international trade—and thus internationally mobile capital represents a more powerful constraint upon politicians. Considerable evidence suggests that markets respond quickly to economic aggregates, government partisanship and policy reforms.⁶⁰ Trading patterns change slowly because the factors of production that underlie comparative advantage change slowly. Moreover, more than half of trade in advanced democracies is intra-industry,⁶¹ which has made international trade more complementary and less competitive.⁶² Around one third of trade in the OECD is intra-firm,⁶³ which further decreases flexibility.

Although capital investment is typically more flexible than trade, there is a hierarchy of flexibility among ownership variables. FDI stocks—which include controlling (>10%) stakes, start-ups and property investment⁶⁴—are the least mobile and relatively insensitive to structural changes because they include sunk and high exit cost investments. FDI flows are fresh investment decisions and so are more sensitive to current rates of return. However, because FDI often only travels within multinational enterprises (e.g. reinvesting profits) or within industries we should not think of FDI

⁶⁰E.g. Bernhard and Leblang 2002; Leblang and Mukherjee 2005; Mosley 2003; Mosley and Singer 2008.

⁶¹E.g. Brülhart 2009; OECD 2002.

⁶²Burgoon 2001.

⁶³OECD 2002.

⁶⁴Lane and Milesi-Ferretti 2007.

flows as highly mobile or sensitive. Finally, portfolio equity stock—defined as small, primarily stock market, investments⁶⁵—are highly flexible: these investments should be most sensitive to changing rates of return and most closely approximate perfect capital mobility in the sense they can move almost costlessly, immediately and across industries. Because transactions represent small stakes, or may be part of complex portfolio strategies, investors are not strongly tied to their stocks.

Accordingly, we argue capital is more capable of responding quickly to changes in government policy than patterns of international trade. Thus voters and governments may be more concerned by, and so feel constrained by, the risks and implicit threats associated with capital mobility than with international trade. Further, we expect a hierarchy such that the effects of portfolio equity stock exceed FDI flows and FDI stock. For these changes in international flows to be consequential for voters, they must affect the macroeconomic outcomes that voters care about.

2.3.2 Differing economic and political impacts

We now consider the implications of different dimensions of globalization for macroeconomic performance, and thus the cost-benefit analyses of policy-makers who seek to win support from voters who care about economic growth, wages and employment. Foreign capital supports economic growth by providing additional investment and technological transfer in some cases,⁶⁶ although disentangling the causal relationship has proved difficult.⁶⁷ Crucially, the withdrawal of foreign capital entails considerable economic costs, increasing in dependence upon foreign capital.⁶⁸ If domestic capital does not plug the gap—particularly likely if firms make binary investment decisions or move *en masse*—swift capital flight can significantly harm voters in the real economy. Furthermore, Mosley and Singer⁶⁹ find open capital accounts increase a country's stock market

⁶⁵Lane and Milesi-Ferretti 2007.

⁶⁶E.g. Borensztein, De Gregorio and Lee 1998.

⁶⁷Li and Liu 2005.

⁶⁸Rajan and Zingales 1998.

⁶⁹Mosley and Singer 2008.

valuation; this is important for voters, whose assets are increasingly tied to stock indices.

The positive effect of trade on economic growth is arguably more ambiguous than foreign ownership. Although economies open to trade tend to grow faster, the long-run effects remain uncertain.⁷⁰ Given the merits of openness are often complex and contingent, the threat of losing trade—which is less flexible—is likely to constrain governments less than foreign capital.

The distributional consequences of trade liberalization differ by type of trade, and so may not even be politically salient. In specific factor trade models, workers in uncompetitive industries with non-transferable skills may lose their jobs following trade liberalization and be forced into sectors where their marginal product (and thus wages) is lower⁷¹. This picture typifies *inter*-industry trade between countries with different production functions, and implies demand for compensation.

However, influential recent analyses have emphasized *intra*-industry trade where advanced countries trade differentiated products, which is more likely to induce reallocations within industries toward the largest and most productive firms.⁷² Intra-industry trade should act as a weaker constraint on governments than inter-industry trade because changes in trade patterns and welfare are less politically salient,⁷³ and therefore provides reason to believe that the impact of increased trade dependence will be weaker than foreign ownership, which will induce larger sectoral reallocations according to comparative advantages.⁷⁴

The impact of trade is further complicated by political responses that could divide citizens and make government more active, as suggested by the compensation hypothesis. Empirical evidence suggests voter trade policy preferences respond to trade-related labour market outcomes,⁷⁵ and such labour market experiences influence political preferences.⁷⁶ However, Margalit⁷⁷ also finds

⁷⁰Rodriguez and Rodrik 2000.

⁷¹Wood 1994.

⁷²Burgoon 2001; Eaton, Kramarz and Kortum 2011; Melitz 2003.

⁷³For Melitz 2003, trade liberalization unequivocally increases citizen welfare.

⁷⁴Antràs 2003; Antràs and Helpman 2004.

⁷⁵Baker 2005; Scheve and Slaughter 2001; Walter 2010.

⁷⁶Margalit 2011; Walter 2010.

⁷⁷Margalit 2011.

that compensatory policies can mitigate negative voter responses to trade, and thus provides a rationale for increasing government activity in response to trade shocks. This evidence suggests that the negative consequences of trade can ignite as political issues, and particularly if additional government activity is divisive this could increase incentives for voters to turn out.

While outward (or non-domestic) investment also hurts domestic actors, it is harder to identify losers from investments that did not happen. This hard-to-observe concern is difficult for governments to address without recourse to the cross-border competition in economic incentives underpinning the constraint argument. Abiad and Mody⁷⁸ find no effect of government partisanship on financial reform adoption. Accordingly, we expect that foreign investment will not make compensation such a salient political issue.

2.3.3 Hypotheses

In sum, we argue that economic globalization as a constraint upon domestic policy operates more powerfully through foreign ownership than international trade. Given existing evidence that voters are sensitive to constraints on government and that economic policy polarization has declined, this implies that measures of the globalization of ownership—FDI flows and portfolio equity stock especially, but also FDI stocks—should have stronger negative effects on turnout than the globalization of trade:

H4a: Increases in foreign ownership (FDI and portfolio equity) transactions reduce turnout, and do so more than increases in international trade.

Furthermore, the most flexible forms of ownership are expected to act as the most powerful constraints on government, and in turn reduce turnout most.

The effect of the globalization of trade is ambiguous. Although increases in trade could induce similar negative effects upon turnout and its intermediaries, we argue that trade is more likely

⁷⁸Abiad and Mody 2005.

than foreign ownership variables to affect government spending and support polarizing political cleavages. If international trade is more likely to lead to demand for compensation than foreign ownership, then we should find that trade has a stronger positive—or weaker negative—effect on government spending than indicators of foreign ownership (depending on whether the compensation or constraint hypotheses hold). Therefore, if the compensation mechanism dominates the constraint mechanism:

H4b: Increases in international trade increase government spending, which in turn increase turnout.

3 Data and methods

To test the hypothesis outlined above, this paper analyses two country panel datasets. This section first operationalizes economic globalization, then details our data and methods. While our theory may have more general applicability, data availability and concerns about causal homogeneity restrict our analysis to established OECD members—those who have been OECD members for all or most of the sample period, 1970-2007. The start point was chosen for reasons of data availability while the end point is before the 2008 financial crisis, although it also happens that globalization data availability after 2007 is problematic. Detailed variable sources, operationalization and descriptive statistics are provided in the Appendix.

3.1 Measuring economic globalization

Economic globalization presents complex operational issues. Unfortunately, no direct measure of voter perceptions of globalization or globalization's constraint on government efficacy exist across our sample. Rather than using policy based measures of economic openness, we use aggregate cross-border economic transactions as the most appropriate indicators of globalization for the theories being tested here. As discussed above, actual trade and capital flows are more likely to drive

fear of investment and trade loss and to be noticed by citizens. Although policy is important, many other factors determine firm investment decisions.⁷⁹ The popular KOF measure of economic globalization separates actual flows from capital market restrictions.⁸⁰ Although useful as a summary, it assumes that ownership and trade represent a single underlying globalization dimension.

As argued above, we believe that the effects of globalization may vary by transaction type, and therefore examine *FDI flows*, *FDI stock*, *Portfolio equity stock* and *Trade* separately—all are measured annually as a percentage of GDP. Data on trade is obtained from the World Bank.⁸¹ Capital account stocks come from an updated version of Lane and Milesi-Ferretti’s⁸² dataset, which uses a wealth of sources to compile estimates of capital stocks. Finally, data on FDI flows come from UNCTAD.⁸³ In each case we combine assets and liabilities (or outflows and inflows) to provide an indicator of the overall dependence of an economy upon international transactions. Differences between assets and liabilities are explored below, but show little difference.

We transform each globalization indicator x as follows. Rather than just employ the natural logarithm of x , to militate against the possibility that highly open economies such as Luxembourg drive our results, we distinguish values of x above and below zero to capture diminishing effects.⁸⁴ It is theoretically appealing to believe that a given Δx has a weaker effect for larger initial values of $|x|$. We add one to prevent the logarithmic function from approaching $-\infty$ near $x = 0$. Accordingly we use the following procedure to calculate adjusted values \tilde{x} :

$$\tilde{x} = \begin{cases} -\ln(-x + 1) & \text{If } x < 0 \\ \ln(x + 1) & \text{If } x \geq 0 \end{cases} \quad (1)$$

⁷⁹Unreported analyses available in our replication code unsurprisingly show weaker effects for capital restriction policies than for the transaction measures: KOF capital market restrictions produce a clear negative effect, while the more general Chinn-Ito index is marginally significant.

⁸⁰Dreher, Gaston and Martens 2008.

⁸¹World Bank 2010.

⁸²Lane and Milesi-Ferretti 2007.

⁸³UNCTAD 2010. See Appendix for further details.

⁸⁴The FDI flows components can take negative values; see [UNCTAD website](#).

For ease of nomenclature we continue referring to this monotonic transformation as the log. Using a squared term instead confirms the diminishing effects of economic globalization.

Unsurprisingly the (transformed) globalization indicators are positively correlated. The large correlations between foreign ownership variables—FDI flows has correlation coefficients of 0.83 and 0.76 with FDI stock and Portfolio equity stock respectively, while the correlation between FDI stock and Portfolio stock is 0.86—suggest that these indicators reflect the latent ownership concept. However, the associations between ownership and trade variables are moderate—Trade has correlation coefficients of 0.48, 0.50 and 0.31 with FDI flows, FDI stock and Portfolio equity stock respectively. This supports our claim that foreign ownership and trade represent distinct dimensions of economic globalization. To examine the ownership variables together, we calculate *Ownership scale*—the first factor in an analysis extracting country fixed effects.⁸⁵

3.2 Government spending data

The compensation hypothesis is typically conceived as social welfare spending. However, general equilibrium shifts induced by economic globalization may not be limited to this sphere, while demand for many forms of social spending should be unaffected.⁸⁶ Various types of targeted government spending—including active and passive labour market programs, government investment, subsidy initiatives and human capital formation—represent alternative forms of spending that could compensate globalization’s losers. Accordingly, we remain agnostic to the source of spending and use *Government spending*—total annual government disbursements as a percentage of GDP—as the dependent variable. The sample mean for such spending is 45.3% of GDP. Our results are robust to using a traditional *Social benefits* spending variable, whose sample mean is 13.5% of GDP. Both measures are from the OECD Economic Outlook database.⁸⁷

⁸⁵We take the Bartlett predicted value for the first factor in an analysis containing country dummies and the three ownership variables. The ownership variables load heavily on this factor.

⁸⁶Burgoon 2001.

⁸⁷OECD 2010.

We include a battery of control variables based on previous analyses of government spending.⁸⁸ The baseline model includes measures of *Deindustrialization*, the *Dependent population*, *Partisanship*, proportional representation (*PR system*), lagged budget *Deficit*, *Unexpected growth* and *Strength of labour*. We address the cyclical nature of spending by controlling for *Automatic transfers* and *Automatic consumption*.⁸⁹

Data were available for an unbalanced panel of twenty-one OECD countries over the period 1970-2007,⁹⁰ and unlike our election data are measured at annual intervals. To address missingness, almost exclusively on the automatic transfers variable, we use multiple imputation.⁹¹

3.3 Electoral turnout data

Our primary dependent variable of aggregate electoral turnout refers to elections to the lower legislative chamber. Two metrics are commonly used: turnout as a proportion of registered voters or as a proportion of the voting age population (VAP). The VAP denominator is estimated relatively infrequently and can introduce errors that would otherwise be absent where registration procedures are high quality.⁹² Therefore, we measure *Turnout* as the proportion of the registered electorate, using data from the Institute for Democracy and Electoral Assistance.⁹³ However, following Franklin⁹⁴ we use the VAP measure for the US where registration operates differently. We check our analyses using the VAP measure and find universally identical results.

⁸⁸Bernauer and Achini 2000; Burgoon 2001; Garrett 1995; Garrett and Mitchell 2001; Hicks and Zorn 2005; Iversen and Cusack 2000; Rehm 2011; Rodrik 1997, 1998.

⁸⁹Iversen and Cusack 2000.

⁹⁰The full list of countries can be found in Figure 1. Greece and Iceland are excluded from the spending analysis because automatic consumption and strength of labour series were unavailable.

⁹¹We use *Amelia II* (Honaker and King 2010) for this procedure because it can incorporate dynamics. We never impute data beyond the bounds of the available country series for any dependent variable. We impute ten datasets using all of the variables in Table 1 as well as other useful variables. Further details are available in our web appendix. Imputation increased the sample size from 459 to 700, but removing the automatic transfers variable would do nearly as well.

⁹²Blais, Massicotte and Dobrzynska 2003.

⁹³IDEA 2009.

⁹⁴Franklin 2004.

In addition to adding Government spending as an intermediary variable to test for the compensation causal path, we also control for alternative explanations of electoral turnout. Since many variables have been used to explain turnout,⁹⁵ our baseline model only includes controls for which there are strong theoretical priors for inclusion; we consider additional variables as robustness checks (see robustness section). To capture the effect of socioeconomic variables we control for the size of the electorate⁹⁶ and a life-cycle effect measured by the proportion of the VAP aged 30 to 69⁹⁷—*Registered voters* and *%VAP, 30-69* respectively. Economic growth was not included because there is no clear theoretical prior,⁹⁸ while there is insufficient variation in GDP per capita across this sample to be meaningful; the main results are unaffected by the inclusion of either. Given we employ fixed-effect specifications, time-invariant political institutions are captured by country intercepts. However, because some countries have changed electoral formulas we include controls for *PR system* and *Mixed system*;⁹⁹ in addition, we include a measure of vote-seat *Disproportionality*¹⁰⁰ and a *Compulsory voting* dummy.¹⁰¹ To capture electoral fatigue and the lower salience potentially attached to legislative elections not held concurrently with presidential elections, we include *Years since last election*¹⁰² and a *US mid-term* dummy variable. Finally, we control for contingent political variables—namely *Margin of victory*¹⁰³ and the effective number of parties (*ENPS*).¹⁰⁴ We consider many other variables as robustness checks, focusing especially on European integration.

Data availability and our OECD requirement generated a maximum sample of 259 elections

⁹⁵See Blais 2006; Geys 2006.

⁹⁶See Geys 2006.

⁹⁷Blais, Gidengil and Nevitte 2004; Gray and Caul 2000.

⁹⁸Radcliff 1992.

⁹⁹Blais and Carty 1990; Jackman 1987.

¹⁰⁰Blais and Aarts 2006; Blais and Dobrzynska 1998; Geys 2006.

¹⁰¹Franklin 2004.

¹⁰²Franklin 2004.

¹⁰³Blais 2006; Geys 2006.

¹⁰⁴Blais 2006; Blais and Dobrzynska 1998; Gray and Caul 2000. These political variables risk post-treatment bias but are included because of their prevalence in the extant literature.

across twenty-three countries, 1970-2007, to be used in the subsequent analysis.¹⁰⁵

3.4 Statistical methods

Panel data entail a number of important model specification issues, many of which are not adequately addressed in the existing literature. We start by examining Figure 1, which depicts trends in electoral turnout on the left axis and government spending and the KOF summary measure of international financial flows—a weighted index containing trade, FDI flows, FDI stocks, portfolio investment and remittances¹⁰⁶—on the right axis for each of our twenty-three countries. Figure 1 shows that while electoral turnout has declined in most countries, this decline has occurred from varying starting points and to different extents. Although less pronounced, most countries have gradually increased expenditures over the period where globalization increased.

To test our hypotheses, we parametrically model the relationship between economic globalization and the dependent variables of government spending and turnout. Diagnostic tests and Figure 1 inform our model specification. Firstly, we address heteroskedasticity and clustering within countries by using cluster-robust standard errors.¹⁰⁷ Secondly, a Wooldridge¹⁰⁸ test of the baseline models unsurprisingly indicated the presence of first-order serial correlation.¹⁰⁹ We model this

¹⁰⁵The full list of countries and year spans can be found in Table 3. In addition to the countries for the government spending models, we were able to add Greece and Iceland. We include compulsory voting countries Australia and Belgium because full turnout is never actually achieved, although the results are strengthened by their exclusion. The maximum sample size is 236 election-years after first-differencing removes the first election from each country series and is reduced further where FDI flows is included.

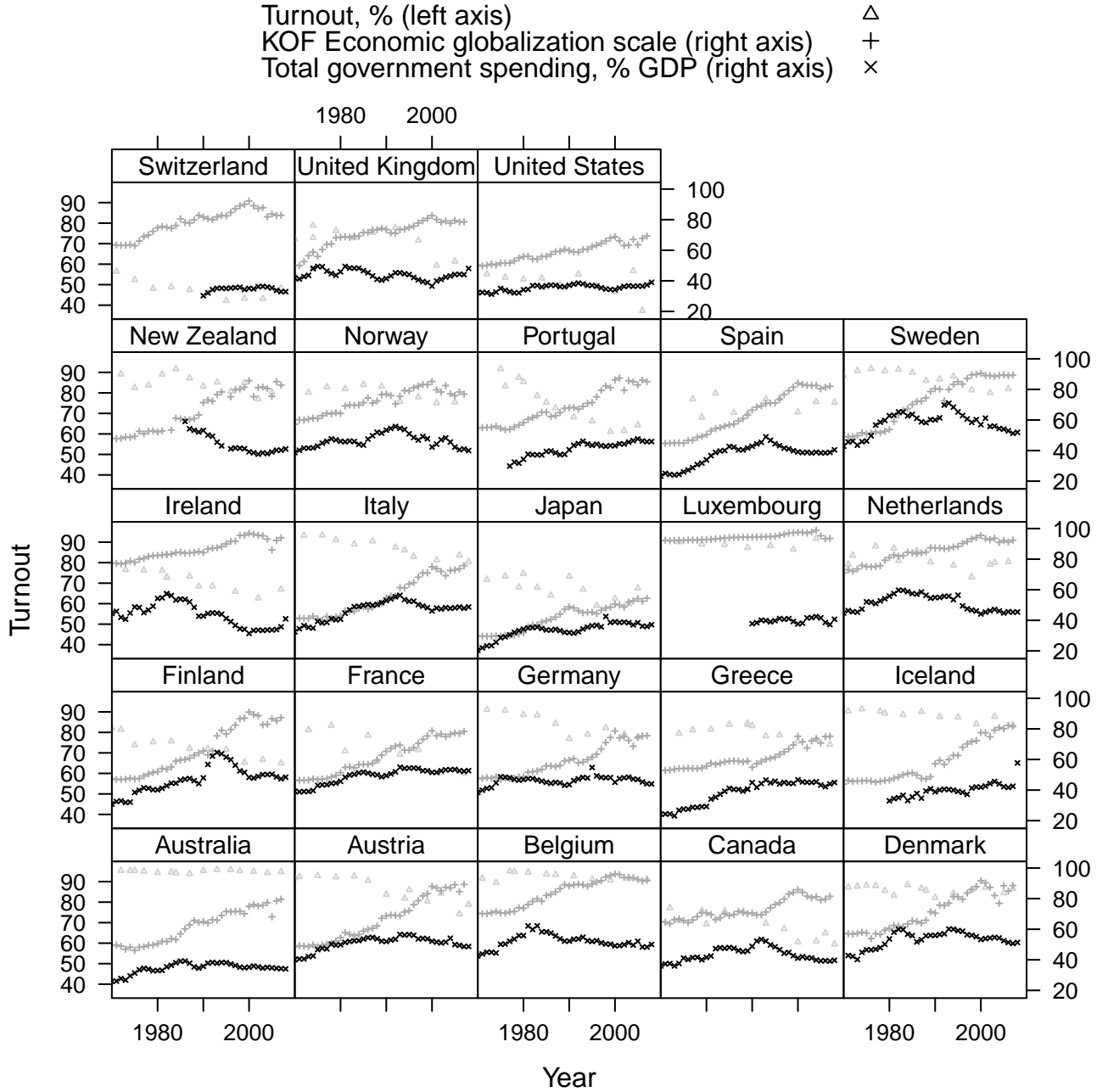
¹⁰⁶Dreher, Gaston and Martens 2008.

¹⁰⁷The baseline models used to perform all diagnostic tests include the control variables shown in Tables 1 and 2. For government spending, a likelihood ratio test strongly rejected the null hypothesis of homoskedastic errors in each imputed dataset. For turnout, the test also strongly rejected the null. These results are robust to including country-specific time trends and country fixed effects. We use the Arellano and Bond 1991 cluster-robust error correction.

¹⁰⁸Wooldridge 2002.

¹⁰⁹For government spending, the Wooldridge test rejected the null hypothesis of no first-order serial correlation at the 0.01% confidence level in each imputed dataset. For turnout, the test also strongly rejected the null hypothesis. The test for turnout is not rejected at the 10% level once

Figure 1: Turnout, total government spending and economic globalization, 1970-2007



with a lagged dependent variable (LDV); model diagnostics indicate this is sufficient to remove residual (and higher-order) serial correlation.

Third, the presence of omitted country effects biases coefficient estimates. A Hausman¹¹⁰ test suggests the coefficients from a random-intercept model are biased by omitted country effects.¹¹¹ Since cross-sectional variation is not required for identification (even if it enhances efficiency in some cases) and our theory is principally concerned with the effects of changes in globalization rather than levels, we include country fixed effects (FEs). Ultimately, if changes in the extent of globalization are associated with changes in spending and turnout *within* countries, this constitutes more convincing evidence of a causal link than cross-sectional correlations would do.¹¹² Examining turnout in US House elections, Clouse¹¹³ also finds cross-sectional models to be problematic and implements a similar first-differencing transformation.

A final, and perhaps greatest, concern is spurious correlation¹¹⁴ as economic globalization and government spending have generally increased over time while turnout has decreased. This is evident from Figure 1, but also indicated by a Fisher test.¹¹⁵ Furthermore, trends in turnout differ considerably across countries, with some like Australia and Belgium observing relative constancy while Switzerland appears to experience a non-linear decline. There are a number of means of country-specific time trends are added to the model, but rejected in all spending models.

¹¹⁰Hausman 1978.

¹¹¹For government spending, the Hausman test rejected the null hypothesis that the difference in coefficients between the fixed- and random-effect models is not systematic for the majority of imputed datasets (and all datasets once country-specific time trends are included in the model). For turnout, the test strongly rejected the null hypothesis; this result holds when time-invariant or slow-moving covariates and country-specific time trends are added to the model.

¹¹²Given the time-varying nature of economic globalization, any positive finding obtained from models utilizing cross-sectional variance that is not supported by within-country evidence strongly suggests the result is biased.

¹¹³Clouse 2011.

¹¹⁴Granger and Newbold 1974.

¹¹⁵A Phillips-Perron version of the Fisher test taking a single lag of the dependent variable failed to reject the null hypothesis of a unit root for government spending in each panel (even after first-order serial correlation was removed) for each imputed dataset. For turnout the test also failed to reject the null.

addressing spurious correlation. One popular approach inserts common time trends. Alternatively, Garrett and Mitchell¹¹⁶ and Steiner,¹¹⁷ for government spending and turnout respectively, employ period dummies to capture common time effects. However, it is hard to believe that “time”—which may proxy for cohort shifts or broad economic or political changes—works in the same way across heterogeneous countries, as common time trends and period dummies imply. Inappropriately extracting common time dynamics across countries where time affects countries differently may bias estimates, or at least fail to address the spurious correlation concern.¹¹⁸ In order to capture *country-specific* dynamics, and thus control for unobserved trends that might induce spurious correlation, we detrend the data by including quadratic trend terms specific to each country.¹¹⁹

Plümper, Troeger and Manow¹²⁰ note that removing trends eliminates variation that may be explained by economic globalization, and thus our test is conservative. Because spurious regression is a major concern, only if we can show that economic globalization and turnout are related after detrending can we claim robust evidence that economic globalization has caused a decline in turnout. Besides, if globalization is related to turnout it should be related to the variation in turnout around any polynomial decline. In addition to making the data stationary, country-by-country detrended data also mitigate the possibility that a LDV will absorb substantive effects in the presence of strong serial correlation.¹²¹

Combined, these specification choices imply the following regression equation:

$$y_{it} = \alpha y_{it-1} + \tilde{\mathbf{x}}_{it}\boldsymbol{\beta} + \mathbf{z}_{it}\boldsymbol{\gamma} + \mathbf{year}_t\boldsymbol{\delta}_1 + \mathbf{year}_t^2\boldsymbol{\delta}_2 + \mu_i + \varepsilon_{it}; \quad i = 1, \dots, N; t = 1, \dots, T_i \quad (2)$$

¹¹⁶Garrett and Mitchell 2001.

¹¹⁷Steiner 2010.

¹¹⁸Here the coefficient on a common time trend term is close to zero with a large standard error. As Figure 1 shows, this is clearly inappropriate for many countries in the sample.

¹¹⁹See Angrist and Pischke 2009; Phillips and Moon 2000. Results are robust to using cubic trends instead.

¹²⁰Plümper, Troeger and Manow 2005.

¹²¹Achen 2000.

where the subscripts denote observations from period t in country i , y_{it} is the dependent variable, y_{it-1} takes coefficient α , $\tilde{\mathbf{x}}_{it}$ is a $1 \times G$ vector of G globalization variables with $G \times 1$ coefficient vector β , \mathbf{z}_{it} is a $1 \times K$ vector of strictly exogenous control variables with $K \times 1$ coefficient vector γ , $\mathbf{year}_t \delta_1$ and $\mathbf{year}_t^2 \delta_2$ denote $1 \times N$ (standardized) quadratic country-specific time trends multiplied by $N \times 1$ vectors of coefficients for each country, μ_i are N country FEs and ε_{it} is the error term. Note that, unlike annual government spending data, elections are not an annual event, and thus t differs across the spending and turnout models. Although the independent variables appear to only affect y_{it} contemporaneously, the LDV gives the equation a dynamic structure and thus identifies long-run effects in addition to short-run (contemporaneous) effects.¹²²

Estimating equation (2) is problematic because the inclusion of a LDV alongside country FEs induces endogeneity and thus renders OLS inconsistent. Nickell¹²³ demonstrates this inconsistency for fixed T , but shows this dynamic bias disappears as $T \rightarrow \infty$. Because the dimensions of the turnout and government spending datasets differ we use different estimation techniques.

For turnout, where $N > \bar{T} = N^{-1} \sum_i T_i$, we estimate equation (2) using the one-step Arellano and Bond¹²⁴ “difference GMM” estimator designed for panels with short T where dynamic bias is greatest. This estimator first-differences equation (2) to eliminate μ_i and instruments for Δy_{it-1} with structurally orthogonal lags of the level y_{it-s} , $s \geq 2$ (and all other exogenous variables). Consistent estimation requires no s -order serial correlation in the differenced errors (verifies orthogonality of lags) and Δy_{it-1} not overidentified (instruments are exogenous). Although consistent in N , difference GMM is typically used for small- T -large- N panels and so its small N properties may be in doubt. However, our estimation strategy is robust to more conventional but inconsistent OLS approaches (see robustness section).

For the imputed spending models, where $T > N$, we instead use a bias-corrected OLS estimator

¹²²The short-run effect of a change in x_g is $\hat{\beta}_g \Delta \tilde{x}_g$. The long-run effect is $\hat{\beta}_g \Delta \tilde{x}_g / (1 - \hat{\alpha})$.

¹²³Nickell 1981.

¹²⁴Arellano and Bond 1991.

known as least squares dummy variable correction (LSDVC), first proposed by Kiviet.¹²⁵ Bruno¹²⁶ extended LSDVC to our case of unbalanced panels. LSDVC computes the bias of OLS estimates relative to a consistent estimator—we use the difference GMM estimator—and then adjusts coefficient estimates for bias of order $N^{-1}T^{-2}$. Bootstrapped standard errors are calculated using 500 simulations for each imputed dataset. Simulation studies show LSDVC consistently outperforms GMM and OLS estimators of autoregressive models with unit FEs in terms of both bias and root mean squared error for relatively large T across a variety of parameter specifications.¹²⁷

A detailed discussion of estimation issues is provided in our web appendix. All models were estimated using Stata 12.

4 Results

We now test our hypotheses using the data and methods described above. Our results provide strong support for the constraint hypotheses (H1)—but operating only through foreign ownership, not trade (H4a). The negative effect of the globalization of ownership on turnout is largest and most robust for the most flexible flows, FDI flows and Portfolio equity. In addition to this direct macro-level effect, we also find evidence of an indirect effect: contradicting the compensation hypothesis (H2a, H4b), foreign ownership (and perhaps also trade) reduces total and social benefit government spending (H3a); this in turn further decreases turnout (H2b/H3b).

4.1 Government spending

To first evaluate the compensation hypothesis (H2a) and the argument that this operates through trade (H4b), we examine the impact of economic globalization on government spending. Taking Government spending as the dependent variable, Model (1) in Table 2 combines the LSDVC es-

¹²⁵Kiviet 1995.

¹²⁶Bruno 2005.

¹²⁷E.g. Beck and Katz 2004; Bruno 2005; Kiviet 1995.

timates for equation (2) across the ten imputed datasets using the baseline specification. Models (2)-(6) separately add the economic globalization variables.

The coefficients on the control variables are generally consistent with the findings in the extant literature: not only is spending slow-moving, but deindustrialization and union strength are positively correlated with spending. There is, however, no evidence to suggest that increases in the power of left-wing parties, budget surpluses, large dependent populations, or countries with PR systems spend more. Replicating Iversen and Cusack,¹²⁸ spending responds strongly to unexpected economic growth and automatic transfers.

Turning to Models (2)-(6) and H2a, the spending data provide no evidence to support the compensation hypothesis operating through either foreign ownership or trade. Rather, the data suggest that increases in foreign ownership *decrease* Government spending—consistent with the constraint hypothesis (H3a) and the globalization of ownership. In the short-run, the median country's increase in FDI stock, FDI flows and Portfolio equity stock over the 1970-2007 period (from 9.7% to 91.7%, 1.6% to 11.4% and 0.7% to 41.5% of GDP respectively) reduced total spending as a proportion of GDP by 2.3, 1.2 and 3.9 percentage points respectively. Long-run feedback through the LDV quintuples the magnitude of these effects and thus represents a substantial reduction in spending. The ownership scale reinforces these results by showing that the first factor is also significantly negative. The uncertainty surrounding the coefficient on Trade—which is also negative but significant just outside the 10% level—suggests that neither the constraint nor compensation hypotheses dominate, although we cannot distinguish between trade having no impact upon spending from the net effect of opposing forces being equal. For there to exist a negative indirect effect upon electoral turnout, however, the coefficient on Government spending in the turnout models must take a positive coefficient (H2b/H3b)—we test this alternative hypothesis in the next subsection.

¹²⁸Iversen and Cusack 2000.

Table 1: Economic globalization and government spending

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
LDV	0.804 (0.034)***	0.773 (0.037)***	0.796 (0.039)***	0.786 (0.038)***	0.792 (0.038)***	0.780 (0.038)***
Deindustrialization	0.101 (0.030)***	0.203 (0.061)***	0.108 (0.057)*	0.157 (0.058)***	0.135 (0.054)**	0.153 (0.057)***
Partisanship	-0.011 (0.051)	-0.019 (0.053)	-0.008 (0.052)	-0.013 (0.052)	-0.001 (0.052)	-0.036 (0.054)
Dependent population	-0.075 (0.106)	-0.114 (0.099)	-0.106 (0.098)	-0.182 (0.098)*	-0.166 (0.102)	-0.121 (0.103)
Deficit (lag)	-0.029 (0.031)	-0.051 (0.032)	-0.027 (0.031)	-0.015 (0.033)	-0.007 (0.034)	-0.064 (0.032)**
PR	1.403 (0.578)**	0.766 (0.597)	1.164 (0.645)*	0.573 (0.594)	0.782 (0.575)	0.900 (0.628)
Strength of labor	0.004 (0.002)**	0.004 (0.002)*	0.004 (0.002)*	0.003 (0.002)	0.003 (0.002)	0.004 (0.002)*
Unexpected growth	-0.378 (0.028)***	-0.417 (0.032)***	-0.392 (0.033)***	-0.372 (0.034)***	-0.372 (0.035)***	-0.398 (0.033)***
Automatic transfers	0.994 (0.139)***	0.911 (0.146)***	0.813 (0.150)***	0.784 (0.148)***	0.730 (0.151)***	0.896 (0.146)***
Automatic consumption	-0.040 (0.092)	-0.047 (0.086)	-0.030 (0.085)	-0.027 (0.084)	-0.022 (0.083)	-0.059 (0.087)
FDI stock (log)		-1.073 (0.289)***				
FDI flows (log)			-0.782 (0.134)***			
Portfolio equity stock (log)				-1.197 (0.199)***		
Ownership scale					-2.309 (0.581)***	
Trade (log)						-1.197 (0.728)
Country FE	Y	Y	Y	Y	Y	Y
Country-specific time trends	Y	Y	Y	Y	Y	Y
Observations	721	721	721	721	721	721
Countries	21	21	21	21	21	21
R^2 (within)	0.954	0.955	0.955	0.955	0.955	0.954

Notes: All models estimated with LSDVC using one-step difference GMM bias corrections of order $N^{-1}T^{-2}$. Standard errors were computed using 500 bootstrapped simulations and were combined across ten imputed datasets using Rubin averaging rules. The R^2 term comes from the OLS FE model before adjustment, and is averaged across imputations.
* denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

4.1.1 Robustness checks

First, very similar results emerge if we estimate the models with OLS or difference GMM instead of LSDVC. Second, the results are robust to using the non-imputed data, with the sole exception that PR systems consistently have higher spending. Third, to address possible common shocks we included year dummies, both instead of and in addition to country-specific time trends (which may be insufficiently flexible to capture common shocks). The results are robust, except that Trade is significantly negative around the 1% level in both cases. Fourth, to address endogeneity concerns, we used suitable lagged levels as GMM instruments in difference GMM models, finding very similar results and Trade significant around the 5% level. All unreported analyses and robustness checks cited can be found in our replication code.

Finally, the findings for Government spending are substantively similar to analyses using Social benefits as a proportion of GDP;¹²⁹ see web appendix. The (unreported) decline in the globalization coefficient magnitudes is to be expected since social benefits are a fraction of total spending. Trade again has a statistically significant negative effect on social benefits—providing further evidence against the compensation hypothesis. This suggests that even if party manifestos increasingly profess their support for welfares and education programs,¹³⁰ this is not reflected in spending.

4.2 Electoral turnout

The results for electoral turnout obtained from estimating equation (2) with difference GMM are shown in Table 2 and test the aggregate implications of the constraint hypothesis (H1) and the hypothesis that foreign ownership is the driving force behind this effect (H4a). Model (1) shows the baseline turnout specification. Models (2)-(10) include measures of economic globalization, first entering these variables separately before examining the inclusion of foreign ownership vari-

¹²⁹OECD 2010.

¹³⁰Burgoon 2012.

ables together with trade and spending variables simultaneously. The coefficients in Table 2 are instantaneous within-country marginal effects; long-run effects are computed below.

The coefficients on the control variables in Model (1)—which are fairly consistent across subsequent models—generally exhibit the expected effects. Elections in more proportional electoral systems, with fewer parties, smaller and predominantly middle-aged populations, with longer periods between elections, and concurrent presidential elections (in the US) experience higher turnout. Margin has the expected negative sign but fails to achieve significance in any model.¹³¹ The negative coefficient for Compulsory voting contrasts with analyses focusing on cross-sectional variation, but is based on only two instances of reform.¹³² The negative coefficient for the LDV represents reversion to trend; its small size indicates suggests the effect is immediate and relatively persistent.¹³³ The serial correlation (AR) tests indicate that there are no problems instrumenting for the LDV,¹³⁴ while the Sargan overidentification test is not rejected in any model.¹³⁵

4.2.1 Direct effects of economic globalization

Entering the economic globalization variables separately in Models (2)-(6), we find a negative effect working through foreign ownership. This provides strong support for hypotheses H1 and H4a. FDI stocks and especially FDI flows and Portfolio equity stock, exhibit large negative coefficients

¹³¹This may be explained by the *post hoc* measurement of a variable that would ideally be measured before the election (Geys 2006), if actual competition cannot be captured at the national level (Franklin 2004) or by the difference between the two largest parties (Blais 2006).

¹³²Note that neither of the two instances of reform in the sample—Austria after 1982, and Italy after 1993—show a significant decline in turnout immediately following the shift away from compulsory voting. The large positive coefficient frequently obtained in statistical studies (Geys 2006) arises from cross-sectional variation subsumed by the FEs in our analysis. All results are robust to removing the compulsory voting variable.

¹³³Further analysis, available in our replication code, suggests the large coefficient on the LDV found in previous research is due to the exclusion of country FEs and time trends.

¹³⁴In Models (1), (3) and (6)-(10) where the AR2 tests for the differenced equation are rejected at the 5% level, y_{it-3} is instead the first lag used as an instrument. Whichever lags are used the results are very similar, although fewer lags increase standard errors.

¹³⁵To ensure non-rejection at the 5% level, Model (2) removed higher order lags ($s > 10$).

Table 2: Economic globalization and aggregate turnout

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)	Model (9)	Model (10)
LDV	-0.164 (0.115)	-0.163 (0.081)**	-0.199 (0.096)**	-0.187 (0.077)**	-0.229 (0.072)**	-0.168 (0.116)	-0.235 (0.078)**	-0.224 (0.097)**	-0.243 (0.086)**	-0.226 (0.103)**
Registered voters (log)	-20.207 (7.073)***	-22.528 (7.750)***	-22.139 (10.352)**	-22.734 (6.361)***	-25.956 (10.215)**	-20.171 (7.186)***	-17.053 (11.239)	-19.400 (7.741)**	-17.475 (10.875)	-19.367 (7.679)**
%VAP, 30-69	0.140 (0.117)	0.181 (0.116)	0.208 (0.118)*	0.54 (0.091)***	0.212 (0.108)*	0.146 (0.119)	0.198 (0.114)*	0.224 (0.093)**	0.200 (0.123)	0.226 (0.093)**
Years since last election	0.387 (0.218)*	0.409 (0.219)*	0.512 (0.211)**	0.463 (0.218)**	0.507 (0.212)**	0.387 (0.218)*	0.563 (0.211)**	0.513 (0.222)**	0.578 (0.210)**	0.515 (0.222)**
US mid-term	-13.511 (1.632)***	-13.725 (1.146)***	-13.333 (1.393)***	-13.482 (1.078)***	-13.194 (1.091)***	-13.438 (1.683)***	-12.400 (1.372)***	-12.700 (1.507)***	-12.279 (1.493)***	-12.662 (1.600)***
Compulsory voting	-2.775 (1.107)**	-1.344 (0.949)	-3.498 (1.125)***	-1.546 (0.795)*	-2.334 (0.756)***	-2.754 (1.072)***	-2.712 (1.071)**	-2.001 (0.973)**	-2.725 (0.972)***	-1.985 (0.999)**
Mixed system	-0.344 (1.113)	0.801 (1.880)	-0.219 (1.075)	0.762 (1.018)	0.076 (1.014)	-0.359 (1.121)	-0.528 (1.965)	5.268 (1.351)***	0.012 (1.832)	5.253 (1.343)***
PR system	2.953 (1.435)**	3.429 (2.021)*	4.046 (1.428)***	2.547 (1.116)**	3.094 (1.212)**	2.967 (1.363)**	3.936 (2.184)*	7.244 (1.661)**	3.364 (2.036)*	7.209 (1.640)***
Disproportionality	-12.423 (3.510)***	-13.551 (3.453)***	-14.742 (3.510)***	-14.566 (3.248)***	-15.200 (3.415)***	-12.356 (3.623)***	-14.547 (3.197)***	-13.343 (3.356)***	-14.179 (3.385)***	-13.289 (3.455)***
ENPS	-0.718 (0.509)	-0.765 (0.554)	-0.994 (0.594)*	-0.765 (0.507)	-1.092 (0.761)*	-0.703 (0.517)	-1.032 (0.607)*	-0.611 (0.523)	-0.944 (0.615)	-0.596 (0.530)
Margin	-0.028 (0.045)	-0.032 (0.045)	-0.009 (0.049)	-0.044 (0.046)	-0.014 (0.051)	-0.028 (0.044)	-0.039 (0.050)	-0.048 (0.049)	-0.041 (0.049)	-0.049 (0.048)
FDI stock (log)		-1.811 (0.865)**								
FDI flows (log)			-2.030 (0.610)***				-1.529 (0.630)**		-1.719 (0.601)***	
Portfolio stock (log)				-2.396 (0.524)***				-1.880 (0.443)**		-1.888 (0.442)***
Ownership scale					-3.519 (0.938)***					
Trade (log)						0.505 (2.754)			2.678 (2.172)	0.433 (2.270)
Government spending							0.193 (0.076)**	0.201 (0.078)***	0.189 (0.081)**	0.201 (0.079)**
Country FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Country-specific time trends	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	234	230	202	227	202	234	194	212	194	212
Countries	23	23	22	23	22	23	22	22	22	23
$[Corr(\Delta y, \Delta \hat{y})]^2$	0.83	0.83	0.85	0.84	0.85	0.83	0.86	0.86	0.86	0.86
AR2 test	-1.64	-1.57	-1.26	-1.95*	-1.40	-1.70*	-2.06**	-2.44**	-2.04**	-2.44**
AR3 test	-1.48	-1.34	-1.10	-1.03	-1.09	-1.49	-1.11	-0.95	-1.19	-0.94
AR4 test	-1.60	-1.49	-1.50	-1.02	-1.24	-1.58	-1.21	-1.07	-1.18	-1.08
Sargan χ^2	107.93	118.53*	96.33	119.73	108.73	107.66	94.69	94.83	96.07	94.41

Notes: All models estimated with one-step difference GMM. Differenced variables are used as standard instruments and all level lags of the dependent variable exceeding two are used as GMM instruments, except in Models (1), (3), (6)-(10) where third-order lags are used. Model (2) restricts the number of lagged instruments to 9 to avoid overidentification. Country-clustered robust standard errors in parentheses. * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$.

that are statistically significant. These results are consistent with our theory that the globalization of ownership reduces incentives to turn out. The Ownership scale reflects the combination of these variables and is also negative and highly significant. There is no evidence for any effect of trade dependence. This supports our claim that the structural impacts of trade liberalization may not directly alter voter behavior (H4a).

Table 3 presents the predicted long-run effect of changes in foreign ownership on turnout in each country over the sample period. Predictions for country i were computed recursively,¹³⁶ accounting for the values of globalization variable g at each election t through dynamic feedback:

$$\hat{\beta}_g \left[\left(\sum_{t=2}^{T_i} \hat{\alpha}^{T_i-t} \tilde{x}_{itg} \right) - \tilde{x}_{i1g} \right]. \quad (3)$$

We treat the first observation \tilde{x}_{i1g} as exogenous. Table 3 suggests foreign ownership has had a major effect in most countries, and has thus contributed considerably to the observed declines in turnout. On average across countries, of the 8.9 percentage point decline in turnout, changes in FDI stock, FDI flows and Portfolio equity stock have equated to 2.8, 2.2 and 6.1 percentage point declines in turnout respectively. Because these variables are highly correlated and were estimated in separate models the sum of these effects should not be interpreted as a total foreign ownership effect. Given the data have been detrended and the ownership variables may have contributed to time trends, these estimates are probably lower bounds. In some countries the predicted effect of economic globalization exceeds the actual decline because of countervailing forces.

4.2.2 Indirect effects of economic globalization

Models (7) and (8) assess the indirect globalization hypothesis (H2b/H3b) by including Government spending as an additional covariate. Government spending is positive, suggesting that—as

¹³⁶Note the standard assumption that $\hat{\beta}_g$ and $\hat{\alpha}$ do not vary across i and t ; we find support for $\hat{\beta}_{ig} = \hat{\beta}_g$ using random-coefficient models as a robustness check.

Table 3: Predicted long-run effect of foreign ownership on turnout by country

	Sample period	FDI stock (% Δ)	FDI flows (% Δ)	Port. equ. stock (% Δ)	Ownership scale (Δ)	Turnout (actual % Δ)
Australia	1972-2007	-0.8	-1.1	-2.9	-2.6	-0.6
Austria	1970-2006	-4.0	-2.5	-6.7	-5.7	-17.6
Belgium	1971-2007	-4.8	-1.3	-6.5	-1.6	-0.4
Canada	1972-2006	0.2	-1.4	-2.0	-2.3	-12.3
Denmark	1971-2007	-2.4	-2.5	-7.5	-5.8	-0.6
Finland	1970-2007	-5.0	-3.5	-10.3	-8.0	-17.2
France	1973-2007	-4.2	-3.7	-6.2	-6.5	-21.2
Germany	1972-2005	-2.6	-1.0	-4.8	-2.5	-13.4
Greece	1974-2007	-3.1	-0.8	-6.0	-3.7	-5.4
Iceland	1971-2007	-5.8	-8.3	-10.0	-12.6	-6.8
Ireland	1973-2007	-2.9	-3.6	-11.2	-7.7	-9.6
Italy	1972-2006	-1.8	-1.9	-6.3	-4.9	-9.6
Japan	1972-2005	-2.3	-0.7	-4.6	-2.8	-4.2
Netherlands	1971-2006	-1.5	-0.5	-2.8	-1.8	1.3
New Zealand	1973-2005	-0.7	2.4	-7.1	-0.5	-8.8
Norway	1972-2005	-2.6	-2.9	-7.2	-6.1	-4.7
Portugal	1975-2005	-3.6	-1.4	-6.6	-4.7	-27.4
Spain	1977-2004	-3.5	-3.5	-6.6	-6.7	-1.3
Sweden	1970-2006	-4.3	-3.3	-7.5	-6.3	-6.3
Switzerland	1971-2007	-2.5	-4.6	-4.1	-5.8	-8.1
United Kingdom	1970-2005	-1.3	-1.1	-3.4	-2.6	-12.8
United States	1970-2006	-1.4	-1.2	-4.7	-3.3	-9.3
Unweighted mean		-2.8	-2.2	-6.1	-4.8	-8.9
Correlation with turnout		0.19	0.06	0.16	0.16	
Adjusted correlation			0.15	0.23	0.24	

Notes: Predictions are derived from Models (2)-(5) in Table 2 according to equation (3) and using data for all available years. Insufficient data was available for Luxembourg for legitimate comparison; meaningful changes in FDI flows were not available for Belgium (only two elections); FDI flows for Germany are first measured in 1990; FDI flows and portfolio equity stock for Greece are first measured in 1989; FDI flows and portfolio equity stock for Iceland are first measured in 1987; FDI flows for Switzerland are first measured in 1983. Change in turnout for the US is between the 1970 and 2006 mid-terms. Adjusted correlation removes all shortened series enumerated above.

predicted, and previously found by Colomer¹³⁷—larger government increases incentives for voters to turn out. The coefficients on FDI flows and Portfolio equity stock decrease in magnitude (albeit insignificantly), but remain significant—this indicates that the constraining effects of foreign ownership do not solely operate through spending. This finding suggests the existence of two constraint paths for the globalization of ownership: one operating negatively from ownership directly and a second operating negatively and indirectly through reduced government spending. Multiplying the coefficients from Tables 1 and 2 estimates that the negative indirect effects are approximately one twentieth the magnitude of the direct effects of the globalization variables. The addition of Trade in Models (9) and (10) demonstrates the robustness of these findings, and provides further evidence that no dominating constraint or compensation effect operates through international trade. Unreported regressions examining FDI stock show that the coefficient becomes insignificant—we suggest that this lack of robustness reflects the relative immobility of FDI stocks compared to changes in such stocks and more transient portfolio investment.

The results thus provide strong support for the constraint hypothesis arguing that economic globalization reduces the incentive to vote (H1), but also suggest an indirect effect which—contrary to the compensation hypothesis—causes governments to reduce their spending, which in turn further reduces turnout (H3). These effects operate solely through the globalization of ownership (H4a). Given the difficulties of drawing valid inference, our models necessarily extracted variation from the data (especially by removing stable country differences and within-country trends); that we still find such clear results lends the relationships considerable credibility.

4.2.3 Inward v. outward globalization

Having established that different aspects of economic globalization have different effects, before turning to our robustness checks, it makes sense to ask whether the effects of globalization differ between their inward and outward components. It may be that governments fear the withdrawal of

¹³⁷Colomer 1991.

foreign capital from their country and may even welcome capital invested abroad being returned. So inward foreign ownership might be more constraining than outward.

However, decomposing the globalization variables suggests the constraining impact of foreign ownership generally works equally in either direction. Using the same baseline models estimated in Table 2, Table 4 reports the coefficients where the external assets/net outflows and external liabilities/net inflows components are distinguished and entered into regression equations separately and then simultaneously. Although the coefficients on FDI stock and Portfolio equity stock assets are larger, statistical tests fail to reject the null hypothesis of equal size. Similarly, the evidence for FDI flows tentatively suggest that inflows dominate outflows with only the former achieving statistical significance at the 5% level. Again noting that FDI constitutes only equity holdings of at least 10%, this may be explained by large and visible foreign takeovers—such as the US firm Kraft’s takeover of the UK firm Cadbury in 2010—strongly influencing the perceptions of voters. This suggests the possibility of differences in the effects of immediate (flows) and longer-term accumulative (stocks) ownership. Such conclusions are cautious as the coefficients are not statistically different. Even after decomposition, trade variables had no clear effects.

4.2.4 Robustness checks

Despite adopting the most rigorous statistical approach that we deem reasonable, robustness checks are still necessary. With the occasional exceptions of FDI stock and Government spending, our findings are robust to all checks.

Our first set of checks examine sensitivity to variable and observation inclusion. First, the main findings in Table 2 are robust to separately dropping all twenty-three countries. The only exception is FDI stock, which was significant only at the 10% level about half the time and once fell just outside the 10% band. Second, removing cases with standardized residuals with an absolute value exceeding two suggests that our findings are not driven by outliers. Third, to address concerns that tax havens drive the analysis we removed Iceland, Ireland, Luxembourg and Switzerland and found

Table 4: Assets and liabilities decomposition

	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
FDI flows, in (log)	-1.622 (0.702)**		-1.838 (0.696)***			
FDI flows, out (log)		-1.559 (0.734)**	-1.048 (0.618)*			
FDI stock, assets (log)				-1.989 (0.933)**		-1.687 (1.169)
FDI stock, liabilities (log)					-1.255 (0.805)	-0.591 (1.010)
Observations	210	196	196	230	230	230
Countries	22	22	22	23	23	23
Difference $\chi^2_{(1)}$			0.58			0.32
<hr/>						
	Model (7)	Model (8)	Model (9)	Model (10)	Model (11)	Model (12)
Portfolio stock, assets (log)	-2.513 (0.562)***		-1.955 (0.636)***			
Portfolio stock, liabilities (log)		-1.904 (0.512)***	-1.300 (0.558)**			
Imports (log)				1.567 (2.280)		3.453 (2.230)
Exports (log)					-0.170 (2.366)	-2.631 (2.555)
Observations	230	227	227	234	234	234
Countries	23	23	23	23	23	23
Difference $\chi^2_{(1)}$			0.41			2.20

Notes: Models are otherwise identical to (2)-(6) in Table 2. The null hypothesis for the χ^2 is that globalization coefficients are equal.

very similar results. Fourth, all results are robust to the removal of US mid-terms. Fifth, we found substantively similar results when measuring turnout as a proportion of the VAP; here standard errors declined and the coefficient on FDI stock increased in magnitude and became significant at the 1% level, although Government spending became insignificant. Sixth, our results—with the rare exceptions of FDI stock of Government spending—are robust to including many feasible control variables.¹³⁸ Seventh, adding our globalization variables to Franklin's¹³⁹ generational models yielded similar results. Finally, to address concerns about common shocks we included dummy variables for each decade, both instead of and in addition to country-specific time trends. Unsurprisingly, the dummies reveal turnout is declining by decade, but leave the main results intact.

An especially important concern is that much of the economic globalization in the OECD is due to European integration.¹⁴⁰ The profound links between the two have three potentially important implications. First, patterns of trade and capital flows will be in part the product of developments in European integration. Second, with policy making at the European level constraining national governments, EU membership is another potential source of lower turnout. This, thirdly, might lead to weaker effects of economic integration on turnout among EU members, especially those involved in the European Monetary System (EMS). However, splitting the sample by EU (including predecessors) membership and countries that have joined the Eurozone the Online Appendix shows similar results in both samples,¹⁴¹ indicating that that similarly constraining effects of globalization occurred outside the EU.¹⁴² Moreover, including controls for contemporary and cumulative EU membership left our results unchanged and do not suggest an independent effect of the EU on

¹³⁸These are: union density, population density, unemployment, budget deficit, GDP per capita (log), growth per capita, consumer price index, deindustrialization, wage coordination, gross and net income inequality (Gini coefficient), total cash social benefits, Polity IV democracy scores, median voter position, voting age, and the Schmidt index of cabinet composition.

¹³⁹Franklin 2004. We first almost exactly replicated Franklin's (2004: 153) FE Model E.

¹⁴⁰Hay and Wincott 2012.

¹⁴¹When examining subsequent Eurozone members, the results were robust to examining only the post-1979 EMS period.

¹⁴²Using interactions instead of splitting the sample provided similar results.

turnout. It is possible that while European integration has increased economic constraints, the importance of EU political decision-making has counter-balanced this effect.

Second, we examined two popular alternative estimation procedures and found these less demanding estimators provide stronger results. First, a FE model with a LDV and country-clustered standard errors estimated with OLS yielded analogous coefficients and smaller p -values except for FDI stocks fell just outside the 10% standard. Second, implementing the Beck and Katz¹⁴³ OLS approach with panel-specific AR1, country FEs and panel-corrected standard errors saw the coefficient magnitudes and t -statistics for the globalization variables uniformly increase. Thus, the difference GMM estimates are not a small sample artefact. In addition, we also used the “system GMM” estimator¹⁴⁴—designed for cases where lagged levels are weak instruments for Δy_{it-1} because y_{it} follows a random walk (not the case here)—and found substantively similar results for the globalization variables except that FDI stock became essentially zero and insignificant, in turn moving the scale just outside the 10% margin.¹⁴⁵

Third, averaging the independent variables across the prior electoral cycle produced very similar results. Contemporaneous measures of the independent variables could have overestimated the speed with which voters update their perceptions (in ways a LDV cannot capture), or missed annual or cyclical volatility. We also tested for a difference between contemporaneous and electoral cycle averages by subtracting the cycle average from the value for the election year. In only one case—Trade in Model (10)—was this difference significant. We conclude that immediate experiences produce similar effects to experiences over the full electoral cycle.

Finally, the assumption of homogeneous causal effects across countries may seem heroic.¹⁴⁶ To examine such variation in globalization coefficients, we estimated multi-level models with random

¹⁴³Beck and Katz 1995.

¹⁴⁴Blundell and Bond 1998.

¹⁴⁵We prefer the difference to system GMM approach system GMM only provides the same estimates for the time-varying variables asymptotically under the additional assumption that all instruments for the levels equation are uncorrelated with the FEs.

¹⁴⁶Plümper, Troeger and Manow 2005.

coefficients.¹⁴⁷ Overall, there is little coefficient heterogeneity, suggesting economic globalization has similarly affected turnout across OECD nations.¹⁴⁸ This finding thus supports the predicted effects of foreign ownership in Table 3, which assume coefficient homogeneity.

4.2.5 Is globalization endogenous to turnout?

While we have argued that economic globalization has affected turnout, the reverse causal direction is also plausible. A possible argument runs as follows: the working (manufacturing) class opposes globalization in advanced democracies because it stands to lose from further integration,¹⁴⁹ and so where turnout is higher—which implies higher working class mobilization given this group usually exhibits disproportionately low turnout¹⁵⁰—governments respond by keeping globalization at lower and more politically viable levels. Pontusson and Rueda¹⁵¹ argue turnout affects the programs of left parties only where low-income voters are mobilized, while Iversen and Cusack¹⁵² show that while turnout does not affect social transfers it does increase government consumption and Mahler¹⁵³ finds turnout increases government redistribution.

There are good reasons to doubt this story. The idea that higher turnout produces a stronger left share of the vote is an implicit but crucial component of the causal path from turnout to globalization. However, Fisher¹⁵⁴ shows that increases in turnout are not positively associated with increases in left vote share, while Moene and Wallerstein¹⁵⁵ actually find that turnout *reduces* spending on social insurance. Furthermore, instrumenting for the differenced globalization variables with or-

¹⁴⁷Our models use AR1 error corrections and unstructured covariance matrices. These models cannot include FEs.

¹⁴⁸The multi-level models provide similar point estimates and standard errors, except FDI stock's smaller and now insignificant coefficient. Likelihood ratio tests indicate that the random coefficients do not improve the fit compared to a random-intercept model.

¹⁴⁹E.g. Autor, Dorn and Hanson forthcoming.

¹⁵⁰Lijphart 1997.

¹⁵¹Pontusson and Rueda 2010.

¹⁵²Iversen and Cusack 2000.

¹⁵³Mahler 2008.

¹⁵⁴Fisher 2007.

¹⁵⁵Moene and Wallerstein 2001.

thogonal lagged levels, as with the spending models, leaves the results unchanged.¹⁵⁶ In practice, this means instrumenting the most recent difference with the level of globalization around a decade earlier. Using a more traditional 2SLS approach, we find the negative foreign ownership results remain significant when these variables are instrumented for by the linear combination of lagged economic growth and lagged (log) GDP per capita—both significant determinants of capital flows that are plausibly not directly related to turnout. These results can be found in our web appendix.

5 Concluding discussion

This paper considered two alternative mechanisms by which economic globalization may influence voter turnout, setting the constraint hypothesis against the compensation hypothesis. We further distinguished two distinct strands of economic globalization, arguing that the impact of the globalization of ownership (essentially capital mobility) should differ from the globalization of trade.

Examining aggregate data from twenty-three OECD countries since 1970, we find strong support for a constraint mechanism operating through foreign ownership, both directly and—in strict opposition to the compensation hypothesis—indirectly by reducing government spending. As we theorized, the effect of economic globalization on turnout depends on which indicator is used. Measures of the globalization of ownership were all negatively related to turnout following a hierarchy where the most flexible flows were most constraining, while trade had no clear effect. Thus a key conclusion is that, after applying rigorous tests that account for stable country differences and country-specific turnout trends, there is robust evidence that the globalization of ownership has contributed to the marked decline in turnout in developed societies. If developing countries are even more capital-dependent,¹⁵⁷ this effect could be even larger in such contexts.

The compensation hypothesis suggests that turnout might go up as a result of economic glob-

¹⁵⁶AR tests indicate that the third lags \tilde{x}_{it-3} (and above) of the globalization variables in levels are conditionally uncorrelated with the first difference $\Delta\tilde{x}_{it}$.

¹⁵⁷Mosley 2003; Wibbels 2006.

alization, which we argued is theoretically most likely to be driven by the globalization of trade rather than foreign ownership. Given that international trade did not have a positive impact on either spending (as an intermediary) or turnout, the compensation mechanism is either non-existent or dominated by the constraining effect of economic globalization.

In order to illuminate the theoretical mechanisms it would have been ideal to have high quality comparative survey data (including a panel component) covering the 1970-2007 period with survey items on turnout and various social attitudes on globalization and electoral politics. While we found some indications from the Comparative Study of Electoral Systems¹⁵⁸ data that increasing globalization produces declining efficacy, indifference between parties, and lower turnout within countries, the results were not robust. Although these were the best available data for the purpose, they include just a subset of OECD countries between 1996 to 2007—typically just two or three elections per country, in a period when changes in globalization were relatively muted. There are also the usual problems of low response rates and measurement error in social surveys, and the particularly difficult problem of measuring turnout.¹⁵⁹ Under the circumstances null findings from these survey data are certainly not refutations of our hypotheses, just absence of evidence for them. The problems and limitations of the survey data also make us appreciate the comparatively comprehensive nature and high quality of the macro data.

Ultimately, while clear survey results could have provided a more detailed picture of the micro mechanisms, they are not essential to establish strong evidence for our hypotheses, which concern macro-level explanatory variables and a dependent variable that is much more accurately measured (and widely available) at the country level than at the individual level. By extracting country-level trends and fixed effects, our theory fits closely with the nuances in the data and is able to dismiss many alternative explanations.

We believe that this paper makes an important contribution, both theoretically and empirically,

¹⁵⁸Comparative Study of Electoral Systems 2003, 2007, 2012.

¹⁵⁹Karp and Brockington 2005.

to our understanding of electoral turnout, and especially the important problem of turnout decline.¹⁶⁰ Our estimates suggest that despite being widely overlooked, economic globalization is responsible for a considerable portion of the decline since 1970—on average, about two thirds in the case of portfolio equity transactions, the most powerful ownership constraint variable.

¹⁶⁰Lijphart 1997.

A Appendix

A.1 Spending models

Government spending: Total disbursements of general government, as a percentage of GDP. Variable YPGTQ.¹⁶¹

Deindustrialization: Percentage of labour force not employed in the agricultural or industrial sectors.¹⁶²

Partisanship: Schmidt index of cabinet composition, ranging from 1 (right hegemony) to 5 (left hegemony).¹⁶³

Dependent population: Percentage of population aged below 16 or above 64.¹⁶⁴

Deficit: Budget deficit (spending - revenue), as a percentage of GDP.¹⁶⁵

PR system: Dummy variable coded 1 for PR electoral system.¹⁶⁶

Strength of labour: Defined, as per Iversen and Cusack,¹⁶⁷ as the product of union density and union centralization.¹⁶⁸

Unexpected growth: Defined, as per Iversen and Cusack,¹⁶⁹ as real GDP per capita growth at time t minus average real per capita growth in the preceding three years.¹⁷⁰

Automatic transfers: Defined as per Iversen and Cusack.¹⁷¹¹⁷²

Automatic consumption: Defined as per Iversen and Cusack.¹⁷³¹⁷⁴

¹⁶¹OECD 2010.

¹⁶²World Bank 2010.

¹⁶³Armingeon *et al.* 2009.

¹⁶⁴World Bank 2010.

¹⁶⁵OECD 2010.

¹⁶⁶Armingeon *et al.* 2009.

¹⁶⁷Iversen and Cusack 2000.

¹⁶⁸Constructed from OECD 2010 and Visser 2009.

¹⁶⁹Iversen and Cusack 2000.

¹⁷⁰Constructed from OECD 2010 data.

¹⁷¹Iversen and Cusack 2000.

¹⁷²Constructed from OECD 2010 data.

¹⁷³Iversen and Cusack 2000.

¹⁷⁴Constructed from OECD 2010 data.

FDI flows (log): FDI inflows plus outflows, as a percentage of GDP.¹⁷⁵ Rather than difference the *estimated* data on FDI stocks from Lane and Milesi-Ferretti,¹⁷⁶ we instead employ the specifically measured UNCTAD FDI flows data. The two series are only moderately correlated ($r = 0.39$). Accordingly we consider only the UNCTAD data that we believe to be more reliable because it has not been imputed and has been compiled using a consistent methodology.

FDI stock (log): FDI assets plus liabilities, as a percentage of GDP.¹⁷⁷

Portfolio equity stock (log): See text for definition.¹⁷⁸

Trade (log): Exports plus imports, as a percentage of GDP.¹⁷⁹

Country-specific time trends: Standardized linear and quadratic year terms for each country.

A.2 Turnout models

Turnout: Percentage of the registered population who voted (except in the US where we use the percentage of the voting age population).¹⁸⁰

Registered voters (log): Natural logarithm of the total number of registered voters.¹⁸¹

%VAP, 30-69: Percentage of voting age population aged 30-69. Spain's value for 2000 for linearly interpolated.¹⁸²

Years since last election: Number of years between elections to the national-level lower house.

US mid-term: Dummy variable coded 1 for US mid-term elections.

Compulsory voting: Dummy variable coded 1 where a country employs compulsory voting.¹⁸³

Mixed system: Dummy variable coded 1 for mixed electoral system.¹⁸⁴

¹⁷⁵UNCTAD 2009.

¹⁷⁶Lane Milesi-Ferretti 2007.

¹⁷⁷Lane and Milesi-Ferretti 2007.

¹⁷⁸Lane and Milesi-Ferretti 2007.

¹⁷⁹World Bank 2010.

¹⁸⁰IDEA 2009.

¹⁸¹Institute for Democracy and Electoral Assistance 2009.

¹⁸²Steiner 2010.

¹⁸³Franklin 2004; Institute for Democracy and Electoral Assistance 2009.

¹⁸⁴Armingeon *et al.* 2009.

Table 5: Descriptive statistics—government spending models (non-imputed data)

Variable	<i>n</i>	Mean	Standard deviation	Minimum	Maximum
Government spending	800	44.25	8.51	20.45	70.93
Social benefits	800	12.73	3.96	3.03	23.66
Deindustrialization	808	63.93	10.00	32.57	79.76
Partisanship	790	2.45	1.53	1	5
Dependent population	808	65.85	2.22	57.66	70.16
Deficit (lag)	772	-0.09	3.08	-11.60	9.53
PR system	795	0.58	0.49	0	1
Strength of labour	745	116.95	93.55	11.50	414.50
Unexpected growth	804	-0.13	2.33	-14.80	7.39
Automatic transfers	516	0.05	0.49	-2.19	3.90
Automatic consumption	742	0.27	0.62	-3.60	10.73
FDI stocks (log)	807	3.18	1.23	0.38	8.69
FDI flows (log)	715	1.28	0.84	-0.95	4.50
Portfolio equity stock (log)	791	2.51	1.67	0	9.05
Ownership scale	715	0.00	1.05	-2.07	5.66
Trade (log)	808	4.08	0.53	2.51	5.79

Disproportionality: Index of relative disproportionality.¹⁸⁵

ENPS: Effective number of political parties by seats in parliament.¹⁸⁶

Margin: Percentage of the popular vote won in the first round of an election by the top party/group minus the second place party/group. We use the vote share obtained through the party list in mixed systems.¹⁸⁷

¹⁸⁵Armingeon *et al.* 2009.

¹⁸⁶Gallagher 2010.

¹⁸⁷Inter-Parliamentary Union 2007; National parliamentary sources.

Table 6: Descriptive statistics—turnout models

Variable	<i>n</i>	Mean	Standard deviation	Minimum	Maximum
Turnout	258	77.21	14.48	34.70	95.80
Registered voters (log)	258	16.02	1.61	11.68	18.99
%VAP	258	64.52	3.00	57.96	72.59
Years since last election	258	3.27	1.13	0	6
US mid-term	258	0.04	0.19	0	1
Compulsory voting	258	0.21	0.41	0	1
Mixed system	258	0.15	0.36	0	1
PR system	258	0.58	0.49	0	1
Disproportionality	258	0.14	0.10	-0.04	0.58
ENPS	258	3.55	1.45	1.69	9.05
Margin	258	9.21	7.28	0.02	32.19
FDI stocks (log)	254	3.11	1.12	0.87	8.59
FDI flows (log)	226	1.21	0.79	-0.35	4.50
Portfolio equity stock (log)	251	2.34	1.56	0	8.71
Ownership scale	226	0.12	0.94	-1.63	5.18
Trade (log)	258	4.06	0.55	2.51	5.64
Government spending	239	44.31	8.31	23.27	68.42
FDI stocks, in (log)	254	2.29	1.24	0.16	7.86
FDI stocks, out (log)	254	2.50	1.10	0.27	7.93
FDI flows, in (log)	234	0.78	0.66	-1.96	3.23
FDI flows, out (log)	222	0.81	0.72	-0.12	4.27
Portfolio equity stock, assets (log)	254	1.70	1.42	0	7.53
Portfolio equity stock, liabilities (log)	251	1.80	1.47	0	8.34
Imports (log)	258	3.39	0.52	1.86	4.86
Exports (log)	258	3.38	0.56	1.91	5.03

References

- Aarts, Kees, and Bernhard Wessels. 2005. Electoral Turnout. In *The European Voter: A Comparative Study of Modern Democracies*, edited by Jacques Thomassen, 64-83. USA: Oxford University Press.
- Abiad, Abdul, and Ashoka Mody. 2005. Financial Reform: What Shakes It? What Shapes It? *American Economic Review*, 95(1):66-88.
- Abrams, Samuel, Torben Iversen, and David Soskice. 2010. Informal Social Networks and Rational Voting. *British Journal of Political Science*, 41(2):229-257.
- Achen, Christopher H. 2000. Why Lagged Dependent Variables Can Suppress the Explanatory Power of Other Independent Variables. Paper Presented at the Annual Meeting of the Political Methodology Society, Los Angeles, CA, 20-22 July.
- Alderson, Arthur S. 2004. Explaining the Upswing in Direct Investment: A Test of Mainstream and Heterodox Theories of Globalization. *Social Forces* 83(1):81-122.
- Aldrich, John H. 1993. Rational Choice and Turnout. *American Journal of Political Science* 37(1):246-278.
- Alesina, Alberto. 1988. Credibility and Policy Convergence in a Two-Party System with Rational Voters. *American Economic Review* 78(4):796-805.
- Antràs, Pol. 2003. Firms, Contracts, and Trade Structure. *Quarterly Journal of Economics* 118(4):1375-1418.
- Antràs, Pol, and Elhanan Helpman. 2004. Global Sourcing. *Journal of Political Economy*, 112(3):552-580.
- Angrist, Joshua D., and Jörn-Steffen Pischke. 2009. *Mostly harmless econometrics: An empiricist's companion*. Princeton University Press.
- Arellano, Manuel, and Stephen Bond. 1991. Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *Review of Economic Studies*

58(2):277-297.

- Armingeon, Klaus, Sarah Engler, Panajotis Potolidis, Marlène Gerber, and Philipp Leimgruber. 2009. *Comparative Political Data Set 1960-2008*. Institute of Political Science, University of Berne.
- Autor, David H., David Dorn, and Gordon H. Hanson. Forthcoming. The China Syndrome: Local Labor Market Effects of Import Competition in the United States. *American Economic Review*.
- Beck, Nathaniel, and Jonathan N. Katz. 1995. What To Do (And Not To Do) With Time-Series Cross-Section Data. *American Political Science Review* 89(3):634-647.
- Beck, Nathaniel, and Jonathan N. Katz. 2004. Time-Series-Cross-Section Issues: Dynamics. Working paper.
- Benoit, Kenneth, and Michael Laver. 2006. *Party Policy in Modern Democracies*. Routledge.
- Bernauer, Thomas, and Christoph Achini. 2000. From 'Real' to 'Virtual' States? Integration of the World Economy and its Effects on Government Activity. *European Journal of International Relations* 6(2):223-276.
- Bernhard, William, and David Leblang. Democratic Processes, Political Risk, and Foreign Exchange Markets. *American Journal of Political Science* 46(2):316-333.
- Blais, André. 2000. *To Vote or Not To Vote: The Merits and Limits of Rational Choice Theory*. University of Pittsburg Press.
- Blais, André. 2006. What Affects Turnout? *Annual Review of Political Science* 9:111-125.
- Blais, André, and Kees Aarts. 2006. Electoral Systems and Turnout. *Acta Politica* 41(2):180-196.
- Blais, André, and Agnieszka Dobrzynska. 1998. Turnout in electoral democracies. *European Journal of Political Research* 33(2):239-261.
- Blais, André, and R.K. Carty. 1990. Does proportional representation foster voter turnout? *European Journal of Political Research* 18(2):167-181.
- Blais, André, Elisabeth Gidengil, and Neil Nevitte. 2004. Where does turnout decline come from?

- European Journal of Political Research* 43(2):221-236.
- Blais, André, Louis Massicotte, and Agnieszka Dobrzynska. 2003. Why is Turnout Higher in some Countries? *Elections Canada*.
- Blundell, Richard, and Stephen Bond. 1998. Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics* 87(1):115-143.
- Boix, Carles. 1998. *Political Parties, Growth and Equality*. Cambridge University Press.
- Boix, Carles. 2000. Partisan Governments, the International Economy, and Macroeconomic Policies in Advanced Nations, 1960-93. *World Politics* 53(1):38-73.
- Borensztein, E., J. De Gregorio, and J.W. Lee. 1998. How does foreign direct investment affect economic growth? *Journal of International Economics* 45(1):115-135.
- Bretschger, Lucas, and Frank Hettich. 2002. Globalisation, Capital Mobility and Tax Competition: Theory and Evidence for OECD Countries. *European Journal of Political Economy* 18(4):695-716.
- Brockington, David. 2009. It's about the benefits: choice environments, ideological proximity and individual participation in 28 democracies. *Party Politics* 15(4):435-454.
- Brühlhart, Marius. 2009. An Account of Global Intra-industry Trade, 1962-2006. *The World Economy* 32(3):401-459.
- Bruno, Giovanni S.F. 2005. Approximating the bias of the LSDV estimator for dynamic unbalanced panel data models. *Economics Letters* 87(3):361-366.
- Burgoon, Brian. 2001. Globalization and Welfare Compensation: Disentangling the Ties That Bind. *International Organization* 55(3):509-551.
- Burgoon, Brian. 2009. Globalization and backlash: Polanyi's revenge? *Review of International Political Economy*, 16(2):145-177.
- Burgoon, Brian. 2012. Partisan Embedding of Liberalism: How Trade, Investment, and Immigration Affect Party Support for the Welfare State. *Comparative Political Studies*, 45(5):606-635.
- Cameron, David R. 1978. Expansion of the public economy: a comparative analysis. *American*

- Political Science Review* 72(4):1243-1261.
- Castles, Francis G. 1998. *Comparative Public Policy: Patterns of Postwar Transformation*. Edward Elger.
- Cerny, Philip G. 1997. Paradoxes of the Competition State: The Dynamics of Political Globalization. *Government and Opposition* 32(2):251-274.
- Clouse, Clayton. 2011. Changes in Congressional Turnout, 1972-2006. *Journal of Elections, Public Opinion and Parties* 21(4):453-472.
- Colomer, Josep M. 1991. Benefits and Costs of Voting. *Electoral Studies* 10(4):313-325.
- Comparative Study of Electoral Systems. 2003. *CSES Module 1 Full Release*. www.cses.org.
- Comparative Study of Electoral Systems. 2007. *CSES Module 2 Full Release*. www.cses.org.
- Comparative Study of Electoral Systems. 2012. *CSES Module 3 Full Release*. www.cses.org.
- Downs, Anthony. 1957. *An Economic Theory of Democracy*. Harper and Row.
- Dreher, Axel, Noel Gaston, and Pim Martens. 2008. *Measuring Globalisation: Gauging its Consequences*. New York: Springer.
- Duch, Raymond M., and Randolph T. Stevenson. 2010. The Global Economy, Competency, and the Economic Vote. *Journal of Politics* 72(1):1-19.
- Eaton, Jonathan, Francis Kramarz, and Samuel Kortum. An Anatomy of International Trade: Evidence from French Firms. *Econometrica*, 79(5):1453-1498.
- Feddersen, Timothy, and Alvaro Sandroni. 2006. A Theory of Participation in Elections. *American Economic Review* 96(4):1271-1282.
- Fisher, Stephen D. 2007. (Change in) turnout and (change in) the left share of the vote. *Electoral Studies* 26(3):598-611.
- Fisher, Stephen D., Laurence Lessard-Phillips, Sara B. Hobolt, and John Curtice. 2008. Disengaging voters: Do plurality systems discourage the less knowledgeable from voting? *Electoral Studies* 27(1):89-104.
- Franklin, Mark N. 2004. *Voter Turnout and the Dynamics of Electoral Competition in Established*

- Democracies Since 1945*. Cambridge, UK: Cambridge University Press.
- Freeman, John R. 2008. Democracy and Markets in the Twenty-first Century: An Agenda. In *International Perspectives on Contemporary Democracy*, edited by Peter F. Nardulli, 183-220. University of Illinois Press.
- Gabel, Matthew J., and John D. Huber. 2000. Putting Parties in Their Place: Inferring Party Left-Right Ideological Positions from Party Manifestos Data. *American Journal of Political Science* 44(1):94-103.
- Gallagher, Michael. 2010. *Election indices*. Gallagher's website.
- Garrett, Geoffrey. 1995. Capital mobility, trade, and the domestic politics of economic policy. *International Organization* 49(4):657-687.
- Garrett, Geoffrey. 1998. *Partisan Politics in the Global Economy*. Cambridge University Press.
- Garrett, Geoffrey. 2001. Globalization and government spending around the world. *Studies in Comparative International Development* 35(4):3-29.
- Garrett, Geoffrey. and Deborah Mitchell. 2001. Globalization and the welfare state: income transfers in the advanced industrialised democracies, 1965-1990. *European Journal of Political Research* 39(2):145-177.
- Geys, Benny. 2006. Explaining voter turnout: A review of aggregate level research. *Electoral Studies* 25(4):637-663.
- Gordon, Roger H. 1986. Taxation of investment and savings in a world economy. *American Economic Review* 76(5):1086-1102.
- Granger, C.W.J. and P. Newbold. 1974. Spurious Regression in Econometrics. *Journal of Econometrics* 2:111-120.
- Gray, Mark, and Miki Caul. 2000. Declining Voter Turnout in Advanced Industrial Democracies 1950 to 1997: The Effects of Declining Group Mobilisation. *Comparative Political Studies*, 33(9):1091-1122.
- Hausman, J.A. 1978. Specification Tests in Econometrics. *Econometrica* 46(6):1251-1273.

- Hay, Colin, and Daniel Wincott. 2012. *The Political Economy of European Welfare Capitalism*. Palgrave Macmillan.
- Hellwig, Timothy T. 2001. Interdependence, government constraints, and economic voting. *Journal of Politics* 63(4):1141-1162.
- Hellwig, Timothy T. 2008. Globalization, Policy Constraints, and Vote Choice. *Journal of Politics* 70(4):1128-1141.
- Hellwig, Timothy T. 2001. Interdependence, Government Constraints, and Economic Voting. *Journal of Politics* 63(4):1141-1162.
- Hellwig, Timothy T. 2011. The World Economy, Political Control, and Responsibility for Economic Performance. Working paper.
- Hellwig, Timothy T., and David Samuels. 2007. Voting in Open Economies: The Electoral Consequences of Globalization. *Comparative Political Studies* 40(3):283-306.
- Hicks, Alexander, and Christopher Zorn. 2005. Economic Globalization, the Macro Economy, and Reversals of Welfare: Expansion in Affluent Democracies, 1978-94. *International Organization* 59(3):631-662.
- Hobolt, Sara B., and Robert Klemmensen. 2006. Welfare to Vote: The Effect of Government Spending on Turnout. Paper presented at Midwest Political Science Association, Chicago, 20-23 April.
- Honaker, James, and Gary King. 2010. What to do About Missing Values in Time Series Cross-Section Data. *American Journal of Political Science* 54(2):561-581.
- Huber, Evelyne, Charles Ragin, John D. Stephens, David Brady, and Jason Beckfield. 2004. *Comparative Welfare States Data Set*.
- Huber, Evelyne, and John D. Stephens. 2001. *Development and Crisis of the Welfare States: Parties and Politics in Global Markets*. Chicago: University of Chicago Press.
- Institute for Democracy and Electoral Assistance. 2009. *Voter Turnout*. www.idea.int.
- Inter-Parliamentary Union. 2007. *Parline Database*. www.ipu.org.

- Iversen, Torben. 2001. The Dynamics of Welfare State Expansion: Trade Openness, De-Industrialization, and Partisan Politics. In *The New Politics of the Welfare State*, edited by Paul Pierson, 45-79. New York: Oxford University Press.
- Iversen, Torben, and Thomas Cusack. 2000. The Causes of Welfare State Expansion: Deindustrialization or Globalization? *World Politics* 52(3):313-349.
- Jackman, Robert W. 1987. Political Institutions and Voter Turnout in the Industrial Democracies. *American Political Science Review* 81(2):405-423.
- Karp, Jeffrey A., and David Brockington. 2005. Social Desirability and Response Validity: A Comparative Analysis of Overreporting Voter Turnout in Five Countries. *Journal of Politics* 67(3):825-840.
- Kayser, Mark A., and Michael Peress. 2012. Benchmarking across Borders: Electoral Accountability and the Necessity of Comparison. *American Political Science Review* 106(03):661-684.
- Kiviet, Jan F. 1995. On bias, inconsistency, and efficiency of various estimators in dynamic panel data models. *Journal of Econometrics* 68(1):53-78.
- Kydland, Finn E., and Edward C. Prescott. 1977. Rules Rather than Discretion: The Inconsistency of Optimal Plans. *Journal of Political Economy* 85(3):473-492.
- Lane, Philip R., and Gian Maria Milesi-Ferretti. 2007. The external wealth of nations mark II: Revised and extended estimates of foreign assets and liabilities, 1970-2004. *Journal of International Economics* 73(2):223-250.
- Laver, Michael, and John Garry. 2000. Estimating Policy Positions from Political Texts. *American Journal of Political Science* 44(3):619-634.
- Leblang, David, and Bumba Mukherjee. 2005. Government Partisanship, Elections, and the Stock Market: Examining American and British Stock Returns, 1930-2000. *American Journal of Political Science* 49(4):780-802.
- Lijphart, Arend. 1997. Unequal Participation: Democracy's Unresolved Dilemma. *American Political Science Review* 91(1):1-14.

- Li, Xiaoying, and Xiaming Liu. 2005. Foreign Direct Investment and Economic Growth: An Increasingly Endogenous Relationship. *World Development* 33(3):393-407.
- Mahler, Vincent A. 2008. Electoral turnout and income redistribution by the state: A cross-national analysis of the developed democracies. *European Journal of Political Research* 47(2):161-183.
- Margalit, Yotam. 2011. Costly Jobs: Trade-related Layoffs, Government Compensation, and Voting in U.S. Elections. *American Political Science Review* 105(1):166-188.
- Melitz, Marc J. 2003. The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity. *Econometrica* 71(6):1695-1725.
- Moene, Karl O., and Michael Wallerstein. 2001. Inequality, Social Insurance, and Redistribution. *American Political Science Review* 95(4):859-874.
- Morton, Rebecca B. 1991. Groups in Rational Turnout Models. *American Journal of Political Science* 35(3):758-776.
- Mosley, Layna. 2003. *Global Capital and National Governments*. Cambridge University Press.
- Mosley, Layna, and David A. Singer 2008. Taking Stock Seriously: Equity-Market Performance, Government Policy, and Financial Globalization. *International Studies Quarterly* 52(2):405-425.
- Nickell, Stephen. 1981. Biases in dynamic models with fixed effects. *Econometrica* 49(6):1417-1426.
- OECD. 2002. *OECD Economic Outlook* 71.
- OECD. 2010. *OECD Economic Outlook* 88.
- Pandya, Sonal. 2010. Labor Markets and the Demand for Foreign Direct Investment. *International Organization*, 64:389-409.
- Phillips, Peter C.B., and Hyungsik R. Moon. 2000. Nonstationary panel data analysis: an overview of some recent developments. *Econometric Reviews* 19(3):263-286.
- Plümper, Thomas, Vera E. Troeger, and Philip Manow. 2005. Panel data analysis in comparative

- politics: linking method to theory. *European Journal of Political Research* 44(2):327-354.
- Plümper, Thomas, Vera E. Troeger, and Hannes Winner. 2009. Why is There No Race to the Bottom in Capital Taxation? *International Studies Quarterly* 53(3):761-786.
- Pontusson, Jonas, and David Rueda. 2008. Inequality as a Source of Political Polarization: A Comparative Analysis of Twelve OECD Countries. In *Democracy, Inequality and Representation*, edited by Pablo Beramendi and Christopher J. Anderson, 312-353. Russell Sage Foundation.
- Pontusson, Jonas, and David Rueda. 2010. The Politics of Inequality: Voter Mobilization and Left Parties in Advanced Industrial States. *Comparative Political Studies* 43(6):675-705.
- Powell, G. Bingham, and Guy D. Whitten. 1993. A Cross-National Analysis of Economic Voting: Taking account of the political context. *American Journal of Political Science* 37(2):391-414.
- Radcliff, Benjamin. 1992. The welfare state, turnout, and the economy. *American Political Science Review* 86(2):444-456.
- Rajan, Raghuram G., and Luigi Zingales. 1998. Financial Dependence and Growth. *American Economic Review* 88(3): 559-586.
- Rehm, Philipp. 2011. Social Policy by Popular Demand. *World Politics* 63(2):271-299.
- Riker, William H., and Peter C. Ordeshook. 1968. A theory of the calculus of voting. *American Political Science Review* 62(1):25-42.
- Rodríguez, Francisco, and Dani Rodrik. 2000. Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence. *NBER Macroeconomics Annual* 15:261-325.
- Rodrik, Dani. 1997. *Has Globalization Gone too Far?* Washington, DC: Institute for International Economics.
- Rodrik, Dani. 1998. Why Do More Open Economies Have Bigger Governments? *Journal of Political Economy* 106(5):997-1032.
- Scheve, Kenneth F., and Matthew J. Slaughter. 2001. What determines individual trade-policy preferences? *Journal of International Economics* 54:267-292.
- Scheve, Kenneth F., and Matthew J. Slaughter. 2004. Economic Insecurity and the Globalization

- of Production. *American Journal of Political Science* 48(4):662-674.
- Steiner, Nils D. 2010. Economic globalization and voter turnout in established democracies. *Electoral Studies* 29(3):1-16.
- Steiner, Nils D., and Christian W. Martin. 2012. Economic Integration, Party Polarisation and Electoral Turnout: Testing for a Causal Chain. *West European Politics* 35(2):238-265.
- Swank, Duane. 2002. *Global Capital, Political Institutions, and Political Change in Developed Welfare States*. Cambridge, UK: Cambridge University Press.
- Swank, Duane. 2005. Globalisation, Domestic Politics, and Welfare State Retrenchment in Capitalist Democracies. *Social Policy and Society* 4(2):183-95.
- Uhlener, Carole J. 1989. Rational Turnout: The Neglected Role of Groups. *American Journal of Political Science* 33(2):390-422.
- United Nations Conference on Trade and Development. 2009. *World Investment Report*.
- U.S. Census Bureau Population Division. 2007. *Population Estimates*. www.census.gov.
- Visser, Jelle. 2009. *ICTWSS: Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts in 34 countries between 1960 and 2007*.
- Vowles, Jack. 2008. Does globalization affect public perceptions of 'Who in power can make a difference'? Evidence from 40 countries, 1996-2006. *Electoral Studies* 27(1):63-76.
- Walter, Stephanie. 2010. Globalization and the Welfare State: Testing the Microfoundations of the Compensation Hypothesis. *International Studies Quarterly* 54(2):403-426.
- Ward, Hugh, Lawrence Ezrow, and Han Dorussen. 2011. Globalization, Party Positions, and the Median Voter. *World Politics* 63(3):509-547.
- Wibbels, Erik. 2006. Dependency Revisited: International Markets, Business Cycles, and Social Spending in the Developing World. *International Organization*, 60(2):433-468.
- Wood, Adrian. 1994. *North-South Trade, Employment and Inequality*. Oxford, UK: Oxford University Press.
- Wooldridge, Jeffrey M. 2002. *Econometric Analysis of Cross Section and Panel Data*. Cambridge,

MA: MIT Press.

World Bank. 2010. *World Development Indicators*.