



Global Capital Markets, Housing Prices, and Partisan Fiscal Policies

Ben W. Ansell and J. Lawrence Broz

SRC Discussion Paper No 31

February 2015



Systemic Risk Centre

Discussion Paper Series

Abstract

In recent years, global imbalances have channeled the excess savings of surplus countries toward the real estate markets of deficit countries. By consequence, the deficit countries that attracted lots of foreign capital experienced large run-ups in house prices while the surplus countries that exported capital exhibited flat or slow house price growth. We argue that international capital flows affect the fiscal policy preferences of both voters and political parties by way of their impact on housing prices. Where capital inflows are large and housing prices are rising, we expect voters to respond by demanding both lower taxes and less publicly-provided social insurance. This is because rising house prices allow homeowners to “self insure” against income losses due to unemployment, illness, and old age. We present survey evidence that supports this claim. Furthermore, we find that responses to house prices are mirrored in capital exporting countries: households become more supportive of both taxes and social insurance as home prices remain flat or decline. Finally, we show that political parties are the mechanisms through which the fiscal preferences of households find policy expression. Taxes and social insurance spending tend to fall (rise) where the right (left) is in power and capital inflows are driving up housing prices. In capital exporting nations, by contrast, we find an attenuation of these partisan fiscal policy outcomes.

This paper is an updated version of the paper with the same title presented at the ‘Political economy of systemic risk’ conference held at the LSE on 6th March 2014 and is published as part of the Systemic Risk Centre’s Discussion Paper Series. The support of the Economic and Social Research Council (ESRC) in funding the SRC is gratefully acknowledged [grant number ES/K002309/1].

Ben W. Ansell, Professor of Comparative Democratic Institutions, Nuffield College, University of Oxford

J. Lawrence Broz, Professor of Political Science, University of California, San Diego.

Published by
Systemic Risk Centre
The London School of Economics and Political Science
Houghton Street
London WC2A 2AE

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior permission in writing of the publisher nor be issued to the public or circulated in any form other than that in which it is published.

Requests for permission to reproduce any article or part of the Working Paper should be sent to the editor at the above address.

© Ben W. Ansell and J. Lawrence Broz submitted 2014

Global Capital Markets, Housing Prices, and Partisan Fiscal Policies

Ben W. Ansell
Nuffield College
University of Oxford
ben.ansell@politics.ox.ac.uk

and

J. Lawrence Broz
Department of Political Science
University of California, San Diego
jlbroz@ucsd.edu

Ver. 2

This draft: March 3, 2014

This version was prepared for the LSE Conference on Systemic Risk, March 6th 2014. Earlier versions were presented at the LSE International Relations speaker series, December 2013, the eighth annual meeting of the International Political Economy Society, October 25-26, 2013, Claremont Graduate School. the 2013 Annual Conference of the American Political Science Association, August 29 - September 1, Chicago, IL and the 2013 Annual Conference of the International Studies Association, April 3-6, San Francisco, CA. We thank Mark Hallerberg, Carsten Jensen, Miles Kahler, Isabela Mares, and other conference participants for their helpful comments. We also thank Maya Oren (UCSD) and Henry Thomson (UMN) for excellent research assistance.

Abstract: In recent years, global imbalances have channeled the excess savings of surplus countries toward the real estate markets of deficit countries. By consequence, the deficit countries that attracted lots of foreign capital experienced large run-ups in house prices while the surplus countries that exported capital exhibited flat or slow house price growth. We argue that international capital flows affect the fiscal policy preferences of both voters and political parties by way of their impact on housing prices. Where capital inflows are large and housing prices are rising, we expect voters to respond by demanding both lower taxes and less publicly-provided social insurance. This is because rising house prices allow homeowners to “self insure” against income losses due to unemployment, illness, and old age. We present survey evidence that supports this claim. Furthermore, we find that responses to house prices are mirrored in capital-exporting countries: households become *more* supportive of both taxes and social insurance as home prices remain flat or decline. Finally, we show that political parties are the mechanisms through which the fiscal preferences of households find policy expression. Taxes and social insurance spending tend to fall (rise) where the right (left) is in power and capital inflows are driving up housing prices. In capital exporting nations, by contrast, we find an attenuation of these partisan fiscal policy outcomes.

Introduction

The experience of the past decade has demonstrated the challenges that international capital flows can pose for financial stability. Indeed, the build-up of global imbalances was one of the preconditions for the recent financial crisis. Deficit countries such as the United States, Spain, the United Kingdom, Ireland, Iceland, Portugal, Greece, Estonia, New Zealand, and Australia attracted lots of foreign capital and exhibited large run-ups in house prices while surplus countries such as Germany, Switzerland, China, and Austria exported capital and experienced flat or slow house price growth. In this paper, we consider the domestic political implications of a world in which global financial integration allows the channeling of one country's excess savings towards another country's real estate market. Our novel argument is that global capital flows influence voters' fiscal policy preferences--and, hence, fiscal policy itself--by way of their impact on housing prices.

House prices are salient to households because homes hold significant value and are the largest asset for most homeowners (due to relatively high leverage in residential real estate). More importantly, homeowners care about house prices because the equity they build up in their homes can serve as a personal 'nest egg' for retirement or loss of income. In this sense, home equity is a form of *self-supplied private insurance* against job loss that can substitute for publically-provided social insurance. Our argument is that citizens, relying on housing as private insurance, will be less (more) supportive of social insurance where capital inflows (outflows) are driving up (down) the value of this asset. Furthermore, we argue that political parties are the mechanisms through which the fiscal policy preferences of households shape government policy.

Where capital inflows are large and house prices are rising, we expect homeowners to respond by demanding lower taxes and less publicly-provided social insurance. Rising home

prices fueled by foreign capital inflows enhance the valuation of homeowners' 'nest eggs,' thereby reducing homeowners' dependence on tax-funded government programs that insure against income loss due to unemployment, illness, and old age. These capital-importing (deficit) country responses to rising house prices should be mirrored in capital-exporting (surplus) countries, where households should become more supportive of both taxes and social insurance. In surplus countries, the outflow of capital leads to flat or declining house prices, which makes ownership of residential real estate a poor substitute for publically-provided insurance against income shocks.

The fiscal policy *preferences* of households are connected to fiscal *policy* outcomes by way of political parties. Since homeowners tend to belong to right-wing parties--which are predisposed to cutting taxes and reducing social insurance expenditures--we expect taxes and social insurance spending to fall when the right is in power and capital inflows are driving up housing prices. In contrast, left-wing parties have fewer homeowners among their constituents and a baseline preference for increased social spending. Therefore, in countries experiencing capital inflow-driven housing booms, we expect left parties to increase social spending in order to target benefits to their constituents who lack the private insurance provided by home ownership. In nations experiencing capital outflows and stagnant housing prices, we expect an attenuation of these partisan fiscal policy predictions. Where home prices are stagnate, right-parties will not receive increased pressure from home-owning constituents to cut taxes and social spending. Nor will left parties face increased pressures to increase social spending when housing prices are flat. Thus, the effect of partisanship on fiscal policy is *conditional* on capital inflows and house price appreciation.

We believe we are the first authors to analyze the impact of financial globalization on fiscal preferences and fiscal policy outcomes that operates through the house-price channel. One branch of existing research examines the extent to which international capital mobility constrains the ability of partisan governments to pursue distinctive fiscal priorities (Garrett and Lange 1991, Garrett 1998, Rodrik 1997, Oatley 2002, Busemeyer 2009). The question here is whether financial globalization increases pressure on left governments to converge on the right's preference for low taxes and reduced social spending, in order to prevent the exodus of mobile capital. Another branch of the literature deals with the "Varieties of Capitalism" and emphasizes the importance of labor market skills and the role that social policy plays in insuring workers' investment in highly specific skills (Hall and Soskice 2001, Iversen and Soskice 2001, Iversen 2005). While it is certainly true that investment in skills and human capital is an important intangible asset for most people, affecting their international competitiveness, the most valuable tangible asset that many people will acquire is their home. The value of residential real estate may thus be as important as labor market attributes in shaping citizens' economic circumstances and, by implication, what they demand from government (Schwartz and Seabrooke 2008).

Our analysis proceeds in two stages. In the first stage, we demonstrate that home prices are closely connected to international capital flows. In so doing, we show that financial globalization has important economic consequences for *homeowners*--a politically-relevant constituency that is usually ignored in analyses of fiscal policy. In the second stage, we analyze and evaluate the fiscal implications of globally-induced house price changes. We argue that homeowners view residential real estate as a substitute for publically-provided social insurance. We find support for the argument that rising (falling) home values reduce (increase) support for taxes and social spending in survey data from a broad sample of 29 countries over the 1960-2011

period. At the policy level, using a dataset of 43 countries from 1960 to 2011 we show that rising house prices are associated with reduced government consumption and that this effect is strongest where capital inflows have been highest. We also demonstrate that citizens' fiscal preferences find expression in partisan fiscal policies. Where right (left) parties are in office and house prices are rising, we show that taxes and social spending fall (rise). The joint conclusion we draw from these analyses is that the global capital markets that channel savings from surplus countries into the real estate markets of deficit countries have significant political consequences for social policy.

1. House Prices and International Capital Flows

In this section, we explore the relationship between home prices and international capital flows. We emphasize that there are distinct patterns to home prices that reflect the forces of global capital markets. Home (and other asset) prices tend to appreciate where foreign capital is flowing in, driving down real interest rates and fueling the expansion of domestic credit. Home (and other asset) prices typically fall where capital outflows increase real interest rates and contract domestic lending. We demonstrate the regularity and importance of these patterns in order to establish that home prices—which have political relevance to fiscal policy preferences and outcomes—are shaped by international flows.

The relationship between capital flows and house prices attained headline status after policymakers Federal Reserve Chairman Ben Bernanke (2005) attributed the 2002-2007 run-up in U.S. housing prices to a “global savings glut.” The argument is that capital inflows from emerging market countries (that were steadily accumulating precautionary international reserves in the aftermath of the Asian financial crisis) opened up a host of financial problems for the U.S.

and other deficit countries in the 2000s. As foreign savings were channeled through government (or central bank) hands into Treasury securities, driving down interest rates, private investors turned elsewhere (e.g., subprime mortgages) for higher yields.¹ In the words of Bank of England Governor Mervyn King (2010): “The massive flows of capital from the new entrants into western financial markets pushed down interest rates and encouraged risk-taking on an extraordinary scale. . . Capital flows provided the fuel which the developed world's inadequately designed and regulated financial system then ignited to produce a firestorm that engulfed us all.” In other words, it was the interaction of global imbalances with other domestic factors such as lax monetary policy (Taylor 2009), political incentives for financial innovation (Calomiris 2009); and politically-motivated deregulation of the mortgage market (Mian, Sufi, and Trebbi 2010), that prepared the ground for the subprime boom-bust cycle.²

Despite differences in the details, the subprime crisis has much in common with earlier financial crises, (Reinhart and Rogoff 2009). While the subprime cycle brought new features, such as collateralized-debt obligations and credit-default swaps, external imbalances were common to many previous crises, particularly in the post-Bretton Woods era of high capital mobility (Jordà, Schularick, and Taylor 2010, Obstfeld and Rogoff. 2009). Since 1980, large current-account deficits have been financed by huge capital inflows, and the afflicted countries experienced housing speculation, asset bubbles and cheap loans followed by a credit crunch and the seizing up of the financial system (Reinhart and Reinhart 2009, Aizenman and Jinjara 2009). According to Chinn and Frieden (2011, xiv): “The American economic disaster is simply the most recent example of a “capital flow cycle,” in which capital floods into a country,

¹ See Caballero, Farhi, Gourinchas (2008) for a model that is consistent with these facts.

² Sá, Towbin, and Wieladek (2011) consider the relative importance of these factors and find that mortgage-backed securitization amplifies the response of real house prices to capital inflows.

stimulates an economic boom, encourages high-flying financial and other activities, and eventually culminates in a crash.” The cycle was evidence in the developing-country debt crisis of the early 1980s, the Mexican crisis of 1994, the East Asian crisis of 1997-1998, and the Russian, Brazilian, Turkish and Argentine crises at the beginning of the millennium. Taking the experience of 181 countries between 1980 and 2007, Reinhart and Reinhart (2009) estimate that middle- and low-income countries face about a 20% chance of suffering a banking crisis (and a 30% chance of a currency crisis, a sovereign-debt default, or an inflation spike) if they experienced a “capital-flow bonanza” in the three years beforehand.

We argue that capital flows are important to *politics* as well as to financial crises and other economic phenomenon, by way of their impact on property prices. Our causal pathway begins with capital flows affecting property prices, which then affect citizens’ fiscal policy preferences, which, in turn, affect partisan fiscal policies. **Figure 1** illustrates this causal chain.

Why does a capital inflow raise property prices? When foreign money floods into an economy, local residents use the borrowed money to buy more goods and services. The increase in demand is directed toward both internationally traded goods (e.g. cars, computers, flat screen TVs, clothing), and toward nontradable goods (e.g. housing, medical care, financial services). With respect to traded goods, the foreign-financed spending spree typically results in a sharp increase in imports. This is because the supply of tradable goods is very elastic: imports are readily available to accommodate the increase in domestic demand. By contrast, the increase in demand for nontradables—of which housing is key—just drives up their price. This is because the supply of nontradables is determined domestically and does not increase immediately with the spike in demand. It simply takes time for the supply of nontradables, such as single-family homes, to increase. Therefore, when foreign borrowing increases the amount of money people

have to spend on houses (and other nontradables), home prices rise dramatically. Meanwhile, increased spending on tradable goods, such as cars, electronics, and clothing, leads to a surge in imports rather than an increase in price.

As our focus is on housing prices, we first present some basic evidence that supports the mechanism described above. Our data on home prices comes from the Bank for International Settlements (BIS), which offers property price indices for 46 countries over the 1960-2011 period. The panel dataset is unbalanced with missing observations for many countries in earlier years. **Figure 2** graphs the house price index (2010=100) for all the countries in our sample.

To measure capital inflow surges, we draw on Reinhart and Reinhart (2009) who quantitatively define and date “capital inflow bonanza” episodes. They define such a bonanza as an unusual shift of the current account into the red, using this as a proxy for net capital inflows since the capital and current accounts mirror each other in balance of payments double-entry bookkeeping. They define “unusual” as a current account deficit that exceeds the 80th percentile of a country’s historical experience. This measure ensures that inflows are large relative to a country’s own current account experience but provides uniform treatment across countries. For relatively-closed India, for example, the bonanza threshold is a current account deficit of 1.8% of GDP, while for trade-dependent Malaysia the comparable cutoff is a deficit of 6.6% of GDP. Reinhart and Reinhart (2009, Table 3 and Appendix Table 4) provide bonanza indicators for 64 countries spanning 1960 through 2011.

In our home price dataset, there are 92 country/year observations in which a capital inflow bonanza took place and 547 observations with no bonanza. **Figure 3** displays the difference in average home prices across these two groups, along with 95% confidence intervals.

During a capital inflow bonanza, home prices are 29% higher (17 index points) on average than when there is no bonanza, and this difference is highly significant ($P < 0.0000$).

While this is compelling baseline evidence of a link between large capital inflows and housing prices, we take the analysis further by exploring how *changes* in capital flows relate to *changes* in house prices in annual data. The expectation is that inflows (outflows), as proxied by decreases (increases) in the current account balance will cause house prices to rise (fall). **Figure 4** plots the change in house prices against the change in the current account for all countries in our sample. The relationship is negative, as expected: house prices decline when the current account balance improves. The northeast region of the figure contains the bonanza episodes: the current account has turned sharply negative and foreign borrowing is fueling house price appreciation. The region to the southeast contains cases where the current account is in surplus: countries are lending to the rest of the world and house prices are flat or falling. Note that some countries—Iceland, Ireland, Spain as well as most of Eastern Europe—are well represented in both regions. These countries went through the whole “capital flow cycle” in the 2000s, experiencing rapid property price increases when capital was flowing in between 2000 and 2007, followed by sharp home price declines after the foreign financing suddenly stopped, due to the subprime crisis.

Large global imbalances before the subprime crisis, and the extensive rebalancing that has taken place since the onset of the Great Recession, provide an opportunity to assess the impact of the full capital flow cycle on housing prices. Global imbalances, measured as the absolute sum of surpluses plus deficits, peaked at more than 6% of world GDP in 2006 but subsequently fell to around 3% of world GDP in 2011. Since current account imbalances are matched by equal and opposite capital account imbalances, this meant that there were very large

capital flows in the run-up to the crisis followed by large reductions in flows after the recession hit. We expect the impact of capital flows on housing prices to be most evident during periods when global imbalances rise and fall dramatically. Thus, in **Figure 5** we restrict the sample to the 2000 to 2011 period, during which the world experienced the largest expansion and contraction of global imbalances in history. The figure shows that housing markets in Eastern Europe and elsewhere on the European periphery (e.g., Iceland, Ireland, and Spain) suffered the full brunt of the capital flow cycle. They experienced real estate bubbles when capital was flowing in, followed by property busts when capital flows reversed. For example, Estonia, Lithuania, Latvia, the Slovak Republic, and Slovenia saw their property prices indices peak at 138 on average in 2008, when net capital inflows averaged an astounding 9.7% of GDP. However, in 2009, capital *outflows* that averaged 2.56% of GDP for these Eastern European countries produced a sharp average drop in the real estate prices of 24% in the region. When capital flows reversed suddenly, the real estate market went from boom to bust.

2. From House Prices to Policy Preferences

Given that asymmetric capital flows created substantial variation in housing prices – booms in capital inflow countries, stagnation in capital outflow countries – the question emerges as to whether this variation in house prices affects homeowners’ policy preferences in any systematic way. Hence, we now turn to analyze the political impact of changing housing prices on voter *preferences*, before turning to analyze the political impact of changing housing prices on *fiscal policy outcomes*—the topic of Section 3.

We begin by theorizing about how house-price changes can affect citizens’ preferences over taxation and public spending. Housing can be thought of as comprising a major share of citizens’ ‘permanent income’ (Ansell 2014), which will in part determine their preferences over

government fiscal policies in a manner that is distinct from their labor market income or participation. Sudden changes in house prices effectively constitute shocks to that level of permanent income. For example, citizens may suddenly feel substantially richer during house price booms driven by capital inflows, even as their labor market income stagnates. Conversely, a collapse in house prices caused by a capital outflow may lead citizens to feel poorer, even if their salaries are rising.

We argue that citizens experiencing rising house prices will become more tax averse and less supportive of redistributive spending. With respect to tax aversion, rising home values expose homeowners to rising taxes wherever residential property is subject to taxation through property tax, capital gains tax, or the inheritance tax. This provides a direct “pocket-book” mechanism connecting house price rises to reduced support for taxation. However, there may also be a psychological mechanism at work as rising home values can lead citizens to ‘adopt’ the anti-tax preferences of wealthier citizens (e.g. capital owners, highly-skilled workers). As their homes appreciate, they begin to feel richer, leading citizens to reconsider their socioeconomic status and potentially shift their tax policy preferences toward those of higher status individuals.

Citizens with higher permanent income due to rising house prices will also likely become less supportive of redistributive spending. Partly this is a reflection of tax aversion – not wishing to be the funders of redistributive spending. However, we should also expect individuals with rising house prices to have a lower demand for spending itself. For one thing, presuming diminishing marginal returns to income, redistributive transfers are less valuable to wealthy citizens. Wealthier citizens may also lose eligibility for means-tested benefits, especially those with a property threshold (for example, long term care). Most importantly, we should also expect citizens with increasingly valuable houses to rely on their houses as a ‘nest egg’ – a form of ‘self

insurance' against labor market misfortunes. Accordingly, citizens experiencing house price appreciation should become less supportive of social insurance as their 'private insurance' – housing – rises in value.

To empirically examine these claims we use public opinion data from 29 countries taken from the International Social Survey Program (ISSP) in 2009.³ These data have two advantages for our purposes. First, they provide a recent and globally comprehensive survey – they include not only standard OECD countries in Europe and North America but a broad range of Eastern European countries including Croatia, Latvia, Russia and Turkey. Second, the survey contains a question asking 'How much money would be left if the home you and your family live in was sold?' and then provides an equity scale from 'just debts' to 'renter' to ten different categories of house price. This question not only allows us to identify homeowners in the sample, it also allows us to tap into how rising house prices affect citizens' fiscal preferences independently of the equity. More specifically, by interacting homeownership with the five-year percentage increase (2004-2009) in house prices in the country in which a respondent lives, we generate a variable that taps into the likely equity gain a homeowner experienced over that period.⁴

We begin by examining the effects of our house equity variable on preferences over taxation. **Table 1** examines two questions from the ISSP. Models 1 through 3 examine answers to the question 'Do you think people with high incomes should pay a larger share of their income in taxes than those with low incomes, the same share, or a smaller share?' – in other words, this indicator measures citizens' preferences over progressive taxation. The question is increasing in

³ No cross-national panel dataset exists allowing us to examine the effects on individuals of changes in house prices on their preferences, hence our study focuses on between-individual comparisons of housing equity. Using the American National Election Survey and the British Household Panel Survey, Ansell (2014) shows that citizens whose houses became more expensive, even controlling for average income across the panel, became less supportive of social insurance.

⁴ For citizens with 'just debts,' we presume they have suffered from house price declines. The survey was taken in 2009, after the housing market had crashed, and homeowners with just debts probably lost all their equity in the crash.

support for high income people paying a larger share – that is, in preferences for tax progressivity – and has five points (much smaller, smaller, same, larger, and much larger). The lion’s share of responses is, perhaps unsurprisingly, in the last three categories – but within this group there is substantial variation in preferences. We label this question ‘Tax Opinion’. Models 4 through 6 examine answers to the question ‘Generally, how would you describe taxes in your country for those with high incomes?’ with a five-point scale: ‘much too high’, ‘too high’, ‘about right’, ‘too low’, and ‘much too low’. We label this question ‘Tax Country’. This question combines both normative aspects and an empirical judgment about the levels of taxation in the country and accordingly is more ambiguous conceptually – however, this question displays more variation over the range of possible responses than the ‘Tax Opinion’ question.

As our core independent variables we include the house equity variable described above, along with a dummy variable for homeownership (thereby differentiating the effects of house prices / equity from homeownership itself). As controls we include a variable measuring log income (relative to the country mean), gender, age, partisanship (increasing in support for right-wing parties and dropping individuals with missing partisanship data), number of children, and a measure of religiosity increasing in religious attendance. Our model specification is an ordered logit model (given the five-point nature of our dependent variables) with standard errors clustered by country and sample weights.⁵ Model 1 includes the full sample (15,809 individuals across 29 countries), whereas Model 2 examines low income voters (less than country-mean income) and Model 3 examines high income voters (greater than country-mean income), all for the ‘Tax Opinion’ variable. Models 4 through 6 repeat this sample split but for the ‘Tax Country’ variable.

⁵ A linear model with random effects and random coefficients (for the house equity variable) produces similar results (actually more significant) but at the loss of sample weights and the categorical nature of the dependent variable.

Across all the models there is a clear relationship between house equity and negative support for the tax questions – in other words, citizens with higher house equity are less supportive of progressive taxation than are citizens with lower equity, renters, or citizens with negative equity. The direct effect of homeownership is only significant at the ten percent level in one model though it is positive, suggesting that renters may be slightly less supportive of progressive taxation than are homeowners. However, since the house equity scale is measure along eleven points, this effect is outweighed by house prices. It is easier to interpret these results by examining predicted probabilities. For the ‘Tax Opinion’ question, homeowners with negative equity have a 32% chance of answering that the rich should pay a ‘much larger’ share of taxes than poorer citizens. By contrast, a homeowner at the top of the equity scale (controlling for income) would only have a 22% chance of answering in the same manner. Similarly for the ‘Tax Country’ question the probability of answering that taxes for the rich are ‘too low’ or ‘much too low’ would decrease from 58% to 44%. Examining the subsamples split by income we see a negative effect of house equity across all specifications, though in Model 3 – high income voters - it fails to reach statistical significance.

In **Table 2** we turn to examining preferences over redistributive spending. Models 1 through 3 examine answers to the prompt ‘It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes.’ We code this as a five point scale: ‘strongly disagree’, ‘disagree’, ‘neither’, ‘agree’, ‘strongly agree’ and label this variable ‘Redistribution’ Models 4 through 6 examine answers to the prompt: ‘The government should spend less on benefits for the poor’ – here we code this ‘strongly agree’, ‘agree’, ‘neither’, ‘disagree’, ‘strongly disagree’, so that higher scores mean more support for

redistribution, and label this variable ‘Aid to Poor’. The specifications remain otherwise identical to **Table 1**.

We find once more a negative relationship between house equity and support for the prompts – individuals with higher priced houses are less supportive of redistributive spending even controlling for income. The effect is consistent for the ‘Redistribution’ question – however, house prices only appear to affect lower income voters at conventional levels of statistical significance in terms of responding to the ‘Aid to Poor’ question. In terms of Model 1, examining the Redistribution question, moving from being a homeowner with negative equity to one with the highest level of equity reduces the chances of strongly agreeing the government should redistribute income from 34% to 21% - a fairly dramatic effect. As regards Model 5, low-income voters and preferences over aid to the poor, this same shift would reduce strong support for aid to the poor from 37% to 27%.

Putting our results from **Tables 1** and **2** together we have strong evidence that house equity has an anti-redistributive impact on citizens *separate from their labor market income and status*. Accordingly this is strong prima facie evidence that the housing boom reduced overall support for taxation and redistributive spending across these 29 countries. However, to this point we have not examined whether these preferences differed systematically *across countries*, in ways connected to nationally aggregated changes in house prices. **Table 3** gets at this question by using multi-level analysis to ascertain if homeowners’ preferences over taxation and spending are moderated by national house prices. As noted above, we exclude the house equity variable and instead examining interacting the homeownership variable with the five year percentage change in national house prices. We do so for each of the dependent variables consider so far. **Table 3** shows mixed results: the interactive term for homeownership and national house price

increases is always negative but it is only statistically significant in terms of taxation preferences. The effects for taxation found in Models 1 and 2 are strongly supportive of our conjectures. The probability of believing the rich should pay much more in taxes than the poor (Model 1) is 25% for homeowners in countries without price appreciation (Germany) but 19% for homeowners in countries where prices doubled (Estonia). To interpret this interaction differently, the preferences of homeowners and renters are indistinguishable in countries with stagnant house prices (both at 25%) but seven percent points apart in countries where house prices doubled.

3. From House Prices to Policy Outcomes

We now turn to examining how house prices motivate changes in government policymaking. In particular we argue that under conditions of rising house prices and, per the previous section, less aggregate public support for taxation and redistribution, governments should be under pressure to cut taxes and spending. We expect this effect to be amplified when right-wing governments are in power since such cuts align with their ideological preferences -- that is, left-wing governments are less likely to make such cuts even if public opinion turns towards them. Ansell (2013) shows that the combination of right-wing government and rising house prices is associated with cuts in a broad array of social spending programs, including pensions and unemployment. However, that paper only examines eighteen advanced industrial countries. In this section we are able to double the scope of that analysis, examining forty-three countries, including countries from Western Europe, Eastern Europe, North America, Africa, East Asia, and the Middle East from the 1960s (in two cases) to 2011.⁶

⁶ The countries are Australia, Austria, Belgium, Bulgaria, Canada, the Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Greece, Hungary, Germany, Iceland, Indonesia, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Malaysia, Mexico, Morocco, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey, and the USA

Given our broad dataset, finding data on specific forms of taxation and spending, as in Ansell (2013), is challenging. Accordingly, we limit ourselves to aggregate government consumption data to maximize our sample coverage. We take this data from the Penn World Tables 8.0 (coded as the share of national income pertaining to government spending). Our interest is in examining how changes in house prices affect government consumption controlling for changes in (and levels of) other key macroeconomic and political determinants of spending. In particular, we are interested in examining if the effect of changes in house prices on government consumption is conditional on government partisanship.

Table 4 (a) begins our analysis by examining the direct effect of changes in house prices on government consumption. We use the house price index from Section 1 and log it so that a one period difference reflects the annual percentage change in house prices in a particular country. Models 1 and 2 examine the effects on government consumption of house price changes controlling for changes in GDP per capita, the exchange rate, population, the export and import shares of national income, the price level of government consumption, and total factor productivity (all from the Penn World Tables) and including a lagged dependent variable. Model 1 includes country dummies (fixed effects), Model 2 includes country random effects, and both include a full set of year dummies. Models 3 and 4 include levels as well as changes for all the control variables (and hence are error-correction models).

Across all four models we see sizable negative effects of changes in house prices on government consumption. Moving from a country with zero house price appreciation to one with a sixteen percent appreciation rate (a move from the 25th to the 90th percentile) is associated with an immediate reduction in government consumption of 0.25% of GDP and a long-run (that is, taking the lagged dependent variable into account) reduction of 1.07% of GDP. The estimated

effect of changes in house prices is smaller in the pooled random effects models – however, in these cases the persistence of shocks (the coefficient on the lagged dependent variable) is also larger, balancing this short-term decline in magnitude.

Table 4 (b) includes an interaction of house price changes with the five-year change in the current account surplus. Our expectation is that this interaction should be *positively* signed – that is, housing price rises should cause a larger reduction in government spending where the current account balance has been *declining* and hence capital inflows have been increasing. We repeat the same specifications as in **Table 4 (a)** but add the lagged current account balance and its interaction with house price changes. Across all models we find the expected positive interactive effect, though it is not statistically significant at conventional levels. That is slightly misleading, however, since examining the interaction fully and simulating the effect of house prices rising on government spending, we find that the negative impact of house prices is only statistically significant for countries with current account deficits. To give a sense of the implications of thinking about housing price changes and capital inflows concurrently, Figure 6(a) shows the estimated marginal effect of an increase in house prices at various levels of current account balance. In a country that has experienced a current account deficit of ten percent, increases in house prices should have a substantial negative impact on government consumption. Conversely, for a capital exporter (a ten percent of GDP increase in the current account balance over five years), the effect of increasing house prices on government spending is essentially nil. Thus, our expectation that house prices most dramatically affect government spending in capital importers finds some support in these data.

The political effects of house price changes should matter most we hypothesize where homeownership rates are highest and hence more people benefit from rising wealth. Table 4(c)

examines this conditional effect by interacting the change in house prices with the level of homeownership across 26 European countries for which we have cross-time data on homeownership rates from Eurostat. These rates vary quite dramatically across Europe, from fewer than half of the population in Germany to over 95% in Romania (a legacy of post-Communist housing privatization). We find a strongly negative interactive coefficient on prices and ownership rates. To explore the substantive impact of this interaction in **Figure 6b** we plot the predicted marginal effect of increasing house prices on the government share of spending at various levels of homeownership. For rates below 60% this effect is in fact positive (the bottom decile of observations), whereas for rates above 65% the effect is strongly negative. Since over two-thirds of our observations have homeownership rates above 65%, for the preponderance of the sample we see the negative effect observed in the sample as a whole. However, for countries with low homeownership rates we conclude that house prices are much less likely to impact spending.

Finally, **Table 4 (d)** interacts the change in house prices with cabinet partisanship, using the left-center-right coding used in the Database of Political Institutions (Keefer, 2009). Here we use dummies for being a center party and for being a left party, with the omitted category being right parties and we enter these terms on their own and in interaction with house price changes. In three of the four models (Models 1 through 3) our expectations are borne out. Here we see that the direct effect of changes in house prices remains negative – implying that when right-wing parties are in power, house price increases lead to reductions in government consumption. Examining the interaction terms we see that when left or center parties are in power the negative direct effect of house price increases is countervailed. That is, the positive terms on these interactions match or exceed the direct negative coefficient on house prices. In the case of left-

wing governments, at least in the fixed effects models, this countervailing effect is large enough that left-wing governments are actually associated with increased government consumption when house prices rise – some support for our conjecture that left-wing governments are likely to be responsive to the equity poor and renters. Finally, for center parties, the effects of house price increases are essentially nil. This table provides strong evidence that parties respond to house price increases in systematically different ways. **Figure 6c** presents the predicted levels of government spending – with ninety-five percent confidence intervals - of various levels of house price appreciation under left and right cabinet control, demonstrating this differential effect quite dramatically.

4. Conclusions

Global imbalances over the past decade reached historic levels, producing a massive wave of international capital flows that fueled house bubbles in many borrowing countries. In this paper, we have considered the domestic political implications of a world in which the savings of surplus countries are channeled into the real estate markets of deficit countries by way of global capital markets. Our argument is that international capital flows influence the fiscal policy preferences of homeowners--and, hence, the fiscal policy choices of partisan governments--by way of their impact on housing prices.

We began by showing that capital flows have important economic consequences for homeowners--a politically-salient constituency that is usually neglected in analyses of fiscal politics.⁷ For example, when a “capital inflow bonanza” is taking place (i.e., when a country experiences an above average increase in capital inflows), house prices are 29% higher on average than when there is no bonanza. Furthermore, we found that a 1% increase in the current

⁷ Schwartz and Seabrooke (2009) is a notable exception.

account balance--which is equivalent to a 1% decrease in net capital inflows--is associated with a 1.2% decrease in home prices. Finally, we established that the negative effect of the current account balance on house prices is amplified after 1999, when capital flows--and capital flows reversals--reached unprecedented levels. Between 2000 and 2011, countries in Eastern Europe and elsewhere on the European periphery experienced wild swings in home prices as the capital flow cycle ran its course.

We have argued that homeowners view the equity they build up in their houses as a private substitute for publically-provided social insurance. Therefore, homeowners will demand both lower taxes and less publicly-provided social insurance where capital inflows are large and housing prices are rising. Using ISSP survey data from a broad sample of high- and medium-income countries, including many in the European periphery, we find that preferences over taxation are consistent with this argument. Where rising home prices has increased equity, citizens are less supportive of progressive taxation than are citizens with lower equity, renters, or citizens with negative equity. The same holds for preferences over redistributive spending: controlling for income, citizens with higher priced homes express less support for redistributive government spending. Moreover, the effects of homeownership, at least on preferences over taxation, appear to be larger in countries that had larger house price booms.

Finally, we connected house prices and capital inflows to fiscal policy outcomes. Using a sample of 39 countries from 1960 to 2011 we found that increases in house prices appear negatively related to government consumption; that this effect is magnified in countries that have been experiencing sizable medium-term capital inflows; and that the effect is also driven largely by right-wing parties. We argue that this partisan dynamic is a function of right-wing parties

being more likely to represent homeowners, whose preferences over social spending tilt negatively as house prices rise.

Political economists have long considered global trade and capital flows to be important determinants of social policy preferences and outcomes (e.g., Garret and Lange 1991, Garrett 1998). However, these longstanding arguments have traditionally focused on the impact of globalization on the labor market; in particular, on risk and insecurity created by import competition and footloose investment capital. In this paper, we show that the global flows that may have been most important in affecting policy preferences and outcomes are those that drove asset prices. In other words, instead of increasing labor market insecurities, globalization may have created a (possibly false) sense of income security through the asset price channel. Where current account deficits produced capital inflows that drove up housing prices, the public came to view homeownership as a substitute for government social insurance, creating a ripe opportunity for the Right to cut public spending. Globalization may indeed undermine the welfare state, but it has done so through an unexpected channel.

In future research, we intend to pursue case studies on the European periphery where certain countries (e.g., Latvia, Estonia, Ireland, and Spain) experienced the boom-to-bust capital flow cycle in less than a decade. These cases may allow us to gauge the sensitivity of citizens' fiscal policy preferences to sudden reversals in house prices. We can then, in turn, explore the responsiveness of partisan governments to changes in constituent preferences. By tracing the political impact of home prices across the boom and bust phases of the capital flow cycle within these countries, we hope to provide additional evidence in support of the causal mechanism that we have outlined here.

References

- Aizenman, Joshua and Yothin Jinjarak. 2009. "Current Account Patterns and National Real Estate Markets," *Journal of Urban Economics* 66, 2 (September): 75-89.
- Ansell, Ben W. 2014. "The Political Economy of Ownership: Housing Markets and the Welfare State." *American Political Science Review*.
- Bernanke, Ben S. 2005. "The Global Saving Glut and the U.S. Current Account Deficit. Sandridge Lecture, Virginia Association of Economists, Richmond, VA.
- Busemeyer, Marius R. 2009. "From Myth to Reality: Globalisation and Public Spending in OECD Countries Revisited. *European Journal of Political Research* 48 (2): 455-482.
- Caballero, Ricardo J., Emmanuel Farhi, and Pierre-Olivier Gourinchas. 2008. "An Equilibrium Model of 'Global Imbalances' and Low Interest Rates." *American Economic Review* 98, 1 (March): 358-93.
- Calomiris, Charles W. 2009. "The Subprime Turmoil: What's Old, What's New, and What's Next." *The Journal of Structured Finance* 15, 1 (Spring): 6-52.
- Chinn, Menzie D., and Jeffrey A. Frieden. 2011. *Lost Decades: The Making of America's Debt Crisis and the Long Recovery*. New York: W.W. Norton & Co.
- Garrett, Geoffrey. 1998. *Partisan Politics in the Global Economy*. Cambridge University Press, New York, NY.
- Garrett, Geoffrey and Peter Lange. 1991. "Political Responses to Interdependence: What's "Left" for the Left?" *International Organization* 45 (3): 539-564.
- Hall, Peter A. and David Soskice. Editors. 2001. *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.
- Iversen, Torben. 2005. *Capitalism, Democracy, and Welfare*. Cambridge: Cambridge University Press.
- Iversen, Torben and David Soskice. 2001. "An Asset Theory of Social Policy Preferences." *American Political Science Review* 95 (4): 875-893.
- Jordà, Òscar, Moritz Schularick, and Alan M. Taylor. 2010. "Financial Crises, Credit Booms, and External Imbalances: 140 Years of Lessons." NBER Working Paper No. 16567 (December).
- King, Mervyn. 2010. Governor of the Bank of England, Speech at the University of Exeter. January 19.

Mian, Atif, Amir Sufi, and Francesco Trebbi. 2010. "The Political Economy of the Subprime Mortgage Credit Expansion." NBER Working Paper 16107, June.

Obstfeld, Maurice and Kenneth Rogoff. 2009. "Global Imbalances and the Financial Crisis: Products of Common Causes." *CEPR Discussion Paper*, no 7606.

Reinhart, Carmen M., and Vincent R. Reinhart. 2009. "Capital Flow Bonanzas: An Encompassing View of the Past and Present." In *NBER International Seminar in Macroeconomics 2008*, edited by Jeffrey Frankel and Francesco Giavazzi, pp. 1-54. Chicago: Chicago University Press for the National Bureau of Economic Research.

Reinhart, Carmen M., and Kenneth S. Rogoff. 2009. *This Time is Different: Eight Centuries of Financial Folly*. Princeton, NJ: Princeton University Press.

Rodrik, Dani. 1997. *Has Globalization Gone Too Far?* Washington, DC: Congressional Quarterly Press.

Sá, Filipa, Pascal Towbin, and Tomasz Wieladek. 2011. "Low Interest Rates and Housing Booms: The Role of Capital Inflows, Monetary Policy and Financial Innovation." *Bank of England Working Paper* No. 411 (February).

Schwartz, Herman and Leonard Seabrooke, eds. 2009. *The Politics of Housing Booms and Busts*. New York: Palgrave Macmillan.

Schwartz, Herman and Leonard Seabrooke. 2008. "Varieties of Residential Capitalism in the International Political Economy: Old Welfare States and the New Politics of Housing." *Comparative European Politics* (6): 237-261.

Taylor, John B. 2009. *Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis*. Stanford: Hoover Institution Press.

Figure 1: Causal Pathway from International Capital Flows to Fiscal Policy

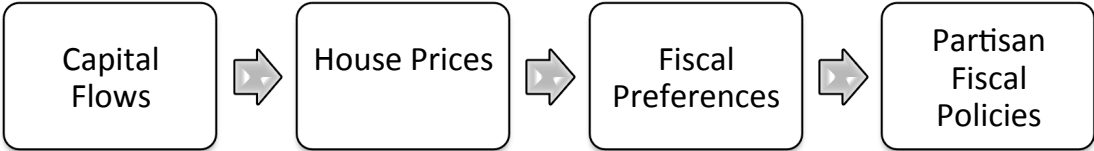
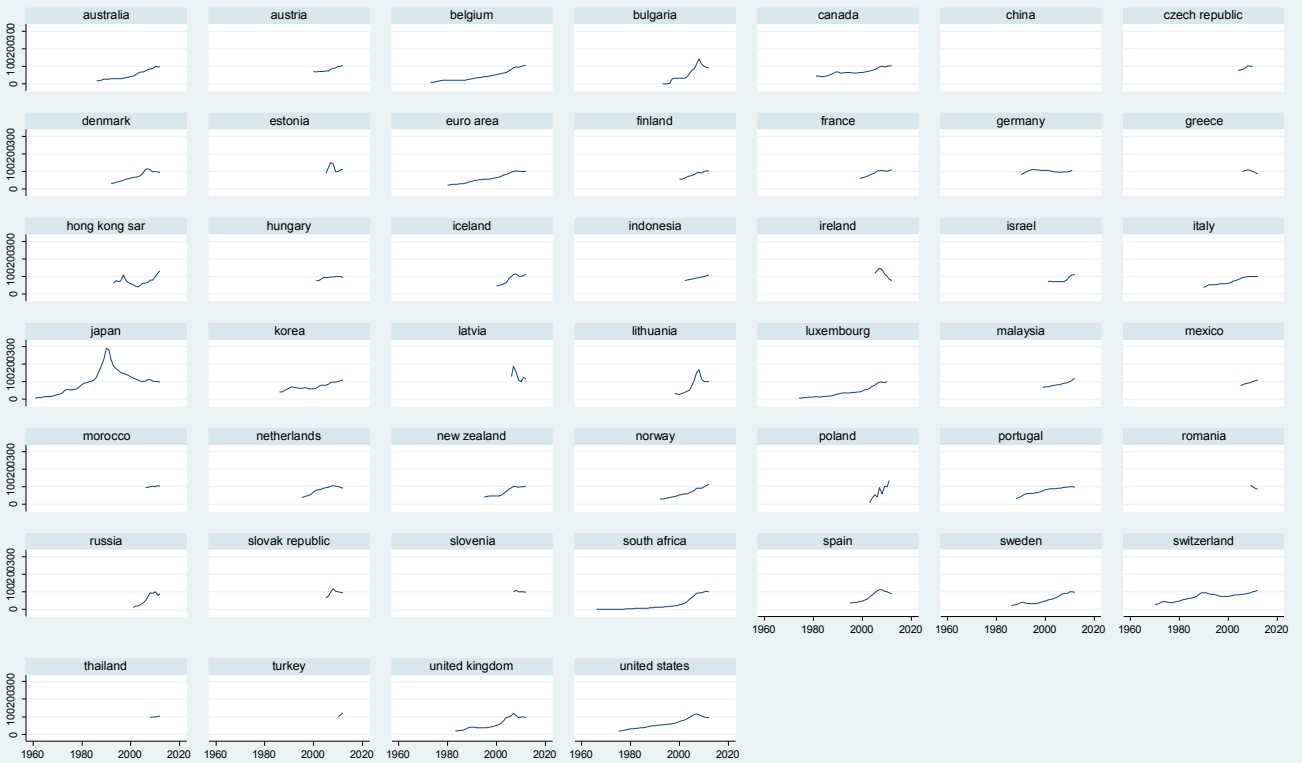
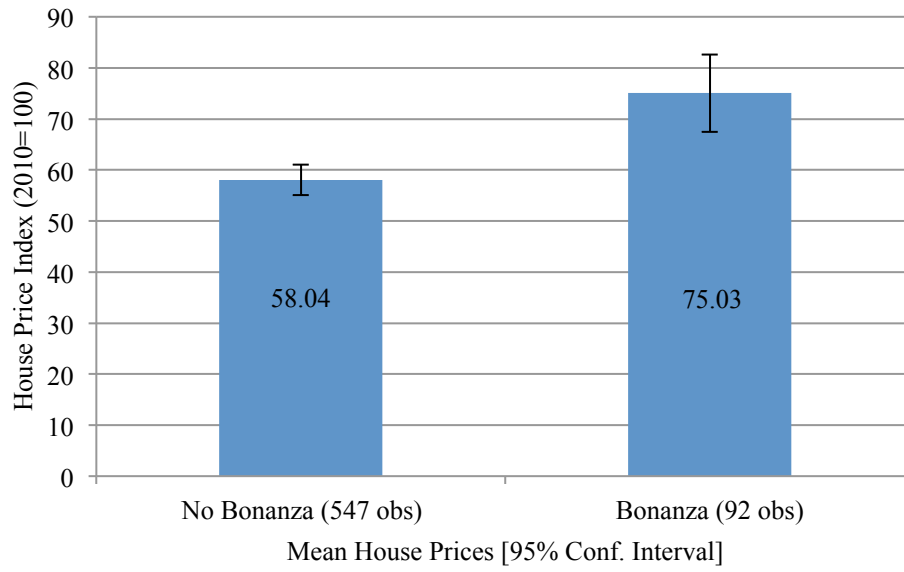


Figure 2: House Prices Indices for 46 Countries



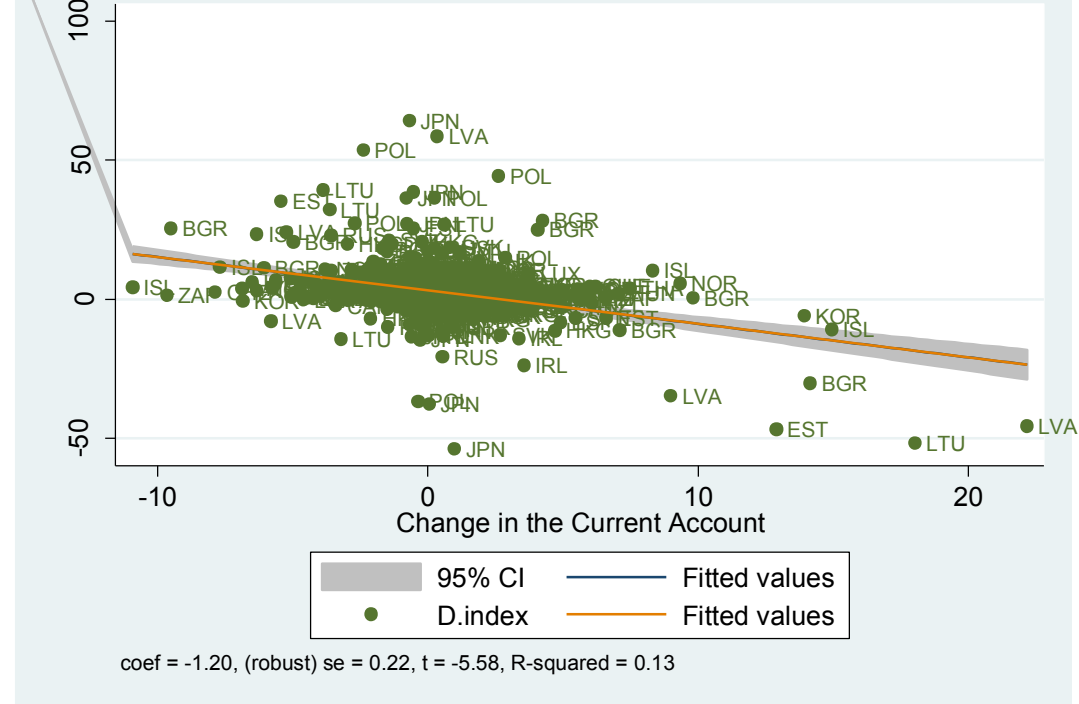
Graphs by country

Figure 3: House Prices and Capital Inflow Bonanzas, 1960-2011

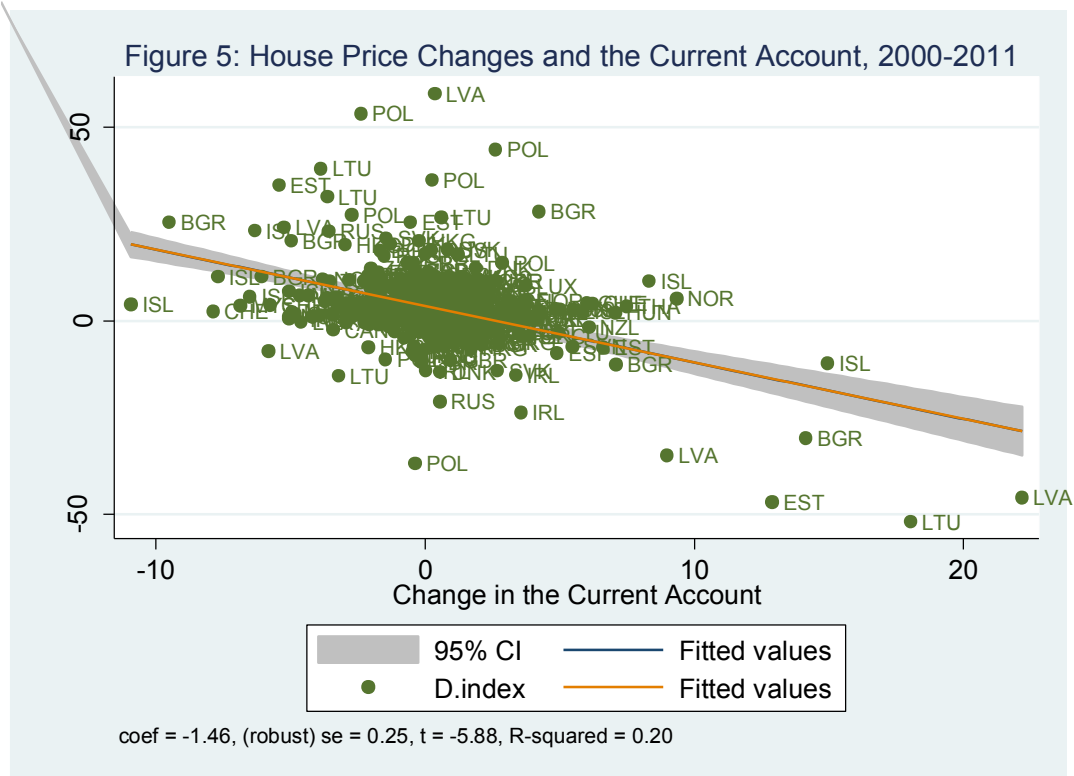


Note: The difference in means between the two groups (16.99) is highly significant ($t = 4.24$).

Figure 4: Changes in House Prices and the Current Account, 1960-2011



Notes: Fitted regression line and 95% confidence bands for 46 countries from 1960 through 2011.



Notes: Fitted regression line and 95% confidence bands for 46 countries from 2000 through 2011.

Figure 6a: Current Account Balance and the Marginal Effects of House Prices on Spending

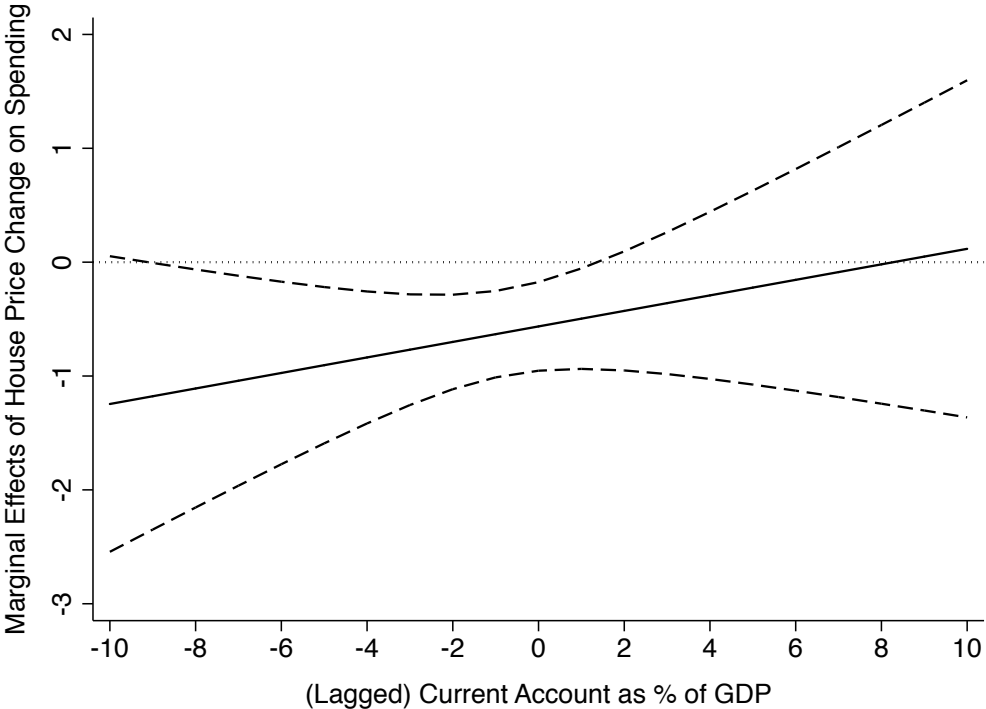


Figure 6b: Homeownership and the Marginal Effects of House Prices on Spending

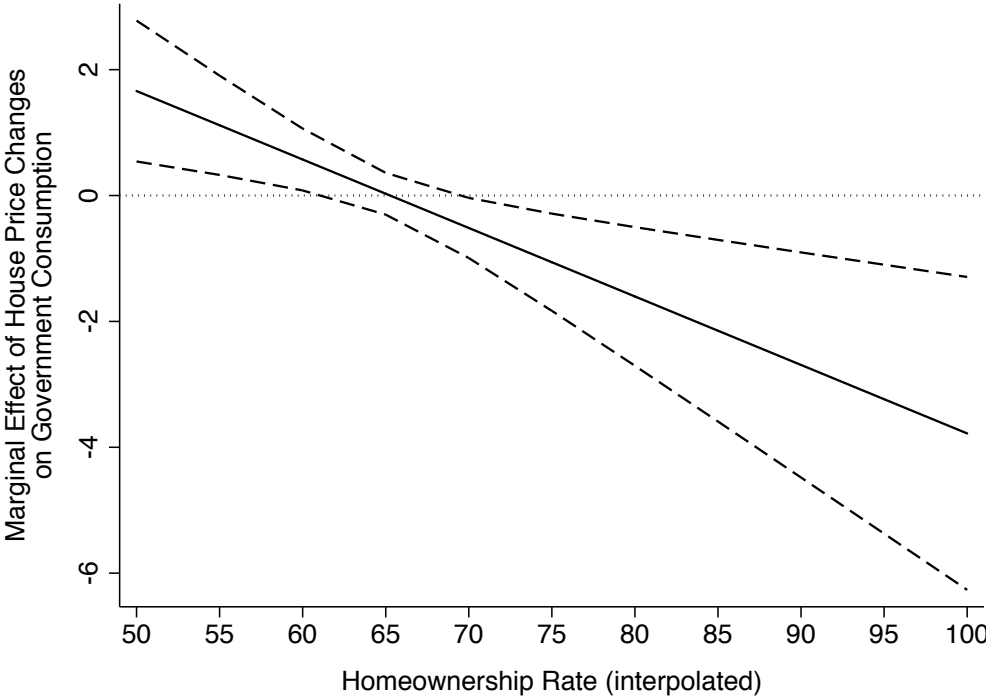


Figure 6c: Differential Effects of Partisanship on the Level of Spending

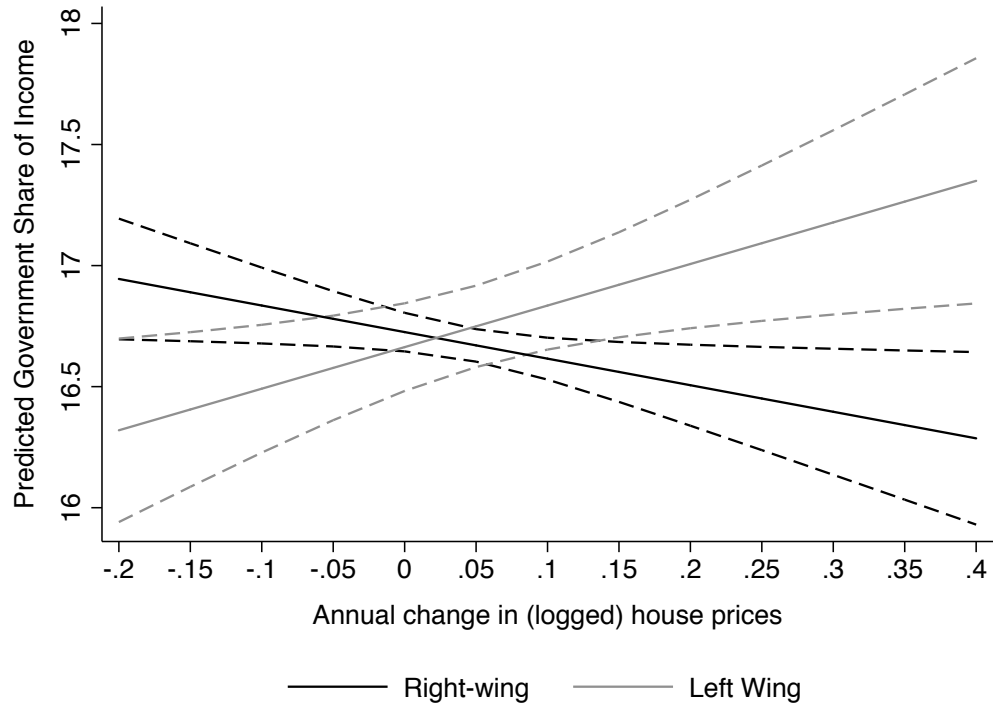


Table 1: House Prices and Preferences over Tax Policy

	(1) All	(2) Low Income	(3) High Income	(4) All	(5) Low Income	(6) High Income
House Equity	-0.046** (0.019)	-0.054*** (0.020)	-0.031 (0.023)	-0.054*** (0.018)	-0.041* (0.022)	-0.056** (0.022)
Own House	0.105 (0.084)	0.128 (0.104)	0.059 (0.090)	0.116* (0.069)	0.056 (0.083)	0.144 (0.111)
Log Income	-0.122 (0.099)	0.067 (0.117)	-0.423*** (0.148)	-0.132 (0.100)	0.126 (0.110)	-0.401** (0.160)
Sex	-0.074* (0.044)	-0.076 (0.058)	-0.074 (0.070)	-0.081* (0.044)	-0.155*** (0.048)	-0.001 (0.063)
Age	0.011*** (0.003)	0.012*** (0.003)	0.010** (0.005)	0.011*** (0.003)	0.011*** (0.003)	0.012*** (0.004)
Partisanship	-0.358*** (0.057)	-0.302*** (0.070)	-0.427*** (0.051)	-0.384*** (0.067)	-0.319*** (0.075)	-0.462*** (0.063)
Children	0.057** (0.022)	0.041 (0.030)	0.075*** (0.026)	0.024 (0.024)	-0.003 (0.032)	0.063*** (0.025)
Religiosity	0.000 (0.026)	0.007 (0.025)	-0.011 (0.032)	0.015 (0.020)	0.023 (0.018)	-0.001 (0.029)
<i>N</i> Countries	15809 29	8848 29	6961 29	15212 29	8435 29	6777 29

Standard errors in parentheses * $p < 0.10$, ** $p < 0.051$, *** $p < 0.01$

Table 2: House Prices and Preferences over Redistribution

	(1) All	(2) Low Income	(3) High Income	(4) All	(5) Low Income	(6) High Income
House Equity	-0.065 ^{***} (0.025)	-0.065 ^{**} (0.026)	-0.053 [*] (0.030)	-0.028 (0.019)	-0.043 ^{***} (0.016)	-0.013 (0.026)
Own House	0.169 ^{**} (0.078)	0.200 ^{**} (0.098)	0.039 (0.119)	0.006 (0.079)	0.116 (0.075)	-0.181 (0.133)
Log Income	-0.152 [*] (0.084)	0.133 ^{**} (0.064)	-0.448 ^{***} (0.165)	-0.135 ^{***} (0.045)	-0.126 ^{**} (0.055)	-0.181 (0.138)
Sex	0.203 ^{***} (0.049)	0.168 ^{***} (0.063)	0.240 ^{***} (0.062)	0.037 (0.063)	0.062 (0.056)	0.023 (0.091)
Age	-0.005 (0.004)	-0.003 (0.003)	-0.007 (0.005)	0.005 [*] (0.003)	0.003 (0.003)	0.008 [*] (0.005)
Partisanship	-0.398 ^{***} (0.058)	-0.330 ^{***} (0.065)	-0.483 ^{***} (0.059)	-0.295 ^{***} (0.036)	-0.230 ^{***} (0.034)	-0.387 ^{***} (0.051)
Children	0.063 ^{***} (0.022)	0.043 (0.030)	0.092 ^{***} (0.026)	0.011 (0.015)	0.001 (0.022)	0.022 (0.020)
Religiosity	0.015 (0.042)	0.013 (0.038)	0.016 (0.049)	-0.011 (0.022)	0.011 (0.024)	-0.039 (0.025)
<i>N</i> Countries	15839 29	8860 29	6979 29	15821 29	8856 29	6965 29

Standard errors in parentheses * $p < 0.10$, ** $p < 0.051$, *** $p < 0.01$

Table 3: Multilevel Analysis of Home Ownership and Policy Preferences

	(1) Tax Opinion	(2) Tax Country	(3) Redistribution	(4) Aid to Poor
House Price Change (5 Year)	0.097 (0.562)	0.182 (0.414)	1.302*** (0.487)	0.251 (0.236)
Homeowner	-0.009 (0.112)	-0.049 (0.072)	-0.113 (0.103)	-0.018 (0.068)
Homeowner X House Price Change	-0.428** (0.173)	-0.447** (0.200)	-0.123 (0.157)	-0.198 (0.183)
Log Income	-0.178 (0.111)	-0.205* (0.114)	-0.212** (0.084)	-0.194*** (0.044)
Sex	-0.076 (0.049)	-0.074 (0.052)	0.221*** (0.062)	0.054 (0.080)
Age	0.010** (0.005)	0.011*** (0.004)	-0.004 (0.004)	0.006* (0.003)
Partisanship	-0.321*** (0.048)	-0.348*** (0.051)	-0.369*** (0.051)	-0.312*** (0.044)
Children	0.056* (0.030)	0.029 (0.030)	0.055** (0.026)	0.016 (0.019)
Religiosity	-0.009 (0.030)	-0.001 (0.020)	0.014 (0.038)	0.017 (0.023)
<i>N</i>	12378	11909	12336	12130
Countries	21	21	21	21

Standard errors in parentheses * $p < 0.10$, ** $p < 0.051$, *** $p < 0.01$

Table 4 (a): House Prices and Government Consumption

	(1)	(2)	(3)	(4)
	Fixed Effects	Random Effects	Fixed Effects	Random Effects
Lagged DV	0.819 ^{***} (0.0327)	0.965 ^{***} (0.0125)	0.773 ^{***} (0.0226)	0.964 ^{***} (0.0122)
Ch. House Prices	-0.542 ^{**} (0.227)	-0.704 ^{***} (0.188)	-0.523 [*] (0.267)	-0.644 ^{***} (0.182)
Ch. GDP per cap	-0.226 ^{**} (0.0907)	-0.152 ^{***} (0.0574)	-0.261 ^{***} (0.0852)	-0.184 ^{***} (0.0678)
Lag GDP per cap			-0.0148 (0.0149)	-0.000593 (0.00557)
Ch. Exchange Rate	0.139 [*] (0.0721)	0.111 (0.0867)	0.408 ^{***} (0.121)	0.140 (0.0902)
Lag Exchange Rate			0.624 ^{***} (0.198)	0.0120 (0.0161)
Ch. Population	-0.133 (0.0842)	-0.0653 (0.0418)	-0.323 ^{**} (0.137)	-0.109 [*] (0.0656)
Lag Population			-0.00528 (0.00333)	0.000948 (0.000731)
Ch. Exports	-6.061 ^{***} (1.644)	-6.214 ^{***} (1.622)	-6.985 ^{***} (1.701)	-6.558 ^{***} (1.743)
Lag Exports			-3.065 ^{**} (1.255)	-0.110 (0.398)
Ch. Imports	-3.873 ^{***} (1.197)	-4.100 ^{***} (1.367)	-4.861 ^{***} (1.273)	-4.395 ^{***} (1.329)
Lag Imports			-2.372 [*] (1.186)	-0.431 (0.396)
Ch Price Govt	-0.632 (0.463)	-0.477 (0.444)	-0.544 (0.520)	-0.456 (0.451)
Lag Price Govt			0.136 (0.294)	-0.00451 (0.121)
Ch TFP	-4.302 [*] (2.208)	-4.550 ^{**} (2.182)	-4.852 ^{**} (1.855)	-4.236 [*] (2.395)
Lag TFP			-0.948 (1.032)	0.0494 (0.311)
Constant	3.976 ^{***} (0.664)	0.997 ^{***} (0.279)	5.233 ^{***} (1.010)	0.873 ^{***} (0.263)
<i>N</i>	720	720	720	720
Countries	43	43	43	43

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4(b): House Prices, Current Account Balance and Government Consumption

	(1)	(2)	(3)	(4)
	Fixed Effects	Random Effects	Fixed Effects	Random Effects
Lagged DV	0.804 ^{***} (0.0256)	0.957 ^{***} (0.0135)	0.782 ^{***} (0.0262)	0.952 ^{***} (0.0134)
Ch. House Prices	-0.324 (0.231)	-0.564 ^{***} (0.198)	-0.337 (0.219)	-0.451 ^{**} (0.199)
Lag Current Acct	-0.0302 ^{**} (0.0146)	-0.0146 ^{**} (0.00736)	-0.00736 (0.0173)	-0.0231 ^{**} (0.0103)
Ch. Prices X CA	0.0660 (0.0615)	0.0681 (0.0682)	0.0719 (0.0600)	0.0768 (0.0699)
Ch. GDP per cap	-0.238 ^{**} (0.0980)	-0.138 ^{**} (0.0638)	-0.271 ^{***} (0.0902)	-0.179 ^{**} (0.0767)
Lag GDP per cap			-0.0132 (0.0196)	0.00257 (0.00565)
Ch. Exchange Rate	0.111 (0.0909)	0.0984 (0.0925)	0.456 ^{***} (0.147)	0.141 (0.101)
Lag Exchange Rate			0.707 ^{***} (0.212)	0.0273 [*] (0.0159)
Ch. Population	-0.405 ^{***} (0.140)	-0.0901 ^{**} (0.0380)	-0.303 (0.208)	-0.186 ^{**} (0.0887)
Lag Population			-0.00691 (0.00415)	0.00138 (0.000925)
Ch. Exports	-7.577 ^{***} (2.201)	-7.389 ^{***} (2.078)	-7.926 ^{***} (1.870)	-8.461 ^{***} (2.285)
Lag Exports			-2.881 ^{**} (1.198)	0.266 (0.592)
Ch. Imports	-5.495 ^{***} (1.378)	-4.960 ^{***} (1.593)	-6.006 ^{***} (1.449)	-5.846 ^{***} (1.633)
Lag Imports			-2.957 ^{**} (1.114)	-0.271 (0.526)
Ch Price Govt	-0.589 (0.440)	-0.505 (0.437)	-0.564 (0.525)	-0.488 (0.444)
Lag Price Govt			0.0795 (0.312)	-0.0424 (0.138)
Ch TFP	-3.441 (2.420)	-3.631 (2.511)	-3.857 [*] (1.980)	-2.872 (2.868)
Lag TFP			-0.879 (1.081)	0.00780 (0.352)
Constant	2.908 ^{***} (0.301)	0.512 ^{***} (0.0854)	4.533 ^{***} (1.412)	0.401 (0.374)
<i>N</i>	644	644	644	644
Countries	43	43	43	43

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4(c): House Prices, Homeownership and Government Consumption

	(1) Fixed Effects	(2) Random Effects	(3) Fixed Effects	(4) Random Effects
Lagged DV	0.779 ^{***} (0.0448)	0.968 ^{***} (0.0128)	0.752 ^{***} (0.0497)	0.938 ^{***} (0.0178)
Ch. House Prices	5.355 ^{**} (2.548)	7.101 ^{***} (2.354)	6.401 ^{**} (2.589)	7.825 ^{***} (2.576)
Homeownership	0.0226 (0.0149)	0.00215 (0.00412)	0.0244 (0.0170)	0.00866 (0.00591)
Prices X Homeown	-0.0849 ^{**} (0.0385)	-0.109 ^{***} (0.0361)	-0.102 ^{**} (0.0390)	-0.118 ^{***} (0.0390)
Ch. GDP per cap	-0.163 ^{**} (0.0743)	-0.111 [*] (0.0606)	-0.248 ^{**} (0.101)	-0.175 ^{**} (0.0783)
Lag GDP per cap			-0.0633 ^{***} (0.0158)	-0.0255 [*] (0.0149)
Ch. Exchange Rate	-4.532 (12.86)	-0.108 (10.84)	4.343 (12.41)	-0.202 (12.27)
Lag Exchange Rate			5.673 (6.711)	-0.330 (0.723)
Ch. Population	0.0662 (0.406)	0.187 (0.242)	-0.549 (0.529)	0.288 (0.265)
Lag Population			0.0502 (0.0532)	0.00233 (0.00218)
Ch. Exports	-5.805 ^{**} (2.152)	-6.269 ^{**} (2.550)	-8.462 ^{***} (2.534)	-7.381 ^{***} (2.447)
Lag Exports			-3.893 ^{**} (1.614)	0.123 (0.496)
Ch. Imports	-4.715 ^{***} (1.461)	-5.290 ^{***} (1.920)	-8.004 ^{***} (2.589)	-6.455 ^{***} (1.843)
Lag Imports			-4.655 ^{**} (2.241)	-1.129 ^{**} (0.549)
Ch Price Govt	-0.411 (0.682)	-0.413 (0.644)	-0.414 (0.752)	-0.184 (0.636)
Lag Price Govt			-0.0358 (0.404)	0.252 [*] (0.152)
Ch TFP	-2.339 (1.572)	-3.364 (2.194)	-1.156 (2.654)	-1.901 (2.049)
Lag TFP			0.124 (1.515)	0.0947 (0.693)
Constant	1.713 (1.326)	-0.0779 (0.287)	1.899 (2.762)	-0.375 (0.634)
<i>N</i>	263	263	263	263
Countries	26	26	26	26

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4 (d): House Prices, Partisanship, and Government Consumption

	(1) Fixed Effects	(2) Random Effects	(3) Fixed Effects	(4) Random Effects
Lagged DV	0.868 ^{***} (0.0338)	0.977 ^{***} (0.00853)	0.793 ^{***} (0.0333)	0.976 ^{***} (0.00750)
Ch. House Prices	-0.973 ^{**} (0.433)	-1.097 ^{**} (0.502)	-0.846 ^{**} (0.394)	-1.045 ^{**} (0.513)
Left Cabinet	0.208 (0.194)	-0.0622 (0.111)	0.106 (0.168)	-0.127 (0.124)
Center Cabinet	0.0977 (0.0705)	0.0652 (0.0626)	0.0382 (0.0751)	0.0763 (0.0612)
Ch. Prices X Left	1.584 [*] (0.809)	2.814 ^{***} (0.781)	1.301 (0.800)	2.616 ^{***} (0.836)
Ch. Prices X Center	0.613 (0.591)	0.863 (0.683)	0.256 (0.458)	0.855 (0.692)
Ch. GDP per cap	-0.251 ^{***} (0.0824)	-0.255 ^{***} (0.0762)	-0.280 ^{***} (0.0972)	-0.282 ^{***} (0.0835)
Lag GDP per cap			-0.00887 (0.0134)	0.00352 (0.00490)
Ch. Exchange Rate	0.485 (0.370)	0.824 ^{**} (0.387)	0.354 (0.554)	0.851 ^{**} (0.404)
Lag Exchange Rate			0.403 (0.514)	0.162 (0.120)
Ch. Population	-0.174 (0.133)	-0.0820 ^{***} (0.0281)	-0.362 ^{**} (0.163)	-0.0531 (0.0705)
Lag Population			-0.00228 (0.00322)	-0.0000623 (0.000753)
Ch. Exports	-7.837 ^{***} (1.690)	-8.490 ^{***} (1.840)	-8.734 ^{***} (2.066)	-8.955 ^{***} (1.978)
Lag Exports			-3.608 ^{**} (1.403)	-0.181 (0.373)
Ch. Imports	-6.015 ^{***} (1.131)	-6.523 ^{***} (1.307)	-7.071 ^{***} (1.714)	-6.858 ^{***} (1.353)
Lag Imports			-3.136 ^{**} (1.498)	-0.367 (0.364)
Ch Price Govt	-1.114 ^{***} (0.380)	-1.005 ^{***} (0.375)	-1.192 ^{***} (0.361)	-0.992 ^{***} (0.374)
Lag Price Govt			-0.258 (0.261)	0.00746 (0.113)
Ch TFP	-4.042 ^{**} (1.549)	-3.688 ^{**} (1.850)	-4.459 ^{**} (2.025)	-3.563 [*] (1.911)
Lag TFP			-0.425 (0.834)	-0.150 (0.324)
Constant	2.607 ^{***} (0.623)	0.706 ^{***} (0.229)	4.511 ^{***} (1.003)	0.688 ^{**} (0.305)
<i>N</i>	575	575	575	575
Countries	35	35	35	35

Standard errors in parentheses * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$



THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■



The London School of Economics
and Political Science
Houghton Street
London WC2A 2AE
United Kingdom

Tel: +44 (0)20 7405 7686
systemicrisk.ac.uk
src@lse.ac.uk