The Political Origins of Exchange Rate Valuations*

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26 May 2019

Word Count: 9,798

ABSTRACT

The relative strength of a country’s currency is central to its economic performance. Real exchange rate overvaluation is linked to slower growth, whereas undervaluation is a robust correlate of growth. In this light, why do countries not consistently maintain undervalued currencies? Why do we not observe competitive devaluations? We propose that the benefits to consumers – lower prices and reduced risk of inflation – leads countries with high levels of political competition to avoid undervaluation and to tend toward overvaluation. We demonstrate a robust correlation between political competition and currency overvaluation. We examine 300+ elections in 54 democratic countries from 1972 to the present and show that voters punish currency undervaluation and reward moderate overvaluation. In survey experiments conducted in three advanced industrialized nations with divergent monetary and exchange rate policies and institutions, we find respondent preferences for sustained moderate currency overvaluation. (140 words)

* Previous versions were presented at the International Studies Association 56th Annual Convention, February 18–21, 2015, in New Orleans, Louisiana, the Georgetown Mortara Political Economy Workshop, the International Political Economy Society 2016 annual meeting, the Columbia University “Hierarch of Money” 2016 conference, the European Political Science Association Annual Meeting 2017 (Milan), ESADE, a CIDE (Mexico) workshop, and the Princeton Neihaus Vietnam Conference March 2018. We especially thank Timm Betz, Lawrence Broz, Marc Busch, Jeff Frieden, Andres Kern, Vytautas Kuokštis, Ed Mansfield, Helen Milner, Pietra Rivoli, and Jim Vreeland for comments. Maria Toyoda was a coauthor on an earlier version of the paper, and we thank her for her contribution.
The value of a country’s domestic currency relative to other countries’ currencies – its real exchange rate – is central to the politics of globalization. The real exchange rate is politically important because the distributional consequences of a depreciated (or appreciated) real exchange rate are unequal: some constituencies win, while others lose. When the currency is undervalued relative to others, exports are more competitive on global markets and thus tend to increase, along with wages and employment among exporting firms and industries. Moreover, less competitive import-competing firms and workers are more protected from international competition with an undervalued currency. When the currency is overvalued, imports can surge, benefiting consumers but imperiling import-competing firms and industries (Broz and Werfel 2014; Jensen, Quinn, and Weymouth 2015).

Distributional concerns notwithstanding, governments have strong economic growth incentives to pursue undervaluation and avoid extensive overvaluation. In an influential paper, Rodrik (2008) finds a robust correlation between undervalued exchange rates and economic growth. Rapetti, Skott, and Razmi’s (2012) review of the literature reports that the estimated positive growth effects of undervaluation are robust to estimation techniques, samples, and data choices. Currency overvaluation, while attractive to consumers, is linked to macroeconomic instability (Fischer 1993) and slower economic growth (Easterly 2005; Rodrik 2008). Persistent overvaluation is also associated with current account deficits and balance-of-payments crises,

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1 See Frieden (2015) for the canonical statement on the political implications of exchange rates.
See Owen and Walter 2016 for a review of the ‘open economy macro’ literature.

2 See also Berg and Miao (2010).
particularly in emerging markets – all of which harm growth.\textsuperscript{3} Levy-Yeyati and Sturzenegger (2007) coin the term “fear of appreciation” to capture the asymmetry in economic performance between sustained undervaluation and overvaluation, and the consequent incentives to avoid the latter.

The global politics of exchange rate policy are highly contentious, as real exchange rates can strongly influence export competitiveness. Indeed, the distributional consequences of countries’ undervaluations in trade partner countries engender intense domestic and international political division (Broz and Frieden 2006; Copelovitch and Pevehouse 2013). For instance, Autor, Dorn, and Hanson (2013) link the rapid rise in U.S. imports from China – fueled in part by an undervalued yuan – to the loss of millions of manufacturing jobs in the United States. Firms exporting from an undervalued country become more internationally competitive, often prompting foreign competitors to initiate demands for protection.\textsuperscript{4} In turn, rising import competition appears to drive political polarization and anti-incumbent voting (Autor et al 2016, Jensen, Quinn, and Weymouth 2017).

In light of the evidence about the growth, the trade effects of undervaluation and the resulting political incentives, an important puzzle remains unresolved: \textit{Why do many countries consistently maintain moderately overvalued currencies over time, when sustained}

\textsuperscript{3} For a dissenting view, see Schroeder (2013).

\textsuperscript{4} Steinberg and Shih (2012) argue that the demands of tradable industries in China for undervaluation are strongest in the absence of other compensatory policies, such as export subsidies.
Undervaluation appears to promote economic growth?²⁵ Put another way, why do we not observe a greater tendency toward competitive devaluations – currency wars – among countries? A concern about competitive devaluations appeared in the wake of the Global Financial Crisis when many central banks responded to the crisis with extended monetary expansions (e.g., The Economist 2010). However, against expectations to the contrary, the governments of wealthy democracies coordinated their monetary policies and explicitly refrained from competitive devaluations (Bernanke 2013). Although competitive devaluations do happen, they are rather infrequent, particularly among democracies, and have rarely led to direct responses by the country’s trading partners.

The degree of competitiveness of political institutions is the key to understanding why many countries do or do not undervalue their currencies for sustained periods. As we will show, most democracies tend to maintain moderately overvalued currencies. Currency undervaluation and overvaluation each harm constituencies that can mobilize in highly competitive political contexts. For instance, undervaluation either helps or harms firms depending on the nature of their international transactions. Competing commercial interests over the real exchange rate tend to limit extreme under- or overvaluations over time through robust political competition. What is more, the currency valuation interests of consumers are relatively straightforward: consumers tend to benefit from a slightly overvalued currency through accentuated purchasing power. Given the larger numbers of consumers relative to those employed in export oriented industries, strong political competition contributes to a tendency toward overvaluation.

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²⁵ Since 1975, the currency valuation of the original 22 OECD member states has averaged an estimated overvaluation of more than 30% (authors’ calculations, described below).
Examining data on real exchange rate valuations between 1975 and 2017, we demonstrate two novel findings. First, we find that countries with competitive political institutions are particularly unlikely to sustain an undervalued currency. The results hold in both ordinary least squares (OLS) and instrumental variable (IV) models using global waves of institutional change as an instrument for competitive political institutions (Acemoglu et al 2019). We find that neutral to overvalued currencies correlate with other features of democratic governance (e.g., checks and civil liberties), but the statistical significance of the estimated effects of other features of democratic governance largely vanish once we account for the competitiveness of democratic institutions.

Second, we find strong evidence that incumbents are harmed electorally by currency undervaluation, but rewarded for moderate levels of overvaluation. At very high levels of currency overvaluation, however, incumbents are penalized for further appreciation. Our analysis suggests that there exists an electoral ‘safe zone,’ roughly at overvaluation levels on par with the relative valuation of the U.S. dollar, where incumbent reelection prospects are largely unaffected by modest changes in currency valuations.

We then explore the microfoundations of the observed electoral connection between currency valuation and voter preferences through a survey experiment conducted in Australia, Germany and the U.S., countries characterized by moderate levels of currency overvaluation, but with varying export dependences, monetary policy institutions, and exchange rate regimes. Respondents in all three countries exhibit a strong preference for a stable exchange rate, and indicate a propensity to punish their governments for deviations from the overvalued exchange rate. Their preference for an overvalued exchange rate prevails although respondents in two out of three countries are aware of the possibility that depreciations may be beneficial for national
economic performance. Respondents nonetheless support the overvalued exchange rate because they are also aware that, as consumers, depreciations make them personally worse off.

Our paper contributes to the literature that examines how political institutions influence foreign economic policies (Milner 1999). Steinberg (2015) demonstrates that state control over labor and financial markets, a hallmark of authoritarian governance, enable the pursuit of undervaluation as a growth strategy. Other related work finds that weak democratic institutions can contribute to currency instability (Freeman, Hays, and Stix 2000, Hays, Freeman, and Nesseth 2003, Bodea 2010, Weymouth 2011), and that democratic governments’ commitments to an exchange rate peg, when made, are indeed more credible (Guisinger and Singer 2010). Our contribution shows, for the first time, that competitive electoral institutions make sustained undervaluation difficult since incumbents are penalized electorally for currency undervaluation.

THE POLITICAL ECONOMY OF EXCHANGE RATE MANAGEMENT

Because the real exchange rate is a relative price, governments do not have complete control over its movement. There is, however, widespread agreement that the real exchange rate can be considered a policy variable because governments can – and do – influence it through a number of direct and indirect policy instruments. Direct interventions include foreign exchange market transactions, which may affect the nominal value of the domestic currency. More indirectly,

6 See also Steinberg and Malhotra 2014. This is consistent with the claim that some autocratic countries are able to maintain stable and higher growth rates (Chandra and Rudra 2015).

7 See also Bernhard and Leblang 1999; Frieden, Leblang, and Valey 2010; Plümper and Neumayer 2011; Bearce and Hallerberg 2011.
monetary and fiscal policies can influence the real exchange rate. For instance, a sustained overvaluation will sometimes require relatively high domestic interest rates, which attract investment and raise the relative value of the domestic currency. Increased public spending or fiscal transfers (fiscal expansion) can cause prices to rise in nontradables, shifting resources to the production of nontradable goods, and thus putting upward pressure on the real exchange rate (Iverson and Soskice 2010). Usually through a combination of multiple policy tools, policymakers have been quite successful at maintaining undervalued and overvalued exchange rates over long periods of time (Rodrik 2008).

What factors explain variation in exchange rate policies and outcomes? Why do some countries pursue undervaluation while others do not? A large literature examines these questions by focusing on the domestic distributional implications of currency valuations. The offsetting economic consequences of currency undervaluation and overvaluation create formidable constituencies. The politics of exchange rates revolve around competition among interest groups to achieve the currency outcomes that best align with their economic interests (e.g., Frieden 1991, 2015). Political institutions matter too, since institutions determine the formation of political coalitions – and shape the incentives of politicians to pursue exchange rate policies that favor some groups over others. In this section, we outline the expected distributional effects of different real exchange rate levels, highlighting the undervaluation case. We then turn to

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8 Steinberg (2015) and Steinberg and Shih (2012) argue that China’s pursuit of sustained undervaluation was possible in part due to state control of financial markets.

9 As Eichengreen (2007) notes, the impact of fiscal policy on the real exchange rate depends on a number of market conditions, including the level of private spending and investment.
explanations about how institutional factors shape exchange rate politics to develop our argument concerning the possible relationships between electoral competition and currency valuations.

*The Diversity of Interests around the Domestic Currency Level*

The level of the exchange rate is profoundly consequential to the economic fortunes of nearly everyone – but unlike other economic outcomes such as growth, the level of the currency relative to other currencies affects different groups in different ways. Here we develop expectations about the economic effects of undervalued currencies on consumers and producers.

Undervaluation exerts a clear, adverse effect on consumers through the erosion of purchasing power. As the currency depreciates, imports become more expensive. The drop in import competition after a depreciation may eliminate the incentive for domestic producers to keep prices low. Thus, an “artificially” depreciated currency risks higher inflation as the prices of imported consumer and input goods rise, and domestic producers have less incentive to moderate prices. That is, undervaluation contributes to higher inflation if domestic firms increase their prices in response to diminished foreign competition. In this way, a weak domestic currency erodes the purchasing power of domestic consumers. (Conversely, an appreciated domestic currency increases import competition and encourages firms to keep prices low.) We expect that

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10 Plümper and Neumayer (2011) show that exchange rate depreciations lead to a rise in inflation due to increases in the prices of goods. In line with this, Bodea (2014) finds that stable exchange rates reduce inflationary expectations. See also Walter (2014).
citizens’ consumption interests, particularly in democratic settings, strongly constrain
governments’ ability to maintain undervalued currencies.

While undervaluation is harmful to consumer interests, the effects of a depreciated
currency on firms is more complicated. All else equal, undervaluation makes the goods and
services produced by domestic firms more competitive relative to imports: domestic products
become relatively less expensive compared to those from foreign competitors.\textsuperscript{11} Therefore,
undervaluation can protect less competitive domestic firms. For exporters, a depreciated
currency makes their products more competitive (i.e., cheaper) on global markets. More
generally, an undervalued real exchange rate implies an increase in the price of tradable goods
and services relative to nontradables. For firms with large shares of outputs that are tradable
relative to their inputs, a cheaper currency implies an increase in profits. In line with these
distributional expectations, Broz, Frieden, and Weymouth (2008) show that firms in tradable
goods sectors are more likely to express concerns about exchange rate \textit{appreciations}.

At the same time, not all tradables producers benefit equally from an undervalued
exchange rate. In particular, the expansion of global supply chains in which parts and
components are increasingly produced in multiple countries, complicate the deduction of firms’
exchange rate objectives. For one thing, firms that rely largely on tradable inputs may see a
reduction in profits following the depreciation of the local currency (Frieden 2015; Egan 2016).\textsuperscript{12}

\textsuperscript{11} The reverse outcome can result from an overvalued domestic currency: domestic tradables
producers become less competitive.

\textsuperscript{12} This negative effect amplifies among firms that import intermediates for the production of
nontradable goods and services.
Egan (2016) demonstrates that firms with a high dependence on imported inputs are dissatisfied with real depreciations. The fragmentation of production and trade across borders may contribute to considerable heterogeneity in firm exchange rate interests – potentially even dividing firms within the same industry (Frieden, 2015; Jensen, Quinn, and Weymouth 2015). Thus, despite the favorable boost to export competitiveness, the largest trading firms, which have value chains that extend around the world, will have conflicting interests regarding a weak domestic currency. Moreover, along with their global commercial interests, firms’ preferences for undervaluation may further depend on their individual balance sheets and the currency composition of private debt. Walter (2008) highlights the vulnerability of firms’ balance sheets to depreciation and increased interest rates. Firms with substantial debt denominated in foreign currency will also likely oppose domestic currency depreciation, all else equal.

*Political Competition Makes Sustained Undervaluation Difficult*

Democratic political competition shapes how governments respond to the policy preferences of diverse interests (Milner 1999; Mansfield, Milner and Rosendorff 2002). In democracies, elections entail competition from credible parties that represent constituents with opposing interests. To maximize political support, governments in democracies are more likely to pursue exchange rate policies with broad appeal (Bearce 2014). Despite the potentially powerful growth effects, strong constituencies opposing undervaluation will likely make the pursuit of sustained undervaluation politically untenable in politically competitive systems.\(^{13}\)

\(^{13}\) Moreover, the complex and countervailing effects of different exchange rate outcomes do not allow for a simple division of preferences along traditional partisan policy lines. For example,
Due to the general tendency of political competition to orient policy toward the interests of the median voter, countries with strong democratic political competition may tend instead toward somewhat *overvalued* real exchange rates. As Baker and Wojcik (2017) show, democracies tend in general to have lower prices than autocracies owing to consumer preferences. Given the large number of consumers relative to those employed in tradables industries, political competition shifts the relative weight of tradables producers towards the broad public and consumers. This discourages governments in competitive systems from sustained undervaluations because they harm the median voter’s consumption opportunities and therefore are detrimental to the government’s electoral prospects. In contrast, governments have strong incentives to respond to consumers’ interest in strong currencies and low inflation because of their importance for the government’s political success.

Voter behavior in competitive elections, therefore, represents a key mechanism determining exchange rate valuations. Governments respond to the median voter because governments anticipate that they will be penalized if they deviate from her preferred exchange

leftist parties in small, open, export-dependent economies are unlikely to share exchange rate policy preferences with leftist partisans in large relatively closed economies. Given the fragmentation of global value chains, conservative parties with strong ties to global businesses will also have heterogeneous preferences. We expect (and find) no systematic partisan policy differences among democracies.

In contrast, authoritarian regimes seeking an export advantage through currency undervaluation can more easily suppress consumer and worker demands for cheaper goods or higher wages (Steinberg 2015).
rate policy. If, as we propose, political competition leads governments away from currency undervaluations and towards moderate overvaluation, we should find a connection between exchange rate valuations and election outcomes. Politicians in democracies, on average, should be punished if the exchange rate is stably undervalued because this reduces consumption opportunities of a broad range of voters who do not directly benefit from enhanced export opportunities or protection against imports. In contrast, voters should reward politicians for greater consumption opportunities afforded by stably overvalued currencies.

However, there is likely a limit to overvaluation as a vote-maximizing strategy. At some point, continued increases in currency appreciation can imperil exporters and potentially introduce the risk of deflation and slow growth.\textsuperscript{15} Put another way, at high levels of overvaluation, further appreciation may harm reelection prospects. While consumers care about purchasing power, individual voters are also concerned about the strength of the economy and the competitiveness of exports. We therefore expect that on average countries with highly competitive political institutions will arrive at a moderately overvalued exchange rate.

If governments in competitive political systems pursue a vote-maximizing exchange rate policy, voters in stable but moderately overvalued settings should be satisfied with the exchange rate, as moderate overvaluation strikes a balance between the growth and consumption needs of the broad public. In contrast, the same voters should object to deviations from a moderately overvalued exchange rate level. We test these arguments below.

\textsuperscript{15} These two reasons were among the justifications used by the Swiss National Bank in its surprise devaluation of the Swiss Franc and its peg to the euro in September of 2011.
COMPUTING EXCHANGE RATE VALUATIONS

Using methodologies outlined in Rodrik (2008) and adapted from the International Monetary Fund (2013), we compute country-specific indices of real exchange rate valuations using the 2019 Penn World Tables update (PWT 9.1). The valuation index captures the unique yearly value of a country’s goods, relative to those in the United States at the prevailing nominal exchange rate. To generate our valuation index, we first compute:

\[ RER_{it}^{adj} = \ln(\text{XRAT}_{it} / \text{PPP}_{it}). \]  

(1)

XRAT\textsubscript{it} is the nominal exchange rate, and PPP\textsubscript{it} is the price index. Following Rodrik (2008), we control for the Balassa-Samuelson effect (that the relative prices of nontradables tend to increase with country wealth) using logged GDP per capita in a regression framework\textsuperscript{16}. The undervaluation index is the residual (\hat{\epsilon} \text{ XR}_{it}) of the following regression:

\[ RER_{it}^{adj} = \alpha + \beta \ln GDPPC_{it} + \gamma_t + \epsilon_{it} \]  

(2)

where \( \gamma_t \) is a year fixed-effect term. A virtue of this approach is that the currency valuations of all countries each year are estimated simultaneously in an equilibrium framework, allowing for a

\textsuperscript{16} The “output” version of income (RGDP\textsuperscript{o}) is used as the U.S. price level (US pl_gdpo) is necessary to compute the ratio of the home country price levels to the U.S. price levels. At every year, a country’s price level (pl_gdpo) is divided by the U.S. price level, which is the PWT reference country. The U.S. has therefore a price level equal to 1 for every year. The log of 1 is zero, which, following Rodrik, is then the reference category. The U.S., however, will not have a real exchange rate of zero as the U.S. is also subject to both the Balassa-Samuelson effect and global price shocks. The U.S. exchange rate valuation since 1970, adjusted for shocks and income effects, averaged a roughly 30% currency overvaluation.
comparison of the estimated values across countries and over time (cf. Cline and Williamson 2010). By convention, positive values of \( \hat{\varepsilon}_{XRi} \) denote undervaluation and negative values denote overvaluation. The period examined is 1970–2017, which is post-Bretton Woods and post-OPEC 1. Countries post-Bretton Woods were freer to make exchange rate choices.

In the next section, we examine the political and economic determinants of real exchange rates. We then examine whether changes in currency valuations affect electoral outcomes. We conclude empirically with a survey experiment testing the microfoundations of our argument.

**POLITICAL COMPETITION AND EXCHANGE RATE VALUATIONS**

We constructed a panel for up to 133 countries, from 1970 (or independence) to 2017, to investigate the political institutional correlates of undervaluation and overvaluation. We use democracy indicators from Polity 2 (Marshall et al. 2013).\(^{17}\) In addition to Polity itself, we employ two “concept” Polity variables: constraints on the executive (Exconst) and openness of political competition (Polcomp). We also use the measures of political rights and civil liberties taken from Freedom House (2013) and veto points (POLCON) from Henisz (2000).

We estimate dynamic panel models of the undervaluation index. We test for possible panel unit roots and cointegration among variables. Because of persistence in the data, lags of the endogenous variables necessary to produce serially uncorrelated residuals are employed (tested for using panel Durbin’s \( m \) for AR1). All of our models include year dummies \( \tau_i \) to account for global shocks and trends. The base five-year panel model, with \( i = 1, 2, \ldots, 133 \) and the index \( s \) representing a five-year period, from 1975 to 2017, is:

\(^{17}\) The data are currently available for 167 countries up to 2017.
\[ \hat{\epsilon} X_{R,i,t} = \beta_0 + \beta_1 Y_{i,s-1} + \beta_2 (GDP \text{ Growth}_{i,s-1}) + \beta_3 (\log \text{ GDP/capita}_{i,s-1}) + \beta_4 (\text{ Trade Balance}_{i,s-1}) + \beta_5 (\log \text{ Trade Openness}_{i,s-1}) + \beta_6 (\text{ Eurozone Membership}_{i,s-1}) + \beta_7 (\text{ Inflation}_{i,s-1}) + \beta_8 (\text{ Political Competition}_{i,s-1}) + \tau_s + \epsilon_{i,s} \]

\[ i=1,2,...,133. \quad (3) \]

The models are estimated in five year average panels to allow for business cycle effects. The economic control variables come from the Penn World Tables. Eurozone Membership is a dummy variable that takes a value of 1 for Eurozone countries.\(^ {18}\) Political Competition captures the measures of democratic institutions outlined above.

Since it is difficult to control for the full set of factors that may correlate with political institutions and the exchange rate, we estimate and report IV models in addition to OLS models to address these concerns.\(^ {19}\) This approach alleviates concerns about endogeneity of democracy and changes in political competition: a successful IV strategy can account for the numerous potentially omitted variables that may affect both democracy and subsequent undervaluation. Second, it can also help address concerns about measurement error in the democracy indicators.

**Other Attributes of Democratic Governance that Could Influence Exchange Rates**

Along with competitive elections, democracy is associated with a broader set of institutions that make sustained undervaluation difficult. In robustness tests, we consider a number of alternative

\(^ {18}\) Since countries must meet accession requirements, this variable is also lagged such that the period prior to membership is coded as 1.

\(^ {19}\) IVREG2 from Baum, Schaffer, and Stillman (2010) is used for the IV models.
channels through which democracies, and the constellation of institutions normally associated with them, may influence the value of the real exchange rate over time.

We consider the role of capital controls. Democracies are less likely to maintain capital controls (Milner and Murkherjee 2009; Quinn and Inclán 1997), and capital account restrictions are a useful tool for sustaining a particular exchange rate level. Undervaluation, in particular, requires capital controls to prevent rising domestic inflation.

Another channel through which democracies may influence the real exchange rate is through institutional checks and balances and other facets of decentralization or coalition formation, which may make quick and radical reversals of policies harder (Henisz 2000; Nooruddin 2011). Insofar as democratic governance is associated with independent central banks, clear monetary rules, and other structures limiting executive power, governments with constrained executives or many veto points might therefore be less likely to exhibit overvaluation or undervaluation. We consider these as alternatives to the explanation that we have developed here.

Related research studies how institutional variation within democracies influences prices (Rogowski and Kayser 2002; Iversen and Soskice, 2010). Rogowski and Kayser (2002) contend majoritarian institutions favor consumer interests, leading to lower prices; proportional representation favors producer interests. Iversen and Soskice (2010) argue that proportional representation – and particularly the associated institutional arrangements of wage coordination and centralization – drives up wages in nontradable services, leading to higher wage compression (lower income inequality), and thus higher real exchange rates. They find that lower inequality – measured as the ratio of the income of the bottom decile earner relative to the median – is
associated with appreciating real exchange rates. We enter an indicator for proportional representation as well as the Iversen and Soskice (2010) wage ratio variable \((d1/d5)\) in some specifications to account for this potential democratic institutional explanation.

Results and Discussion

Figure 1 presents preliminary evidence for our propositions. It shows the average cross-section values of exchange rates for 151 nations (Y axis) against the average Polity 2 scores for 1990-2017. In keeping with convention, positive values of the currency valuation index denote undervaluation and negative numbers denote overvaluation. The value of zero on the Y axis denotes a neutral currency valuation. Countries with autocratic institutions show a greater propensity for undervaluation compared to democratic countries. The most democratic countries are characterized by moderate levels of currency overvaluation.

<< Figure 1 about here >>

To examine the evidence more rigorously, we next estimate OLS and two-stage least squares (2SLS) models of the political and economic correlates of real exchange rate undervaluation and volatility for up to 133 countries from 1975 to 2017, based on data

\[\text{\^{\text{\footnotesize\textsuperscript{20}}} We update the wage compression data for their 2.5 model from 16 to 34 countries and extend the sample to 2016 from 2000. See the OECD Electronic Data Base on Wage Dispersion for the relevant data.}\]

\[\text{\^{\text{\footnotesize\textsuperscript{21}}} We use 1990 in Figure 1 as the start to include the full sample of post-Soviet countries.}\]

\[\text{\^{\text{\footnotesize\textsuperscript{22}}} Countries with Polity 2 scores equal to 10.}\]
availability.\textsuperscript{23} Several panel unit root tests strongly reject the null hypothesis that all panels have unit roots.\textsuperscript{24} All specifications include year fixed effects and a lagged dependent variable, which helped achieve serially uncorrelated residuals in all models reported.

\begin{table}[h]
\centering
\caption{Table 1 about here}
\end{table}

Table 1 presents our baseline OLS and IV models. The results reported in Column 1 indicate a strong negative relationship between the Polity measure of democracy and undervaluation, controlling for economic correlates of real exchange rates. In Column 2, we instrument for Polity using our measure of global Polity, and the coefficient estimates are very similar to those reported in Column 1.\textsuperscript{25} In Columns 3 and 4, we replace Polity with one of its concept variables, Political Competition (\textit{Polcomp}). The estimated average effects of Polcomp and currency valuation from Column 3 is presented in Figure 2. The most autocratic countries are statistically significantly associated with currency undervaluation, whereas the most politically competitive countries are statistically significantly associated with currency overvaluation. The strong association between \textit{Polcomp} the undervaluation measure is robust to the use of global \textit{Polcomp} as an instrument (Column 4). In column 5, we estimate country fixed effects models (omitting the lagged endogenous variable), and in column 6, we omit member countries of the Eurozone. The estimated coefficient of \textit{Polcomp} retains its sign, relative magnitude and levels of statistical significance.

\textsuperscript{23} The last panel time period has three years of data (2015-2017), which is the latest available.
\textsuperscript{24} We use IPS and Fisher ADF tests with trends, which are appropriate for unbalanced panels.
\textsuperscript{25} The first stage results appear in Appendix Table A3.
The models reported in Appendix Table 1 contrast the estimated effects of *Polcomp* with the results of other variables that represent other potential mechanisms through which democracies may influence exchange rate valuations. In Column 1, we introduce the component index of Political Constraints (*Exconst*) from Polity. In Model 2, we include Henisz’s POLCON3 variable. Model 3 includes the Freedom House indicators of *Civil Liberties* and *Political Rights*. Model 4 includes an indicator of capital account openness. In column 5, we include all the prior variables, including polcomp. Column 6 includes an index of *Worker Rights*. In Column 7, we include a measure of *Central Bank Independence* from Eichengreen (2014). In Column 8, we add indicators of unemployment. In column 9, we add the indicator of wage compression from Iverson and Soskice (d1/d5). In column 10, we add an indicator of the age dependency of the population, which we take as a rough proxy for the balance of interests between consumers and producers.

In all instances, we find the sign and level of statistical significance of the estimated coefficient of *Polcomp* are unchanged, and the magnitude of the estimate is either similar or larger to the base models, with the exception of model 2. The evidence strongly suggests that political competition – rather than other aspects of democratic institutions or other plausible covariates of exchange rate valuation – influences exchange rate valuations. In results reported in Appendix Tables A2, with *Polcomp* omitted, we rerun Appendix A1 models 1-3. All of the other democracy or democracy-related concept variables are separately statistically significantly correlated with neutral currency valuations. When we include *Polcomp* in Appendix Table 1, however, none of the concept variables related to democracy is statistically significant except *Polcon*. The identifying variance appears to reside in the *Political Competition* variable.
EXCHANGE RATE VALUATIONS: AN ELECTORAL CONNECTION?

We next estimate dynamic incumbent vote share election models, with either the incumbent or incumbent party’s contemporaneous vote share as the dependent variable. The data are from [author] and cover national elections in democracies, 1972-2017. The model controls for known macroeconomic determinants of voting outcome including economic growth, trade exposure, inflation, and unemployment. Following Powell and Whitten (1993), we estimate two lags of the incumbent (person or party) vote shares to control for autoregressive properties of the data. We also follow Powell and Whitten and include a majoritarian dummy. We also include a dummy variable for a country’s membership in the Eurozone.

\[
\Delta \text{Incumbent Party Vote Share}_{i,t} = \beta_0 + \beta_1(\text{Incumbent Party Vote Share})_{i,s-1} + \beta_2(\text{Incumbent Party Vote Share})_{i,s-2} + \beta_3(\text{XR}_{i,t-1}) + \beta_4(\text{GDP Growth}_{i,t-1}) + \beta_5(\text{Trade Balance}_{i,t-1}) + \beta_6(\text{LogTrade Openness}_{i,t-1}) + \beta_7(\text{Inflation}_{i,t-1}) + \beta_8(\text{Unemployment Rate}_{i,t-1}) + \beta_9(\text{Eurozone}_{i,t-1}) + \beta_{10}(\text{Majoritarian Political System}_{i,t-1}) + \epsilon_i, t = 1, 2, ..., 57. \tag{4}
\]

We allow for non-linearities in the relationship between currency valuations and electoral outcomes because we expect that continuous increases in currency overvaluation will have

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26 In presidential systems, the incumbent is either the incumbent seeking reelection or the incumbent’s partisan successor. In parliamentary systems, the incumbent party itself is treated as the incumbent.

27 Following the advice of the creators of the Polity index, our democracy sample is constrained to countries whose Polity2 scores were 7 or higher on the -10 to 10 scale. For presidential systems, we treat the president as incumbent. For parliamentary system, the leading party is treated as the incumbent.
diminishing marginal (and indeed negative) electoral returns with increasing currency overvaluation, at high levels of overvaluation. We therefore allow for the estimated effects of changes in currency valuation to vary with prior levels of currency valuation by entering an interaction term: $\Delta \hat{e}XR_{i,t-1} \times \hat{e}XR_{i,t-2}$

**Results**

In model 1, we report an unconditional negative association with higher levels of undervaluation and incumbent vote shares. A one standard deviation increase in the undervaluation index (.31) is associated with a roughly 1.4% decrease in incumbent vote shares. The sign and levels of statistical significance are robust to the inclusion of year fixed effects (model 2) and year and country fixed effects (model 3). The magnitudes of the estimated coefficients increase in models 2 and 3 compared to model 1. These results are consistent with our expectations that voters punish (reward) incumbents for currency undervaluation (overvaluation). In model 4, we find that both increasing undervaluation and higher levels of undervaluation harm incumbent reelection prospects. A one standard deviation increase in the change indicator (a seven percent decrease in the value of the currency) is associated with a roughly one percent decrease in incumbent vote share at the average level of prior year’s undervaluation index in the democratic sample (a currency overvalued by 20%).

<< Table 2 about here >>

We proposed that the effects of changes in currency valuations are conditional: ever increasing overvaluation runs the risk of deflation, expanding trade deficits, and diminished exports. We therefore allow for changes in currency valuations to have different effects depending on the existing levels of valuation. In model 5, we estimate a conditional model
where the estimated effect of changes in the index \( (\Delta \hat{XR}_{i,t-1}) \) depend on the prior level \( (\hat{XR}_{i,t-2}) \) of the index. Model 5 shows that increased undervaluation at high levels of existing undervaluation are very damaging to incumbent reelection prospects. In contrast, depreciation at high levels of overvaluation is NOT harmful to incumbents if the level of overvaluation is in the -.4 (roughly 33% overvaluation) range, which is roughly consistent with the average of the US during this period. Figure 3 shows both the estimated range and the density of the distribution of the observations.

<< Figure 3 about here >>

We distinguish emerging from advanced economies in terms of the electoral effects. In advanced economies (model 6), we find that devaluations are beneficial for incumbents if the prior level of overvaluation is very high (-.65 or roughly 50% overvaluation, e.g., Sweden in 2014), but are punished at -.2 (or roughly 20% overvaluation) and above (e.g., New Zealand in 2002). Currency changes do not affect incumbent vote shares if the level of currency valuation is moderately overvalued, creating a “safe zone” for incumbents of between 25% and 45% overvaluation. See Figure 4. In emerging markets, in contrast, we find no statistically significant interactive effect. In emerging market democracies, undervaluation is punished and overvaluation is rewarded.

<< Figure 4 about here >>

The other covariates are not the main focus of our investigation. We briefly note that their coefficient estimates are generally consistent with prior findings in the literature. Increasing inflation is estimated to be negative and usually statistically significantly associated with incumbent vote shares. Growth is generally positively signed and sometimes statistically significant. The estimated unemployment coefficient is negatively signed and twice statistically
significant. Majoritarian systems are generally associated with larger incumbent voter shares.

INDIVIDUAL-LEVEL RESPONSES TO EXCHANGE RATE MOVEMENTS

The final part of our analysis uses survey experiments to examine the effect of the exchange rate on the voters at the individual level. These experiments help to isolate the effect of exchange rates on citizens’ assessment of government performance and vote intentions. They allow us to unpack the reasoning of voters about the impact of exchange rates on the aggregate economy as well as on their personal, economic well-being (Bearce and Tuxhorn 2017). Specifically, we examine how voters judge the trade-off between jobs and consumption that characterizes exchange rate policymaking.

We conducted the survey experiments in three countries – Australia, Germany and the United States – in August 2018. The analysis of multiple countries allows us to explore the scope of our argument and how robust the micro-level findings are across different political and economic settings. All three countries – at least nominally – retain substantial monetary autonomy, which is important for voters to hold governments accountable for exchange rate valuations and their domestic economic effects. At the same time, the degree of monetary autonomy and hence the ability to control the exchange rate varies. The U.S. as the issuer of the key international currency clearly has the greatest monetary autonomy. Germany’s exchange rate towards other Eurozone countries is fixed, but the Euro is floating freely vis-à-vis other currencies in the world. Although the German government is only one among multiple stakeholders of the European Central Bank, Germany arguably has the greatest weight for Eurozone monetary policy. The Australian Dollar is also floating freely giving the Australian government substantial flexibility. Yet, the degree to which smaller countries, like Australia, still
retain monetary autonomy is debated (Rey 2013).

Consistent with our theory, the democratic governments in all three countries pursue an exchange rate policy that favors consumers. As Table 3 shows, all three countries have a real exchange rate that is overvalued towards the rest of the world around the time of the experiment.\textsuperscript{28} Australia has the most overvalued, while Germany has the least overvalued exchange rate of the three countries. Despite these variations, the exchange rate level of all three countries lies within the “safe zone” that we identified in the previous section. This zone represents the degree of exchange rate overvaluation that, according to our estimations above, maximizes votes for government parties (see table 2 and figure 4).

\textless Table 3 about here >>

Since the exchange rates of all three countries are located within the politically optimal range, governments are unable to increase political support by either revaluing or devaluing the exchange rate. In other words, citizens in Australia, Germany and the U.S. should prefer exchange rate stability to de- or appreciations because the current level of overvaluation, from the perspective of citizens, provides the optimal balance between consumption opportunities and job security. We therefore expect that citizens, on average, support governments more if the exchange rate remains stable and less if the exchange rate either depreciates or appreciates.

In the experiments, we randomly exposed respondents to different scenarios concerning how the exchange rate of their national currency develops. Our experiments focused on three possible exchange rate scenarios. Respondents saw a) a scenario, in which the exchange rate

\textsuperscript{28} The values on the undervaluation index are for 2017, which is the latest year for which the relevant data is available.
remains stable; or b) a scenario in which the exchange rate depreciates; or c) a scenario in which the exchange rate appreciates. In each scenario, we also described the implications of the respective exchange rate movement for the trade-off between domestic employment and prices. Table 4 presents the exact wording of our vignettes for the U.S. experiment.

Table 4 presents the exact wording of our vignettes for the U.S. experiment.

After reading the exchange rate scenario, respondents were asked five follow-up questions in order to examine their evaluation of the situation. Specifically, they could 1) rate the performance of the U.S. president / head of government; 2) rate the performance of the central bank; 3) indicate if it is more or less likely that they vote for the President’s / head of government’s party after observing the described change in the exchange rate; 4) evaluate how the exchange rate will affect the national economy; and 5) evaluate how the exchange rate will affect their personal economic well-being. Respondents could answer these questions on a five-point scale ranging from ‘Very bad’ to ‘Very good’ for the first two questions and from ‘Very negatively’ to Very Positively’ for the last two questions. For the vote intentions question, voters could choose between three options, i.e. ‘Less likely’; ‘Same’; ‘More likely’.

We simultaneously administered the experiments to a sample of 1,100 respondents in each of the three countries in August 2018 with the help of respondi, a professional polling firm. To enhance the representativeness of our sample, we set quota for age and gender that match the characteristics of the national populations according to the latest data from the U.S. Census, the German Statistical Office and the Australian Statistical Office.

Results

Figure 4 shows the estimated impact of the different exchange rate scenarios on political
evaluations. The dots represent the average effects of exchange rate depreciations and appreciations on voter evaluations relative to exchange rate stability, which is the baseline category. There are three key results. First, the top graph in Figure 4 shows that voters exhibit a strong preference for exchange rate stability in all three countries: vote intentions drop significantly for depreciations and appreciations relative to the status quo, which is a moderately overvalued currency in all three countries. These declines in vote intentions are statistically significant in all three countries.29

<< Figure 4 about here >>

Second, support for depreciations and appreciations almost perfectly counterbalance each other in Australia and the United States. A closer look at the distribution of vote intentions (Figure A1 in the Appendix) illustrates the countervailing influence of the pro-depreciation and the pro-appreciation camps even more clearly: the proportion of voters who punish the government for depreciations is almost the same as the proportion of voters who punish the government for appreciations. The same is true for voters who reward the government for either exchange rate movement. This reinforces the tendency towards stability at the current, overvalued exchange rate level. As long as proponents of depreciations and appreciations are equally strong, their influences on the government are likely to level each other out.

Third, Germany voters have a slightly stronger preference for depreciations than appreciations (but stability is still their preferred choice). The hypothesis test (in table A2 in the Appendix) confirms that this difference between appreciations and depreciations is statistically significant in all three countries.29

29 The plots in figure A1 in the Appendix show how the distribution of responses on the 3-point outcome scale is distributed across exchange rate scenarios.
significant. This means that Germany should have a smaller tendency to overvalue than Australia and the United States. This is indeed the case as the values of the three countries on the undervaluation index in Table 4 show.

The impact of the exchange rate on the other political evaluations questions illuminates these findings. The following results are particularly important. Voters do not distinguish much between the elected government and the central bank when they evaluate exchange rates. To the extent that these evaluations differ across governments and central banks, government ratings are affected more by exchange rates than central bank ratings. In addition, the baseline ratings of government and central bank performance for stable exchange rates are extremely similar: these baseline ratings only differ by 0.04 in Australia, 0.17 in Germany and 0.11 in the U.S. on the 5-point scale that respondents used to evaluate these actors. Voters, thus, hold elected governments directly accountable for changes in the exchange rate and their impact on economic outcomes.

The differential effect of depreciations and appreciations on vote intentions in Germany and Australia can be explained with respondents’ beliefs about the impact of exchange rates on the national economy. As the graph on the lower left of Figure 4 shows, respondents in both countries believe that depreciations are better for national economy performance than appreciations. The hypothesis tests show that these differences between appreciations and depreciations are statistically significant in Australia and Germany. Respondents’ judgement of

---

30 The baseline ratings are 3.23 (government) and 3.27 (central bank) in Australia; 3.14 (government) and 2.97 (central bank) in Germany; and 3.40 (government) and 3.51 (central bank) in the U.S.
the expected impact of appreciations and depreciations differs particularly strongly in Germany. These results suggest that the economic expectations of respondents in two out of three countries are in line with the argument that depreciations help to spur economic growth (Rodrik 2008; Levy-Yeyati and Sturzenegger 2007).

Finally, the results in the graph on the lower right of Figure 4 show that respondents do not expect that depreciations or appreciations affect their personal economic well-being in different ways. Instead, they expect that exchange rates movements are equally harmful for them personally.

Although the focus of our analysis is on the overall effect of exchange rates on political evaluations, we further explore how individual respondents react differently to exchange rates. The results, which are in the Appendix, are largely consistent with the sectoral approach of exchange rate politics (Frieden 1991) and other experimental analyses in this area (e.g. Bearce and Tuxhorn 2017)

We conclude from these results that voters hold governments accountable for exchange rates. They do so in very similar ways across countries, even though the circumstances of monetary policymaking and the constraints of governments in these countries differ. Voters in all countries strongly prefer exchange rate stability to exchange rate appreciations or depreciations. This is the case because voters in somewhat overvalued settings, by and large, expect that depreciations and appreciations negatively affect national economic performance and their personal economic well-being.

**CONCLUSION**

In light of the evidence linking real exchange rate undervaluation to faster growth, it is natural to ask what constrains leaders from pursuing an undervalued currency. We find that
domestic political competition places strict limits on the ability of governments to pursue such an undervaluation strategy and pushes democracies towards moderate overvaluation. First, our analysis of exchange rate valuations across the world since the 1970s shows that political competition in democracies leads to stable overvaluation. Second, an analysis of electoral outcomes in democracies during the same time period explains why: politicians are rewarded for moderate overvaluation and punished for undervaluation. Third, an experimental study of individual-level preferences confirms that citizens in Australia, Germany and the United States are content with their moderately overvalued exchange rate and reward the government for stabilizing it at the current level.

Our results confirm previous research showing that democracy and domestic political competition is a decisive source of international cooperation (Mansfield, Milner and Rosendorff 2002). We show that this insight not only applies to international trade, but also to international monetary relations and exchange rate politics. Competitive devaluations (i.e. currency wars), like trade wars, pose a serious threat to the stability of the international economic system because they create beggar thy neighbor incentives and may be difficult to contain once set in motion. Our findings suggest that such competitive devaluations are unlikely among democracies. The diffusion of democratic political institutions, therefore, is not only desirable from a normative perspective. It also helps to promote harmonious relations among states in a key area of the international economy. A further deterioration of democratic governance around the world threatens to make international economic cooperation all the more elusive.
Figure 1. Real Exchange Rates by Regime Type
Figure 2, Full Sample (based on Table 2, model 5)

Estimated Effect of Currency Depreciation t-1 on Incumbent Vote Share

Figure 3, OECD only (based on Table 2, model 6)

Estimated Effect of Currency Depreciation t-1 on Incumbent Vote Shares
Figure 4: Impact of exchange rate on voter evaluations
### Table 1. Competitive Political Institutions and Real Exchange Rate Valuations

**Five-Year Country Averages, 1975–2017**

<table>
<thead>
<tr>
<th>Method</th>
<th>OLS</th>
<th>IV (2&lt;sup&gt;nd&lt;/sup&gt;)</th>
<th>OLS</th>
<th>IV (2&lt;sup&gt;nd&lt;/sup&gt;)</th>
<th>OLS-FE</th>
<th>OLS</th>
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<td>Sample</td>
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<td>All</td>
<td>All</td>
<td>All</td>
<td>All</td>
<td>No Euro</td>
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<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td></td>
</tr>
<tr>
<td>$\hat{\varepsilon}X_{i,t-1}$</td>
<td>0.7952***</td>
<td>0.8102***</td>
<td>0.7887***</td>
<td>0.8038***</td>
<td>0.7870***</td>
<td></td>
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<td></td>
<td>(0.0201)</td>
<td>(0.0207)</td>
<td>(0.0204)</td>
<td>(0.0211)</td>
<td>(0.0210)</td>
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<td>Income $PC_{i,t-1}$</td>
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<td>-0.0029</td>
<td>-0.0052</td>
<td>-0.0048</td>
<td>-0.0295</td>
<td>-0.0039</td>
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<td></td>
<td>(0.0067)</td>
<td>(0.0066)</td>
<td>(0.0066)</td>
<td>(0.0064)</td>
<td>(0.0321)</td>
<td>(0.0067)</td>
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<td>InGrow$_{i,t-1}$</td>
<td>0.1342</td>
<td>-0.0280</td>
<td>0.1196</td>
<td>-0.0252</td>
<td>-0.2473</td>
<td>0.1297</td>
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<td>(0.2210)</td>
<td>(0.2187)</td>
<td>(0.2179)</td>
<td>(0.2183)</td>
<td>(0.3129)</td>
<td>(0.2207)</td>
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<tr>
<td>Trade $Balance_{i,t-1}$</td>
<td>-0.0011***</td>
<td>-0.0012***</td>
<td>-0.0012***</td>
<td>-0.0012***</td>
<td>-0.0018</td>
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<td>(0.0004)</td>
<td>(0.0005)</td>
<td>(0.0004)</td>
<td>(0.0004)</td>
<td>(0.0013)</td>
<td>(0.0004)</td>
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<td>Trade $Open_{i,t-1}$</td>
<td>-0.0231**</td>
<td>-0.0246**</td>
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<td>(0.0101)</td>
<td>(0.0103)</td>
<td>(0.0101)</td>
<td>(0.0103)</td>
<td>(0.0228)</td>
<td>(0.0105)</td>
</tr>
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<td>Inflation $i,t-1$</td>
<td>-0.0000***</td>
<td>-0.0000***</td>
<td>-0.0000***</td>
<td>-0.0000***</td>
<td>-0.0001***</td>
<td>-0.0000***</td>
</tr>
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<td></td>
<td>(0.0000)</td>
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<td>(0.0000)</td>
<td>(0.0000)</td>
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<tr>
<td>Euro $i,t-1$</td>
<td>0.0072</td>
<td>0.0087</td>
<td>0.0042</td>
<td>0.0048</td>
<td>0.1021***</td>
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<tr>
<td></td>
<td>(0.0145)</td>
<td>(0.0143)</td>
<td>(0.0146)</td>
<td>(0.0144)</td>
<td>(0.0202)</td>
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<tr>
<td>Polity2$_{i,t-1}$</td>
<td>-0.0049***</td>
<td>-0.0051***</td>
<td>-0.0122***</td>
<td>-0.0111***</td>
<td>-0.0142***</td>
<td>-0.0123***</td>
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<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0011)</td>
<td>(0.0023)</td>
<td>(0.0030)</td>
<td>(0.0041)</td>
<td>(0.0023)</td>
</tr>
<tr>
<td>Polcomp$_{i,t-1}$</td>
<td>-0.00122***</td>
<td>-0.0111***</td>
<td>-0.0142***</td>
<td>-0.0123***</td>
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<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0011)</td>
<td>(0.0023)</td>
<td>(0.0030)</td>
<td>(0.0041)</td>
<td>(0.0023)</td>
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<tr>
<td>Constant</td>
<td>0.1076*</td>
<td>0.1630***</td>
<td>0.1490***</td>
<td>0.2303***</td>
<td>0.0920</td>
<td>0.1402***</td>
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<tr>
<td></td>
<td>(0.0557)</td>
<td>(0.0556)</td>
<td>(0.0534)</td>
<td>(0.0524)</td>
<td>(0.2628)</td>
<td>(0.0541)</td>
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<td>Observations</td>
<td>1001</td>
<td>961</td>
<td>996</td>
<td>949</td>
<td>996</td>
<td>934</td>
</tr>
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<td>Countries</td>
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<td>133</td>
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<td>132</td>
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<tr>
<td>R² within</td>
<td>0.346</td>
<td>0.346</td>
<td>0.074</td>
<td>0.334</td>
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<tr>
<td>R² overall</td>
<td>0.775</td>
<td>0.778</td>
<td>0.037</td>
<td>0.755</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durbin’s m (p-value) H0 = no AR1 correlation</td>
<td>0.32</td>
<td>0.45</td>
<td>0</td>
<td>0.46</td>
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<tr>
<td>Perseran R² IV</td>
<td>0.77</td>
<td>0.77</td>
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<tr>
<td>Kleibergen-Paap rk Wald F stat</td>
<td>2511</td>
<td>25.4</td>
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<td>Stock-Yogo 10% critical value</td>
<td>9.08</td>
<td>9.08</td>
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</table>

Note: Five-year country average values. The regressors are lagged by one period. The results of the first-stage estimates appear in the Appendix. All models include period fixed effects. Durbin’s m assesses serial correlation in the panel; the null hypothesis is no serial correlation. Robust standard errors adjusted for country-level clustering. * p-value < 0.10; ** p-value < 0.05; *** p-value < 0.01.
### Table 2. The Estimated Effect of Currency Valuation on Incumbent Vote Shares

**Democratic Elections, 1972-2017**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
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<tbody>
<tr>
<td>IncVotes(_{i,t-1})</td>
<td>0.650***</td>
<td>0.683***</td>
<td>0.641***</td>
<td>0.662***</td>
<td>0.569***</td>
<td>0.663***</td>
<td>0.658***</td>
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</tr>
<tr>
<td></td>
<td>(0.095)</td>
<td>(0.094)</td>
<td>(0.096)</td>
<td>(0.095)</td>
<td>(0.077)</td>
<td>(0.146)</td>
<td>(0.139)</td>
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<tr>
<td>IncVotes(_{i,t-2})</td>
<td>0.029</td>
<td>0.041</td>
<td>0.035</td>
<td>0.026</td>
<td>0.028</td>
<td>0.050</td>
<td>0.055</td>
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<tr>
<td></td>
<td>(0.071)</td>
<td>(0.085)</td>
<td>(0.069)</td>
<td>(0.073)</td>
<td>(0.084)</td>
<td>(0.101)</td>
<td>(0.093)</td>
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</tr>
<tr>
<td>(\hat{\epsilon}<em>{XR</em>{i,t-1}})</td>
<td>-4.200**</td>
<td>-6.9***</td>
<td>-11.06**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.710)</td>
<td>(1.788)</td>
<td>(5.171)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\Delta \hat{\epsilon}<em>{XR</em>{i,t-1}})</td>
<td>-12.889**</td>
<td>-20.343**</td>
<td>-30.59***</td>
<td>-24.95**</td>
<td>-23.59**</td>
<td></td>
<td></td>
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<tr>
<td>(\hat{\epsilon}<em>{XR</em>{i,t-2}})</td>
<td>-3.516**</td>
<td>-3.604**</td>
<td>5.970**</td>
<td>-9.433**</td>
<td>-9.528**</td>
<td></td>
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<tr>
<td></td>
<td>(1.736)</td>
<td>(1.604)</td>
<td>(2.399)</td>
<td>(4.287)</td>
<td>(4.246)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(\Delta \hat{\epsilon}<em>{XR</em>{i,t-1}})</td>
<td>-25.811*</td>
<td>-62.34***</td>
<td>-8.294</td>
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<td></td>
<td>(15.490)</td>
<td>(19.714)</td>
<td>(21.682)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>InGrow(_{i,t-1})</td>
<td>33.168</td>
<td>39.519*</td>
<td>61.135*</td>
<td>23.736</td>
<td>21.811</td>
<td>74.802***</td>
<td>-7.618</td>
<td>-8.052</td>
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<td>Trade</td>
<td>-0.61</td>
<td>-0.071</td>
<td>0.350**</td>
<td>-0.044</td>
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<td>-0.059</td>
<td>-0.003</td>
<td>-0.000</td>
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<td>(0.048)</td>
<td>(0.058)</td>
<td>(0.145)</td>
<td>(0.051)</td>
<td>(0.050)</td>
<td>(0.047)</td>
<td>(0.124)</td>
<td>(0.126)</td>
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<td>Balance(_{i,t-1})</td>
<td>0.009</td>
<td>-0.001</td>
<td>0.062</td>
<td>0.009</td>
<td>0.005</td>
<td>-0.043*</td>
<td>0.027</td>
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<td></td>
<td>(0.025)</td>
<td>(0.026)</td>
<td>(0.086)</td>
<td>(0.025)</td>
<td>(0.023)</td>
<td>(0.026)</td>
<td>(0.034)</td>
<td>(0.034)</td>
</tr>
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<td>Inflation(_{i,t-1})</td>
<td>-0.006**</td>
<td>-0.005**</td>
<td>-0.001</td>
<td>-0.008**</td>
<td>-0.008***</td>
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<td>-0.552*</td>
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<td>0.00</td>
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**Sample**

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<th>OECD</th>
<th>Emerge</th>
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Note: The unit of analysis is country-year elections. The regressors are lagged by one period unless otherwise noted. Robust standard errors adjusted for country-level clustering.

* p-value < 0.10; ** p-value < 0.05; *** p-value < 0.01.
Table 3: Real exchange rate valuation

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<td>U.S.</td>
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Source: Own calculations from PWT 9.1

Table 4: Vignettes

Now, we would like to ask you about your views on the U.S. Dollar and its exchange rate with the other major currencies of the world. Imagine the following, possible scenario taking place in the near future, in 2019.

Vignette 1: The exchange rate of the U.S. Dollar vis-à-vis the major currencies of the world depreciated considerably. This means that exports of U.S. products and services are likely to increase and imports of international products and services are likely to decrease, potentially protecting domestic jobs. It also means that prices for international goods and services are likely to increase.

Vignette 2: The exchange rate of the U.S. Dollar vis-à-vis the major currencies of the world appreciated considerably. This means that exports of U.S. products and services are likely to decrease and imports of international products and services are likely to increase, potentially putting domestic jobs at risk. It also means that prices for international goods and services are likely to decrease.

Vignette 3: The exchange rate of the U.S. Dollar vis-à-vis the major currencies of the world remained stable. This means that exports of U.S. products and services, and imports of international products and services, are likely to remain stable, with no effect on domestic jobs. It also means that prices for international goods and services are likely to remain stable.
References


Baum, Christopher F., Mark E. Schaffer, and Steven Stillman. 2010. ivreg2: Stata module for extended instrumental variables/2SLS, GMM and AC/HAC, LIML and k-class regression.


