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Abstract: Analyses of the political economy of exchange-rate policy posit that firms and individuals in different sectors of the economy have distinct policy attitudes toward the level and the stability of the exchange rate. Most such approaches hypothesize that internationally exposed firms prefer more stable currencies, and that tradables producers prefer a relatively depreciated real exchange rate. Sensible as such expectations may be, there are few direct empirical tests of them. We offer micro-level, cross-national evidence on sectoral attitudes over the exchange rate. Using firm-level data from the World Bank's World Business Environment Survey (WBES), we find systematic patterns linking sector of economic activity to exchange-rate policy positions. Owners and managers of firms producing tradable goods prefer greater stability of the exchange rate: in countries with a floating currency, manufacturers are more likely to report that the exchange rate causes problems for their business. With respect to the level of the exchange rate, we find that tradables producers – in particular manufacturers and export producers – are more likely to be unhappy following an appreciation of the real exchange rate than are firms in non-tradables sectors (services and construction). These findings confirm theoretical expectations about the relationship between economic position and currency policy preferences.

Introduction

As in other areas of public policy, governments' choices of exchange-rate policies are conditioned by the preferences of their constituents. The nominal exchange rate regime and the level of the real exchange rate can have powerful effects on the private sector, and economic agents want government policies that favor them. A government that ignores its constituents' concerns about the exchange rate will come under pressure to change course. Indeed, some of the most dramatic events in the history and recent experience of exchange rate policy have to do with the preferences of social groups: how they changed, conflict among them, how strong they are. The battle over gold in the late nineteenth and early twentieth century – whether in the United States in the 1890s, the United Kingdom in 1925, or in Latin America throughout – was largely about which groups and sectors of the economy were likely to win, and lose, from being on the gold standard (Hefeker, 1995; Frieden, 1997; Broz, 1997; Eichengreen, 1992; Simmons, 1994). So too did the process of European monetary integration implicate powerful interests on both sides of the issue, as it continues to do in the accession countries of Eastern and Central Europe and the former Soviet Union (Eichengreen and Frieden, 1993; Frieden, 2002). Modern currency crises often begin with a government immobilized by contending demands to sustain a fixed rate and to devalue (Klein and Marion, 1997; Frieden, Ghezzi and Stein, 2001; Leblang, 2002). Devising a politically viable policy response to exchange-market developments – including real appreciations and attacks on currencies – has proved extraordinarily difficult for governments from Argentina to Russia.

Just as it is important for policymakers to address the attitudes of powerful constituents toward the exchange rate, it is important for scholars to understand what these attitudes are and how they are expressed. Nonetheless, there is very little systematic empirical work on the policy preferences of major economic agents. While papers by Collins and Giavazzi (1992), Gärtner (1997), Gabel (1998), and Scheve (2004) address related macroeconomic topics – differences in individual attitudes toward inflation, the euro, and global economic integration – there is little work that directly addresses the exchange rate attitudes of business owners operating in different sectors of the economy. By contrast, there is a large body of work that examines sectoral and factoral attitudes toward *trade* policy (Balistreri, 1997; Scheve and Slaughter, 2001; Beaulieu, 2002; and Rodrik and Mayda, 2005).

This paper exploits a large cross-national survey, the World Bank's World Business Environment Survey (WBES), to try to uncover the relationship between the economic activities of firms and their owners' and managers' attitudes toward the exchange rate. The survey tells us only the extent to which corporate respondents regarded the exchange rate as "a problem," which in itself is of limited use. However, we also know the currency regime prevailing in the country at the time of the survey, the level of the real exchange rate, and many things about the firms in question. By relating the prevailing exchange rate policy and the firm's economic characteristics to how "problematic" the currency is perceived to be, we can draw inferences about the sources of attitudes toward the exchange rate.

We start with expectations from the theoretical literature on currency policy preferences. With respect to the exchange rate regime, we expect firms with substantial

cross-border exposure to be particularly sensitive to currency volatility, and thus to be more satisfied with a fixed exchange rate. With respect to the level of the real exchange rate, we expect firms in the tradables sectors to be more satisfied when the currency is weak and more dissatisfied when it is strong.

We find, indeed, that owners and managers of internationally-oriented firms prefer greater stability of the exchange rate: in countries with a floating currency, manufacturers are more likely to report that the exchange rate causes problems for their business than are producers of nontraded goods and services, who typically do not require foreign exchange. With respect to the level of the exchange rate, we find that exporters and manufacturers are more likely to be unhappy following an appreciation of the real exchange rate than are firms in domestically-oriented non-tradable sectors (services and construction). These findings conform to expectations about the cross-sectoral distributional effects of exchange rates.

Exchange rate policy, politics, and policy preferences

The exchange rate is centrally important to economic activity, and government policy has a powerful impact on the currency. After all, the exchange rate is the single most important price in any economy, and it is a price that is routinely set, or at least targeted, by many governments. There is an enormous literature on appropriate currency policy, but unlike in the case of trade or fiscal policy, there is no simple welfare benchmark, so that debates typically involve different weightings of the tradeoffs inherent in exchange rate policy choices. Supporters of flexibility confront opponents of volatility, while those who value the credibility and predictability of a fixed rate square off against those who dread its rigidity. A strong currency provides a powerful tool

against inflation, and boosts national purchasing power; a weak currency gives national producers great incentives to sell into world markets. To paraphrase Jeffrey Frankel, no single currency policy is right for all people (Frankel 1999).

Exchange rate policy is constrained by contending economic interests and policy preferences, which makes it important to understand those interests and preferences. A theoretical literature deduces these attitudes from the distributional consequences of various regime arrangements predicted by economic theory (Frieden, 1991), while empirical analyses have imputed attitudes indirectly from actual currency policies and legislative and other voting behavior (Eichengreen, 1995; Frieden, 1997; Frieden et al. 2001; Frieden, 2002). But scholars have rarely been able to find ways of directly mapping economic position to exchange rate policy preferences.

There are two relevant dimensions of variation along which preferences may vary: on the *regime* by which the currency is managed, and on the *level* of the currency. In the first instance, the issue is whether to float or fix the exchange rate – and if to float, in which of the many possible ways.[1] In the second instance, assuming the currency is not fixed, the question is the desired level of the real exchange rate.[2] There is always the option to let the currency float completely freely, although developing countries have shown themselves reluctant to do this (Calvo and Reinhart, 2002; Levy-Yeyati and

[1] Obviously, policymakers have a wide choice of regime, ranging from a completely free float to a variety of managed floats, degrees of fixity ranging from a target zone to a peg, and a currency board of dollarization. This discussion focuses on the extremes—hard pegs and pure floats—however, because the analysis of intermediate cases flows from the extremes, and the tradeoffs described apply to the intermediate choices, albeit never as starkly as to the extremes.

[2] Under most regimes a government must decide whether it prefers a relatively appreciated or relatively depreciated currency. Free floats are rare, and by the same token, countries that opt for a pegged regime always have the choice of abandoning the peg.

Sturzenegger, 2005). On both dimensions, the attitudes of economic agents are likely to differ.

Attitudes toward the exchange rate regime: stability and credibility or policy flexibility? In an open economy, the main advantage of a fixed-rate regime is to lower exchange-rate risk and transactions costs that can impede international trade and investment.[3] Volatile exchange rates create uncertainty about international transactions, adding a risk premium to the costs of goods and assets traded across borders. In addition, an exchange rate peg can enhance monetary-policy credibility. Both theory and evidence suggest that fixing the exchange rate to the currency of a low-inflation country both promotes international trade and investment and disciplines monetary policy by providing an observable nominal anchor.[4]

But fixing the exchange rate requires that the government sacrifice its capacity to run an independent monetary policy. A floating exchange rate, on the other hand, has the great advantage of allowing a government to pursue an independent monetary policy. This independence provides flexibility to accommodate foreign and domestic shocks, including changes in the terms of trade and world financial conditions, and to affect the competitiveness of (relative prices faced by) the tradable goods sector.

In an open economy, then, economic agents confront a tradeoff between two competing sets of values. On the one hand, a fixed rate brings *stability and credibility*; on the other hand, it sacrifices *flexibility*.

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[3] Mundell (1961), McKinnon (1962), Kenen (1969); a more recent survey is Tavlas (1994).

[4] See for example, the empirical results in Frankel (1995), Rose (2000), Vegh (1992), and Ghosh et al. (1997).

The different valuation of this tradeoff depends largely on the extent to which the economic actors are engaged in international economic activity (Frieden 1991; Hefeker 1997). Those heavily involved in foreign trade and investment – typically including exporters, international investors, the commercial and financial sectors, and those with substantial foreign-currency liabilities – should favor exchange rate stability, since currency volatility is an everyday concern that makes their business riskier and more costly. By the same token, these groups care less about a loss of national monetary autonomy, since they typically do business in several countries, and can shift business or assets abroad if domestic conditions become unfavorable.

By contrast, groups whose economic activity is confined to the domestic economy benefit from a floating regime. The nontradables sector (services, construction, transport) belong in this camp. They are not required to deal in foreign exchange and so are free of the risks and costs of currency volatility. They are highly sensitive to domestic macroeconomic conditions and thus favor the national autonomy made possible by floating.

Tradables producers may have reasons to oppose a fixed rate, as it eliminates the possibility of a depreciation to maintain or restore the competitiveness of tradables producers. This raises the second issue, the level of the real exchange rate.

Attitudes toward the level of the exchange rate. The real exchange rate affects the relative price of traded goods in both local and foreign markets. There is no clear economic-efficiency argument for or against any particular level. A strong (appreciated) currency gives residents greater purchasing power, but also entails a loss of competitiveness for tradables producers. A real appreciation benefits consumers of

imports and harms producers of goods that compete with imports (and exporters). So tradable (import-competing and exporting) industries lose from a currency appreciation, while domestically oriented (nontradable) industries and domestic consumers gain.

Of course, a real depreciation has the opposite effects, stimulating demand for locally produced tradable products, but raising the prices consumers pay for foreign goods and services. Currency depreciations help exporting and import-competing industries at the expense of domestic consumers and producers of nontraded goods and services.

Thus the level of the exchange rate, too, involves two competing goals – stimulating local tradables producers, and raising local purchasing power. The benefit of increasing the competitiveness of national producers comes at the cost of reducing the real income of national consumers, and vice versa.

Two issues complicate theories of exchange rate policy preferences. First, exporters are likely to be torn between a concern for currency stability, on the one hand, and a concern for a favorable level of the exchange rate, on the other. These two concerns conflict, inasmuch as a fixed rate rules out adjusting the nominal exchange rate to improve the competitive position of exporters. Whether exporters favor stability over competitiveness, or vice versa, is likely to depend on such factors as the price sensitivity of consumers of exports, the ability of exporters to hedge against currency volatility, and so on. Second, and closely related, is the fact that tradable producers' concern about currency movements depends upon how directly they are affected by changes in the exchange rate, which is a function of such things as pass-through, currency invoicing, and the importance of imported inputs (Devereux and Engel, 2002; Campa and Goldberg,

1997; Campa and Goldberg, 2005). Generally, both exporters and import-competers in industries with high pass-through are more sensitive to the relative price effects of currency movements than those with low pass-through, since their prices respond more directly to changes in exchange rates. The policy preferences of exporters, in particular, are thus likely to be contingent on a large number of factors, which makes the issue largely an empirical one. In both instances, the extent to which concern about volatility is more important than concern about the level of the exchange rate is largely an empirical question.

A simplified picture of the expected preferences of firms would include:

- Internationally exposed firms, including tradable producers will prefer greater currency stability, hence a fixed exchange rate.
- Tradables producers will prefer greater competitiveness, hence a depreciated currency.

In what follows, we assess the empirical relevance and accuracy of these expectations in a large, cross-national survey of firm managers and owners.

Data and Methods

To analyze attitudes toward the exchange rate, we use data from the World Bank's World Business Environment Survey (WBES).[5] The WBES was administered to owners and managers of over 10,000 firms in 80 countries in 1999, applying a common survey instrument to a representative sample of at least 100 firms in each country. We look at individual responses to the following question: "How problematic is the exchange rate for the operation and growth of your business?" Responses varied along the following

[5] For a discussion of the WBES project, see Batra, Kaufmann, and Stone (2003).

ordered scale: 1 = "No Obstacle," 2 = “Minor Obstacle,” 3 = “Moderate Obstacle,” 4 = "Major Obstacle." These individual responses represent the dependent variable of our analysis, which we will refer to as EXCHANGE RATE PROBLEM.

The variable EXCHANGE RATE PROBLEM exhibits significant variation both across and within countries. The average value of EXCHANGE RATE PROBLEM is 2.55, which indicates that the exchange rate represents a nontrivial consideration for the average business. The average response in Chile of 2.53 is closest to the overall mean response. Hungary represents the lowest country average (1.61); managers in Ecuador, by contrast, were most likely to view the exchange rate as an obstacle to their business (3.74). This is understandable since Ecuador suffered a serious economic crisis in 1999. On the brink of hyperinflation and immersed in a deep financial crisis, Ecuador abandoned its currency in January 2000 and adopted the U.S. dollar as its legal tender. The average response in Thailand is also notably high at 3.63, which reflects the turmoil caused by the collapse of the baht in 1997 and the subsequent Asian financial and currency crises. The overall standard deviation of EXCHANGE RATE PROBLEM is 1.16, the between country standard deviation is .60, and the within country standard deviation is 1.00. **Table 1** reports overall summary statistics. **Tables 2a** and **2b** are the correlation matrices for our firm- and country-level data.

We want to assess how the respondent firms’ sectors, conditioned by the country’s exchange rate regime and the level of the real exchange rate, affect attitudes toward the currency. For this purpose, we need to classify countries by exchange rate regime. We employ two widely used classifications of *de facto* exchange rate regimes: Levy-Yeyati and Sturzenegger (2005), and Reinhart and Rogoff (2004). Although these

classification schemes differ in details, both attempt to capture the actual behavior of the exchange rate. Levy-Yeyati and Sturzenegger, henceforth "LYS," categorize countries as floats or pegs according to observed changes in the nominal exchange rate, the volatility of these changes, and the volatility of international reserves.[6] Reinhart and Rogoff, henceforth "RR," exploit the conditional probability of the exchange rate staying within a given range over a rolling five year window, and use information about parallel (dual market) exchange rates in determining whether a regime continues from one year to the next. Our results are largely robust to these alternative regime classification technologies.

In **Tables 3a** and **3b**, we report all our data by country according to the LYS "floating" and "pegged" exchange rate regime classifications. **Table 3c** provides a comparison of LYS and RR regimes in 1999, the year the WBES survey was administered. Note that RR classifies Indonesia as having a floating regime in 1999 while LYS do not. We drop Indonesia from the RR float sample because, in the aftermath of the currency crisis, firms from all sectors would likely express dissatisfaction with the exchange rate. Indeed, the standard deviation of EXCHANGE RATE PROBLEM in Indonesia is .95, while its average value of 3.54 is one of the highest overall. Sectoral differences may be difficult to discern in this environment. A similar logic applies to Thailand and the Philippines, but since LYS and RR are consistent in their classification of these countries as floating exchange rate regimes, inclusion of these countries will affect the two samples in the same way.

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[6] Levy-Yeyati and Sturzenegger include an "intermediate" category which we omit from our analysis because we have no strong theoretical priors about business elites' attitudes in these regimes.

Figures 1 and **2** provide preliminary comparisons of managers' concerns about the exchange rate across these regimes. Overall, managers report more problems with the exchange rate in floating regimes than managers operating under pegged exchange rates. According to the summary data in **Figure 1**, the average response among managers in floats is 2.78 versus 2.04 for managers in fixed regimes. **Figure 2** shows that 36% of managers in floating regimes find the exchange rate to be a "major obstacle" to their businesses while only 13% of managers in pegged regimes report the same level of concern. These distributions reveal that, *ceteris paribus*, managers find pegged regimes less problematic than floats.

We want to test the hypothesis that internationally exposed firms prefer greater currency stability, and hence a fixed exchange rate. To do so, we need firm-level proxies for "international exposure". The WBES asks respondents several questions about the characteristics of their firms; most important for our purposes, firms are asked to identify the sector in which they operate: manufacturing, service, agriculture, or construction.[7] In a separate inquiry, managers are asked whether their firms export (yes or no).[8] We use these responses to create three unique proxies for international exposure. MANUFACTURING takes on a value of 1 if the firm operates in the manufacturing sector; TRADABLE is a dummy variable for firms in either manufacturing or agriculture; EXPORTER indicates that the firm exports at least a portion of its production. As noted

[7] We drop all firms identifying themselves as "Other."

[8] Respondents that indicated they were exporters were also asked to specify the percentage of exports to total sales. Unfortunately, most firms did not respond to this inquiry and we are constrained to use a dummy variable to indicate whether a firm exports or not.

in **Table 2**, EXPORTER correlates significantly with MANUFACTURING at .33 and with TRADABLE at .31.

A preliminary review of the data reveals variance across sectors in the degree to which exchange rate stability matters for firm managers. **Figure 3** illustrates the average response among manufacturing firms versus that of non-manufacturing firms in floating and fixed exchange rate regimes. Manufacturers, on average, express greater discontent under floating regimes: the average response among manufacturing firms is 2.89 compared to 2.67 for non-manufacturers. Although the average response is lower for both groups in fixed-rate regimes, the difference between the two groups is much lower in fixed-rate regimes; in fact, manufacturers are slightly happier than non-manufacturers in fixed regimes (average values of 1.99 and 2.05, respectively).

Figure 4 compares the distribution of responses between manufacturing and non-manufacturing firms operating in floating exchange rate regimes. Manufacturers express more dissatisfaction with exchange rates under floats than respondents operating non-manufacturing enterprises. Later, we will use more regression analysis to determine if other factors contribute to these differences, but this preliminary evidence suggests that international exposure contributes to a preference for exchange rate stability among businesspeople.

Our next hypothesis relates to the *level* of the exchange rate, which we measure by the variable REER APPRECIATION; the percentage change in the real effective exchange rate between 1999 and 1998.[9] Positive values indicate a real appreciation of the

[9] The data are from the International Financial Statistics (IFS) and the Bank for International Settlements (BIS). The World Development Indicators provide data for Georgia, but coverage ends at 1998. Therefore,

currency. We expect firms in the tradables sectors to be more concerned about the exchange rate as the real exchange rate appreciates. To evaluate this conditional proposition, we make use of interactions between our sectoral dummies and REER APPRECIATION.

Survey responses may reflect other firm- or country-level characteristics besides international exposure and sector of activity. We use the responses to two other WBES questions to control for firm-level factors: government ownership and firm size.[10] We also include several country-level variables in our models: the log of GDP per capita, the log of FDI stock per capita, and financial sector liabilities (M3/GDP).

Our first set of models aims to identify firm owners' concern with the stability of the exchange rate. We estimate the following equation:

$$(\textit{EXCHANGE RATE PROBLEM})_{ij} = \alpha + \beta_1 (\boldsymbol{SECTOR})_{ij} + \beta_2 (\boldsymbol{FIRM})_{ij} + \beta_3 (\boldsymbol{ECONOMY})_j + \varepsilon_{ij} \quad (1)$$

where the subscripts stand for firm *i* in country *j*. The dependent variable is EXCHANGE RATE PROBLEM, the response of firm *i* in country *j*. We divide the sample of responses according to the type of exchange rate regime under which the firms operate: floating or pegged**.** The variable of interest is **SECTOR**, which represents one of the following sectoral dummies: MANUFACTURING, TRADABLE, or EXPORTER. The vectors **FIRM** and **ECONOMY** are firm- and country-level controls.

REER APPRECIATION for Georgia measures the percentage change in the real effective exchange rate between 1998 and 1997.

[10] Government ownership is a dummy variable that takes the value of 1 if a respondent indicates state ownership. Firm size is an ordered response: 1=small (5-50 employees); 2=medium (51-500 employees) 3=large (>500 employees).

To test our claims about sectoral attitudes toward the *level* of the exchange rate, we run interactions between the sectoral dummies and REER APPRECIATION. These models take the following form:

$$(\textit{EXCHANGE RATE PROBLEM})_{ij} = \alpha + \beta_1 (\textbf{\textit{SECTOR}})_{ij} + \beta_2 (\textbf{\textit{SECTOR*REER APPRECIATION}})_j + \beta_3 (\textbf{\textit{FIRM}})_{ij} + \beta_4(\textbf{ECONOMY})_j + \varepsilon_{ij} \quad (2)$$

where the subscripts stand for firm *i* in country *j*. The dependent variable is EXCHANGE RATE PROBLEM, the response of firm *i* in country *j*. As before, we divide the sample of responses according to the type of exchange rate regime under which the firms operate: floating or pegged**. SECTOR** represents one of the following sectoral dummies: MANUFACTURING, TRADABLE, or EXPORTER. The variable of interest is the interaction **SECTOR*REER APPRECIATION**. We expect internationally exposed firms to be more concerned about the exchange rate as the real exchange rate appreciates. **FIRM** and **ECONOMY** are vectors of firm- and country-level controls.

Since our dependent variables are discrete, ordered responses, we estimate the equation with ordered probit models using standard maximum likelihood and heteroskedasticity-robust standard errors. Following Beck et al. (2006), who model a different WBES survey response as a function of firm- and country-level variables, we allow for possible correlation of the error terms among firms within the same country using Stata's "cluster" command. This technique maintains the assumption of

independent error terms across countries, while allowing for within-country correlation of the errors due to factors such common linguistic or cultural interpretations of the survey.

As our dependant variables are responses of *individual* firm owners to a survey question about exchange rates, we are not overly concerned with endogeneity issues – it seems unlikely that such individual responses "cause" government exchange rate policies. That said, in countries where firms *en masse* care more about exchange rate policies, governments probably are responsive to firms' preferences. For example, where exports compose a large share of GDP, governments may to be particularly responsive to exporters when setting exchange rate policy. But, if the causal arrow runs from firms' preferences to policies, the bias is *against* our finding sectoral differences in the data. If export producers obtain the policies they want, we won't observe a difference in the responses of exporting and non-exporting firms.

Results

Tables 4-7 contain estimates of the covariates of exchange rate attitudes among firms operating in floating and in fixed exchange rate environments, respectively. **Tables 4 and 5** use the LYS exchange rate regime classifications while **Tables 6 and 7** replicate the analysis using Reinhart and Rogoff's (RR) regime classifications. Our expectation is that, in floating regimes, firm owners in internationally exposed sectors will express greater concern with exchange rates than other sectors. Moreover, this concern will be muted in fixed regimes, as currency risk is limited. We use sector dummies to proxy for "internationally exposed": MANUFACTURING, TRADABLE (manufacturing + agriculture), and EXPORTER. In Models 1-4, we include the following variety firm- and country-level control variables:

- GOVERNMENT OWNED (1=yes, 0=no)
- SIZE (1=small (5-50 employees); 2=medium (51-500 employees) 3=large (>500 employees)
- LOG GDP/CAPITA (avg. 1997-1999)
- M3/GDP (avg 1997-1999)
- LOG FDI STOCK/CAPITA (avg. 1997-1999)

In **Tables 4-7**, the coefficients for our variables of interest largely confirm our priors: in floating regimes, manufacturers and tradables producers are more likely to express concern about the exchange rate than firms in other sectors. In fixed regimes, by contrast, the internationally exposed sectors are less likely to report that the exchange rate represents a problem for their businesses, although the estimates are not statistically significant in the fixed-regime sample. Note that nontradables are the complement of the set of tradables, so the value of the estimated coefficient on nontradables is the same as for TRADABLE, but with the opposite sign. Thus, nontradables (services + construction) are less likely to be concerned about the exchange rates in floats.

The results on TRADABLE are not significant because attitudes toward a floating exchange rate among firms in agriculture appear not to coincide with those of manufacturing firms. Run separately (but not reported), the dummy for AGRICULTURE is negative and significant in floats and positive (though not significant) in fixed regimes, which is exactly the opposite of the results for MANUFACTURING. We speculate that firm owners in the agricultural sector are less concerned about the exchange rate in floats because agriculture has long been highly protected in most national economies. In addition, much farm output may be in traditional products or goods that do not enter readily into world trade (perishable or delicate produce, for example). Trade barriers and other transport restrictions may thus insulate food producers from the vicissitudes of exchange rate variation in floating regimes.

The negative and significant effect of GOVERNMENT OWNED implies state ownership reduces managers' apprehensions about the exchange rate. It is difficult to see this variable as a proxy for the non-traded sector, however, since the simple correlation between GOVERNMENT OWNED and SERVICES is small and negative (- .062). In fact, state ownership does not correlate strongly or positively with any other stand-in for "internationally sheltered" sector. Therefore, we treat it as a control. One interpretation of the finding that state owned firms are less concerned than other firms about the exchange rate is that they have a privileged relationship with the government that protects them from such forces. They are "sheltered" not so much from exchange rate pressures but from market and political forces of any kind, as the government stands ready to subsidize and protect them. To test this interpretation, we estimated models of firm responses to a separate WBES question about the security of property rights. Our findings (not reported) indicate that state ownership has a large and negative influence on property rights concerns among firms, and that this result is robust to a battery of firm- and country-level controls.

Our country-level control for the stock of foreign direct investment, LOG FDI STOCK/CAPITA, returns negative and (mostly) significant estimates in floating regimes. In other words, firms operating in floats with more FDI per capita are less likely to report that the exchange rate causes problems for their businesses. One interpretation of this result is that foreign investors are more diversified across countries and currencies and thus less sensitive to volatility in the local currency.

In **Figure 5**, we used the Clarify software from Tomz, Wittenberg, and King (2003) to provide substantive meaning to the ordered probit estimates from Model 2 of

Table 4. We simulated the difference in the predicted probabilities of manufacturing and non-manufacturing firms' responses while holding all other variables in at their means. In this way, we isolated the impact of "international exposure," as proxied by being in the manufacturing sector, on firm managers' concern with the exchange rate. The effect is meaningful and significant for all categories of the response except "moderate obstacle." For example, in floating regimes, the simulated difference in the probability that a firm in the sheltered, non-manufacturing sector says the exchange rate is a "major obstacle" is 7 percentage points lower than that of a manufacturing firm.

Tables 8 and 9 test our claims about sectoral attitudes toward the *level* of the exchange rate. To do so, we make use of interactions between our sectoral dummies and REER appreciation. One of our goals is to test the proposition that internationally exposed sectors are more concerned with the exchange rate as the currency appreciates. In addition, we also hope to uncover the reason why producers in internationally exposed sectors express more dissatisfaction with exchange rates in floating regimes than in pegged regimes. The interactions allow us to determine the extent to which the concern in floating regimes involves the level of the exchange rate, as opposed to its volatility.

Tables 8 and 9 report the estimates of Equation 2 for firms operating in floating regimes, using the LYS and RR samples, respectively. We estimate the effects in floating exchange rate regimes because real appreciations are more likely in floats than in regimes classified as *de facto* pegs. Policymakers in *de facto* pegs have demonstrated a commitment to both nominal and real currency stability; indeed, the mean of REER APPRECIATION among countries coded as floating by LYS is -.039, while it is just -.002 among LYS pegs. We thus test the expectation that internationally exposed firms

are more concerned about the exchange rate as the REER appreciates in floating regimes only.

In **Table 8,** Models 1-4 the signs of our internationally-exposed sector variables are positive in every model, as are the interaction terms: in LYS floating regimes, manufacturers, tradables producers, and exporters all express greater concern about the exchange rate as the real exchange rate appreciates. Currency appreciation makes tradable goods less competitive both at home and abroad, which accounts for the positive and significant results on the interaction terms for manufactures, tradable producers, and exporters. In **Table 9**, we estimate the same models using the Reinhart-Rogoff sample and find additional evidence that sectoral attitudes are conditioned by currency appreciation. The interactions of manufacturing and tradables with real appreciation are positively signed and significant, indicating that firms in these internationally exposed sectors express greater concern with the currency as the REER appreciates. While the same relationship holds for the interaction of exporter and REER appreciation, the conditional effect is not statistically significant in this sample.

Figure 6 provides estimates of the magnitude of these interaction effects. Using Model 2 from **Table 8,** we simulated the change in the predicted probability of EXCHANGE RATE PROBLEM = 4 ("Major Obstacle") as REER appreciation moves from its minimum to its maximum value, holding all other variables at their means. The simulations were performed separately for manufacturing firms (left panel) and non-manufacturing (right panel) firms using Clarify.[11]

[11] Similar effects (not reported) were obtained substituting the interactions of REER appreciation with exporter and tradables.

For manufacturing firms, the predicted probability that a respondent will report that the exchange rate is a "major obstacle" increases by 25 percentage points (from .24 to .49) as real appreciation moves from its minimum (-.31) to its maximum (.09) value. By contrast, such a movement has far less influence on non-manufacturing firms in floating regimes: the change in the probability of responding "major obstacle" is just 8 percentage points (from .27 to .35). There is also much more uncertainty around the point predictions for non-manufacturing firms.

Our final concern involves the *relative* importance of volatility and appreciation to firm managers' attitudes about the exchange rate. We found that in floating regimes internationally exposed firms are more concerned about the exchange rate than firms in sheltered sectors. We also found that internationally exposed firms are more concerned than sheltered, non-manufacturing firms when the REER appreciates. But what we would like to know is whether the heightened concern among international exposed firms operating in floating regimes is caused by the inherent volatility of exchange rates in these regimes or by the tendency of floating regimes to experience real appreciations.

Some evidence for the magnitude of each effect can be extracted from the Clarify results presented above in **Figures 5 and 6**. If we compare differences in the predicted probability of manufacturing and non-manufacturing firms reporting that the exchange rate poses a "major obstacle" across these two sets of regressions, we can get some sense of the relative magnitudes of volatility and level, respectively. From **Figure 5**, we see that, *without regard to the level of the real exchange rate*, the difference in the predicted probability that a firm in the sheltered sector reports a "major obstacle" compared to that of a manufacturing firm is 7 percentage points. From **Figure 6**, we estimate that, *as the*

REER appreciates from minimum to maximum, the probability that a manufacturing firm classifies the exchange rate as a "major obstacle" is 17 percentage points higher than for a non-manufacturing firm. With the caveat that the interaction simulations are based on a truncated sample and are subject to wide confidence intervals that diminish the statistical significance of the sectoral differences, it would appear that appreciation in floating exchange rate regimes is the more important problem for firms in the internationally exposed sectors.

Our results provide support for existing arguments linking the economic activities of firms to their preferences over exchange rate policy. Manufacturers express greater uncertainty under floating exchange rates than do firms in sheltered, nontradable sectors. Manufacturers and exporters are also more likely to disapprove of a real appreciation than are firms in nontradable industries. Whether and how these preferences are translated into pressures on policymakers, and into policy, is a matter for further analysis.

Conclusion

Many analyses of the political economy of exchange rate policy start from the presumption that policymakers must take into account the exchange rate policy preferences of domestic economic agents. Such analyses typically posit that internationally oriented firms will be especially averse to the volatility associated with a floating rate, and will therefore prefer a fixed exchange rate. They also typically suggest that tradables producers will be particularly averse to the relative price effects of a real appreciation. Nontradables producers, conversely, are expected to prefer floating rates and an appreciated currency.

The empirical evidence we present here supports these expectations. Owners and managers of manufacturing firms, inherently more affected by the international economy, are more likely to regard the exchange rate as a significant problem in floating-rate regimes than those in the sectors that are not so exposed to cross-border transactions. This implies a preference of these more internationally engaged firms for a fixed exchange rate. Similarly, firms in the manufacturing sector and those with export interests are particularly concerned by a real appreciation of the exchange rate; firms in nontradables sectors are less likely to demonstrate such concern. This implies a preference of tradables producers, including exporters, for a relatively depreciated real exchange rate.

While these results are hardly surprising, they do confirm theoretically grounded expectations about the policy preferences of important economic actors. Further work is needed to explore more nuanced and differentiated aspects of exchange rate policy preferences. For example, it would be important to know how such things as foreign-currency liabilities, intra-firm trade, differential pass-through, and invoicing practices, affect currency preferences. The evidence presented here is, nonetheless, a start toward a more rigorous and precise sense of the economic interests and attitudes with which policymakers contend.

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Figure 1: Average Response of Firm Managers, by Exchange Rate Regime

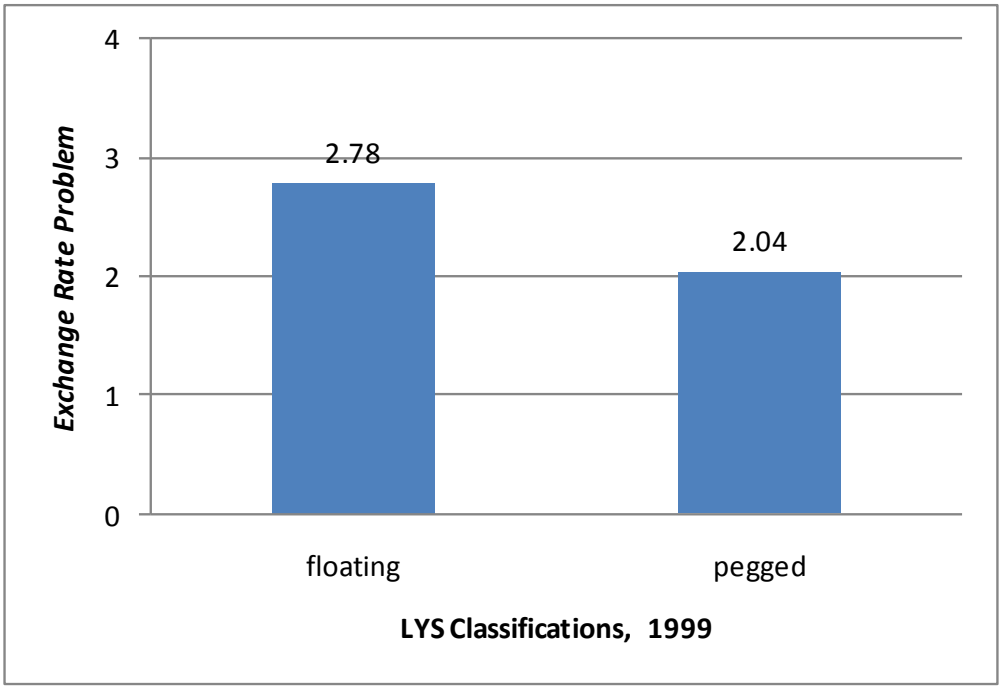


Figure 2: Respondents Reporting Problems with the Exchange Rate, by Exchange Rate Regime

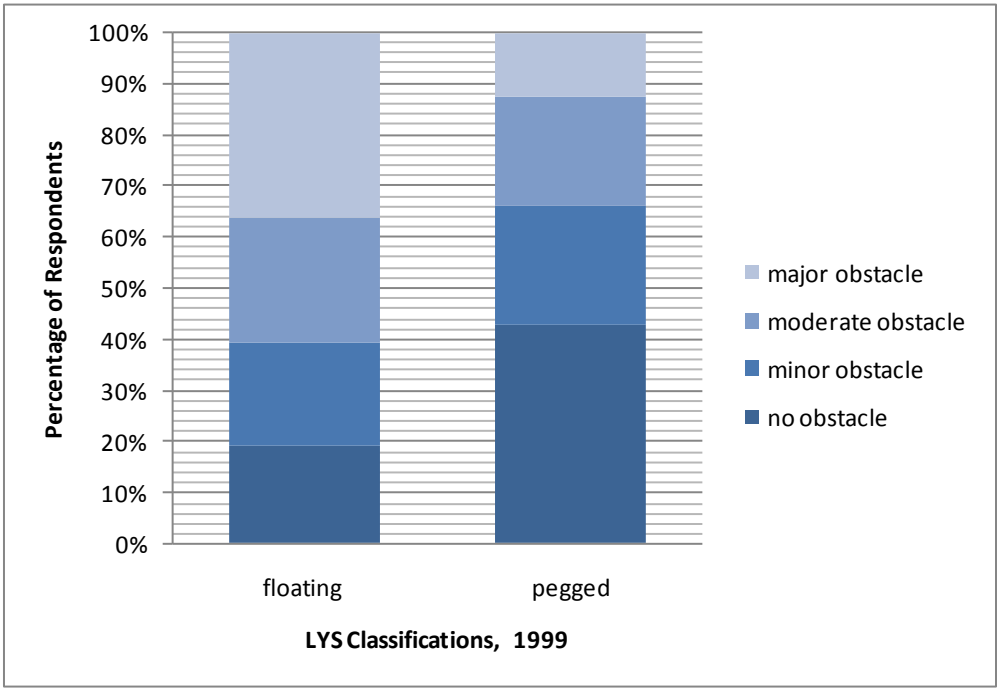


Figure 3: Manufacturing vs. Non-Manufacturing Average Responses, by Exchange Rate Regime

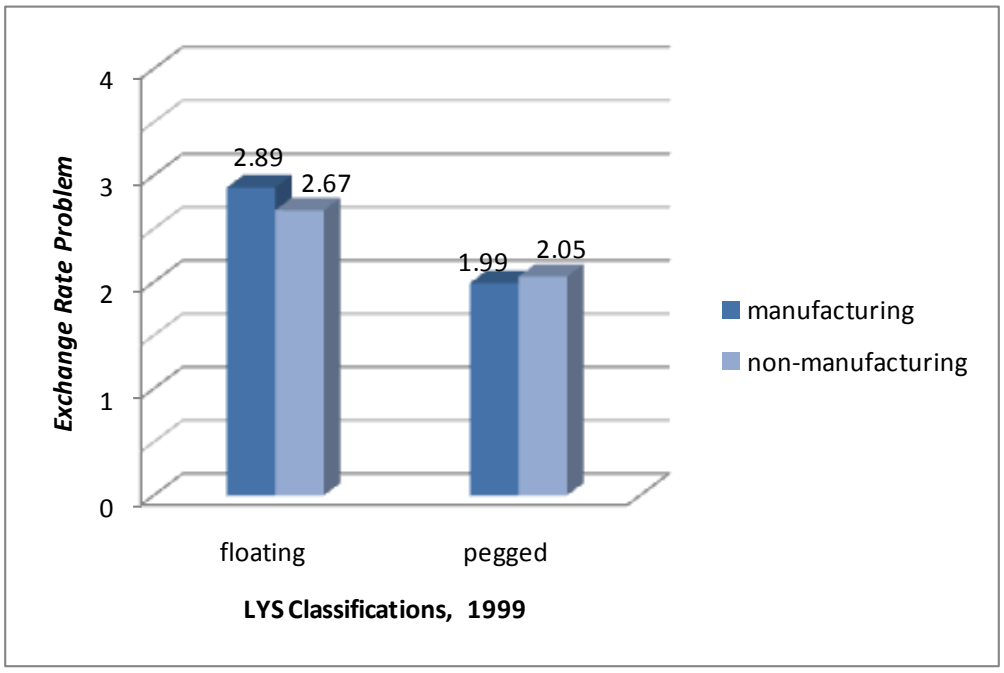


Figure 4: Manufacturing vs. Non-Manufacturing Responses in Floating Regimes

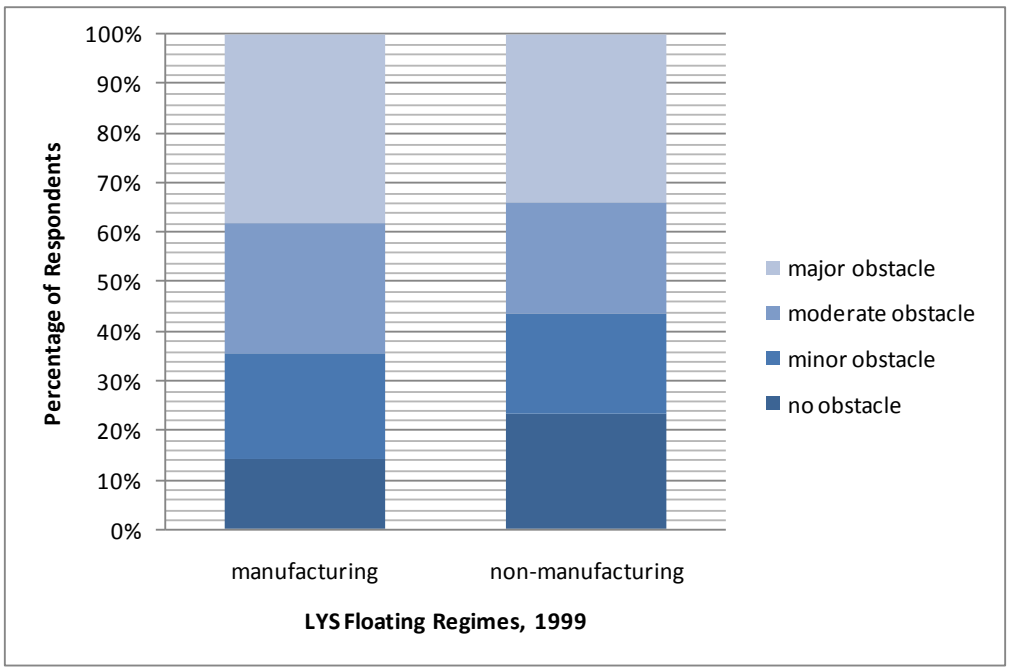
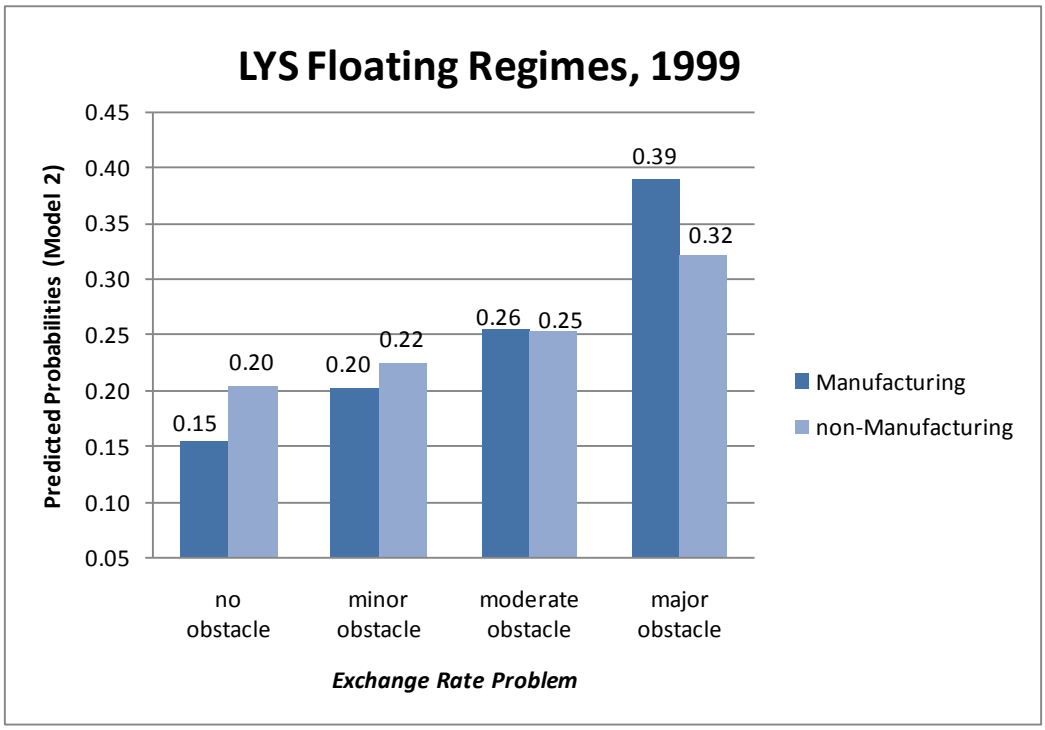
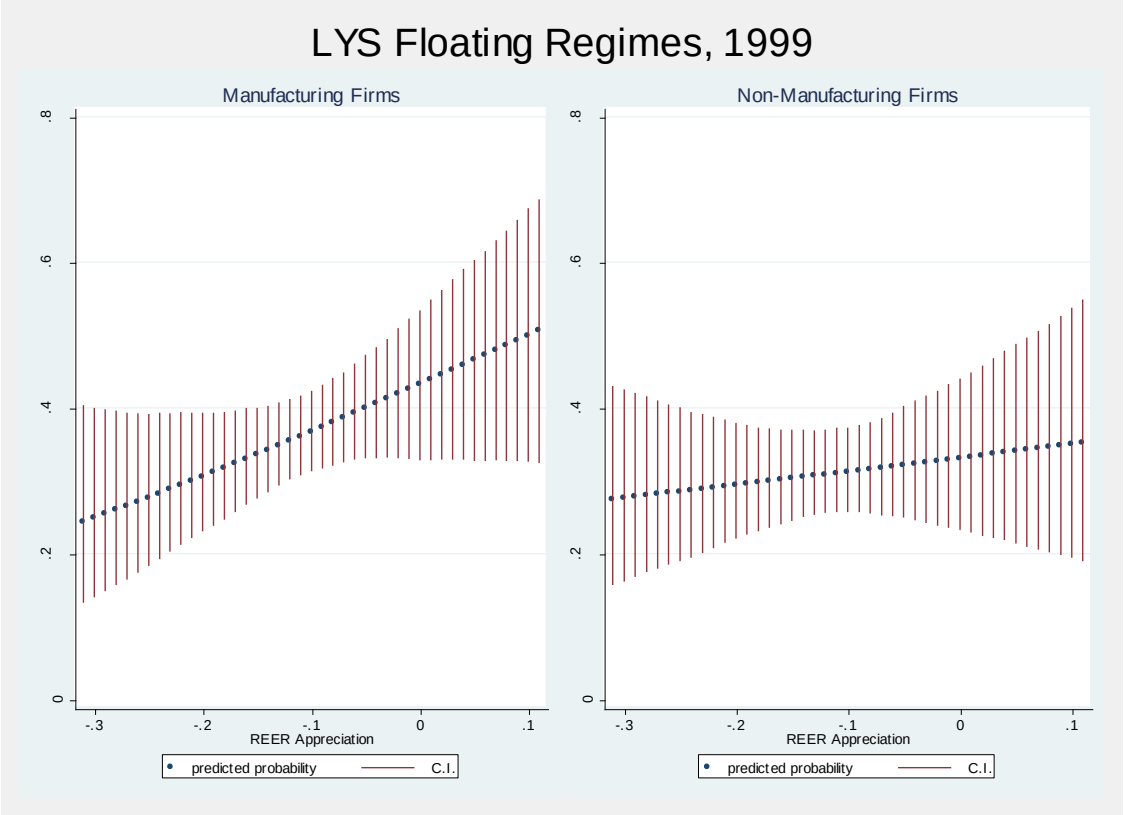


Figure 5: Substantive Effect of Sector (Manufacturing vs. Non-Manufacturing)
(Clarify simulations run on Model 2, Table 4)



Notes: This figure shows the change in the predicted probabilities of firms' responses to a change in firm sector from non-manufacturing to manufacturing, holding all other variables at their means. The simulations were performed on Model 2 from Table 4**,** using the Clarify software (Tomz, Wittenberg, and King 2003). The first differences for "no obstacle," "minor obstacle," and "major obstacle" are significant at the 1 percent level. The difference for the "moderate obstacle" estimate is not significant.

Figure 6: Exchange Rate Appreciation: Manufacturing vs. Non-Manufacturing
(Clarify simulations run on Model 2, Table 8)



Notes: These figures illustrate the change in the predicted probability that EXCHANGE RATE PROBLEM = 4 (a "major obstacle") as REER appreciation moves from its minimum to its maximum value, holding all other variables at their means. The simulations were performed separately for manufacturing (left panel) and non-manufacturing (right panel) firms using the Clarify software (Tomz, Wittenberg, and King 2003).

Table 1: Summary Statistics

Variable	*N*	*mean*	*sd*	*min*	*max*
Exchange Rate Problem	7531	2.585	1.160	1	4
Manufacturing	6998	0.386	0.487	0	1
Tradable	6998	0.454	0.498	0	1
Agriculture	6998	0.069	0.253	0	1
Exporter	7365	0.360	0.480	0	1
Government Owned	7531	0.120	0.325	0	1
Size	7531	1.782	0.735	1	3
REER Appreciation	50	-0.027	0.131	-0.496	0.429
Log GDP/capita	73	7.308	1.282	4.764	10.366
M3/GDP	73	39.388	25.110	0.002	119.487
Log FDI Stock/capita	73	5.719	1.683	1.946	10.159

Table 2a: Correlation Matrix (Firm-Level Variables)

	Exchange Rate Problem	Manufacturing	Tradable	Exporter	Government Owned	Size
Exchange Rate Problem	1					
Manufacturing	0.0351*	1				
Tradable	0.0464*	0.8676*	1			
Exporter	-0.0369*	0.3333*	0.3070*	1		
Government Owned	-0.0515*	0.0594*	0.0862*	0.0699*	1	
Size	0.0016	0.2175*	0.2385*	0.3072*	0.2243*	1

Table 2b: Correlation Matrix (Country-Level Variables)

	Exchange Rate Problem	REER Appreciation	Log GDP/capita	M3/GDP	Log FDI Stock/capita
Exchange Rate Problem	1				
REER Appreciation	-0.1325	1			
Log GDP/capita	-0.2335	0.1282	1		
M3/GDP	-0.199	0.1955	0.4619*	1	
Log FDI Stock/capita	-0.2918	0.1766	0.8622*	0.4474*	1

*Significant at 1%.

Table 3a: Data by Country, Floating Exchange Rate Regime in 1999 (LYS Classification)

Country	Exchange Rate Problem	Manufacturing	Tradable (manufacturing + agriculture)	Agriculture	Exporter	Government Owned	Size	REER Appreciation	Log GDP/capita	M3/GDP	Log FDI Stock/capita
Albania	2.543	0.323	0.331	0.008	0.198	0.126	1.315	.	6.896	55.672	4.934
Belarus	3.085	0.287	0.609	0.322	0.274	0.299	1.872	.	6.963	18.483	4.745
Canada	2.020	0.273	0.283	0.010	0.475	0.040	2.020	-0.012	9.942	76.650	8.658
Chile	2.525	0.460	0.483	0.023	0.414	0.061	2.010	-0.047	8.444	41.964	7.958
Colombia	3.293	0.381	0.412	0.031	0.394	0.020	2.343	-0.093	7.633	34.217	5.781
Czech Republic	2.286	0.198	0.230	0.032	0.328	0.167	1.421	-0.018	8.549	66.469	7.442
Guatemala	3.553	0.406	0.406	0.000	0.320	0.000	1.835	.	7.405	23.438	5.677
Haiti	2.882	0.429	0.494	0.065	0.216	0.029	1.686	.	6.135	32.835	3.258
Honduras	3.264	0.514	0.529	0.014	0.330	0.000	1.692	.	6.827	39.517	5.252
Hungary	1.614	0.277	0.376	0.099	0.394	0.198	1.535	0.022	8.290	47.059	7.727
Kenya	1.782	0.453	0.528	0.075	0.837	0.164	2.273	.	6.042	39.886	3.296
Madagascar	2.245	0.524	0.643	0.119	0.449	0.020	1.755	.	5.443	23.939	2.833
Mexico	3.182	0.525	0.525	0.000	0.394	0.000	2.020	0.093	8.573	32.450	6.673
Pakistan	2.904	0.505	0.516	0.011	0.478	0.064	1.851	-0.068	6.248	46.733	3.951
Peru	3.000	0.386	0.482	0.096	0.245	0.009	2.066	.	7.611	28.100	5.948
Philippines	3.450	0.450	0.450	0.000	0.320	0.020	1.950	0.058	6.851	63.797	5.037
Poland	2.214	0.306	0.398	0.092	0.450	0.209	1.675	-0.024	8.255	34.762	6.513
Russia	3.116	0.274	0.498	0.224	0.079	0.144	1.704	-0.313	7.365	20.288	1.946
South Africa	2.434	0.468	0.532	0.065	0.886	0.060	2.542	-0.053	8.004	42.937	7.048
Sweden	1.773	0.289	0.299	0.010	0.557	0.082	1.742	-0.028	10.096	48.405	9.020
Tanzania	2.200	0.344	0.375	0.031	0.267	0.143	1.743	.	5.511	21.207	4.263
Thailand	3.634	0.535	0.576	0.041	0.645	0.006	1.744	0.036	7.611	101.974	6.236
Turkey	2.830	0.438	0.458	0.021	0.411	0.170	1.735	0.051	7.951	38.850	5.602
Ukraine	3.051	0.379	0.444	0.065	0.239	0.164	1.617	-0.212	6.417	13.912	4.174
United States	1.632	0.256	0.291	0.035	0.341	0.092	1.897	-0.010	10.366	59.334	8.131

Table 3b: Data by Country, Pegged Exchange Rate Regime in 1999 (LYS Classification)

Country	Exchange Rate Problem	Manufacturing	Tradable (manufacturing + agriculture)	Agriculture	Exporter	Government Owned	Size	REER Appreciation	Log GDP/capita	M3/GDP	Log FDI Stock/capita
Argentina	1.811	0.322	0.356	0.034	0.295	0.032	1.874	0.089	8.955	25.988	7.436
Armenia	2.790	0.202	0.258	0.056	0.078	0.218	1.395	0.009	6.260	9.160	5.100
Belize	1.714	0.412	0.412	0.000	0.224	0.082	1.388	-0.032	7.975	48.449	7.048
Bosnia and Herzegovina	1.211	0.500	0.563	0.063	0.606	0.316	1.747	.	6.764	25.231	4.205
Botswana	1.263	0.358	0.396	0.038	0.519	0.211	1.895	.	7.862	24.096	6.683
Bulgaria	2.402	0.513	0.650	0.137	0.345	0.342	1.573	0.025	7.274	47.415	5.697
Cameroon	2.297	0.378	0.486	0.108	0.611	0.054	1.973	-0.013	6.450	14.178	4.277
China	1.793	0.609	0.620	0.011	0.359	0.239	1.804	-0.054	6.649	116.640	5.011
Cote d'Ivoire	2.000	0.313	0.354	0.042	0.739	0.019	1.923	-0.009	6.464	23.549	4.754
El Salvador	2.578	0.543	0.557	0.014	0.287	0.020	1.912	.	7.616	44.903	5.687
Estonia	1.808	0.375	0.392	0.017	0.595	0.208	1.650	0.040	8.119	28.245	7.490
Germany	1.695	0.189	0.200	0.011	0.358	0.074	1.916	-0.032	9.983	73.334	7.959
Ghana	2.500	0.250	0.396	0.146	0.455	0.140	1.980	-0.004	5.468	22.606	4.220
Lithuania	1.821	0.189	0.226	0.038	0.282	0.057	1.179	0.077	7.971	19.339	6.373
Malawi	2.273	0.318	0.364	0.045	0.650	0.091	2.000	0.017	5.010	19.058	3.296
Malaysia	1.977	0.506	0.529	0.023	0.379	0.034	1.667	0.009	8.214	119.487	7.686
Namibia	1.965	0.196	0.304	0.107	0.680	0.088	1.965	.	7.472	44.101	6.633
Panama	1.300	0.534	0.569	0.034	0.463	0.038	2.275	.	8.209	64.578	7.794
Senegal	2.167	0.136	0.182	0.045	0.500	0.000	1.333	.	5.998	23.228	4.331
Singapore	1.820	0.320	0.320	0.000	0.460	0.040	1.930	-0.068	9.908	117.535	10.159
Slovak Republic	2.336	0.261	0.353	0.092	0.478	0.185	1.521	-0.026	8.146	61.951	6.043
Trinidad and Tobago	2.396	0.458	0.514	0.056	0.426	0.069	1.644	0.017	8.613	56.635	8.506
Uganda	1.803	0.275	0.348	0.072	0.471	0.085	1.549	-0.086	5.406	13.752	3.332
Zambia	1.950	0.216	0.351	0.135	0.342	0.100	1.750	0.005	5.710	17.726	5.361
Zimbabwe	3.000	0.343	0.457	0.114	0.632	0.014	2.000	.	6.476	41.335	4.443

Table 3c: Comparison of Levy-Yeyati and Sturzenegger (LYS) and Reinhart-Rogoff (RR) Regimes, 1999

LYS Floats		RR Floats		LYS Pegs		RR Pegs	
Country	*ER Problem*	Country	*ER Problem*	Country	*ER Problem*	Country	*ER Problem*
Hungary	1.614	Hungary	1.614	Bosnia and Herzegovina	1.211	Bosnia and Herzegovina	1.211
United States	1.640	United States	1.632	Botswana	1.263	Panama	1.300
Sweden	1.773	Sweden	1.773	Panama	1.300	Germany	1.695
Kenya	1.792	Kenya	1.782	Germany	1.695	China	1.793
Canada	2.020	Uganda	1.803	Belize	1.714	Estonia	1.808
Tanzania	2.188	Singapore	1.820	China	1.793	Argentina	1.811
Madagascar	2.190	Tanzania	2.200	Uganda	1.803	Lithuania	1.821
Poland	2.214	Poland	2.214	Estonia	1.808	Malaysia	1.977
Czech Republic	2.286	Madagascar	2.245	Argentina	1.811	Cote d'Ivoire	2.000
South Africa	2.468	Czech Republic	2.286	Singapore	1.820	Senegal	2.167
Chile	2.483	Slovak Republic	2.336	Lithuania	1.821	Cameroon	2.297
Albania	2.532	South Africa	2.434	Zambia	1.950	Bulgaria	2.402
Haiti	2.831	Ghana	2.500	Namibia	1.965	El Salvador	2.578
Turkey	2.847	Chile	2.525	Malaysia	1.977	Egypt	2.742
Pakistan	2.903	Albania	2.543	Cote d'Ivoire	2.000	Peru	3.000
Peru	2.952	Georgia	2.767	Senegal	2.167	Zimbabwe	3.000
Ukraine	3.051	Nigeria	2.825	Malawi	2.273		
Belarus	3.096	Turkey	2.830	Cameroon	2.297		
Russia	3.116	Haiti	2.882	Slovak Republic	2.336		
Honduras	3.143	Ukraine	3.051	Trinidad and Tobago	2.396		
Mexico	3.254	Mexico	3.182	Bulgaria	2.402		
Colombia	3.289	Colombia	3.293	Ghana	2.500		
Guatemala	3.438	Indonesia	3.354	El Salvador	2.578		
Philippines	3.450	Philippines	3.450	Armenia	2.790		
Thailand	3.634	Thailand	3.634	Zimbabwe	3.000		

Notes: Reinhart-Rogoff floats include cases of managed floating (which includes a *de facto* crawling band that is narrower than or equal to ±5% and a moving band that is narrower than or equal to ±2%), and freely floating. We drop Indonesia from the RR float sample because, in the aftermath of the currency crisis, firms from all sectors found the exchange rate a problem in Indonesia in 1999, making it difficult to tease out any sectoral distinctions.

Table 4: Exchange Rate Attitudes in FLOATING Regimes (LYS Classification)

	(1)	(2)	(3)	(4)
Government Owned	-0.330**	-0.293**	-0.293**	-0.313**
	(0.132)	(0.127)	(0.130)	(0.137)
Size	0.042	0.020	0.029	0.025
	(0.066)	(0.064)	(0.065)	(0.054)
Log GDP/Capita	-0.120	-0.100	-0.110	-0.122
	(0.098)	(0.094)	(0.094)	(0.096)
M3/GDP	0.006	0.007	0.007	0.006
	(0.007)	(0.007)	(0.006)	(0.007)
Log FDI Stock/Capita	-0.130***	-0.152***	-0.147***	-0.134***
	(0.048)	(0.045)	(0.045)	(0.051)
Manufacturing		0.187***		
		(0.056)		
Tradable			0.102*	
			(0.053)	
Exporter				0.092
				(0.101)
Observations	3108	2918	2918	3049
Countries	25	25	25	25
Pseudo R-squared	0.034	0.041	0.039	0.035

Notes: Ordered probit analysis of EXCHANGE RATE PROBLEM, a discrete, ordered dependant variable of firm managers' responses to the question, "How problematic is the exchange rate for the operation and growth of your business?" (1 = "No Obstacle," 2 = "Minor Obstacle," 3 = "Moderate Obstacle," 4 = "Major Obstacle."). Robust standard errors, clustered by country, are in parentheses. ***, **, * indicate statistical significance levels of 10, 5, and 1 percent, respectively.

Table 5: Exchange Rate Attitudes in FIXED-RATE Regimes (LYS Classification)

	(1)	(2)	(3)	(4)
Government Owned	-0.215	-0.209	-0.209	-0.207
	(0.154)	(0.149)	(0.147)	(0.158)
Size	-0.031	-0.004	-0.009	-0.034
	(0.068)	(0.069)	(0.069)	(0.066)
Log GDP/Capita	-0.159	-0.161	-0.161	-0.149
	(0.172)	(0.163)	(0.164)	(0.170)
M3/GDP	0.000	0.000	0.000	0.000
	(0.002)	(0.003)	(0.003)	(0.002)
Log FDI Stock/Capita	0.026	0.016	0.016	0.027
	(0.159)	(0.148)	(0.149)	(0.157)
Manufacturing		-0.068		
		(0.062)		
Tradable			-0.027	
			(0.066)	
Exporter				0.030
				(0.119)
Observations	1964	1823	1823	1901
Countries	25	25	25	25
Pseudo R-squared	0.009	0.011	0.011	0.008

Notes: Ordered probit analysis of EXCHANGE RATE PROBLEM, a discrete, ordered dependant variable of firm managers' responses to the question, "How problematic is the exchange rate for the operation and growth of your business?" (1 = "No Obstacle," 2 = "Minor Obstacle," 3 = "Moderate Obstacle," 4 = "Major Obstacle."). Robust standard errors, clustered by country, are in parentheses. ***, **, * indicate statistical significance levels of 10, 5, and 1 percent, respectively.

Table 6: Exchange Rate Attitudes in FLOATING Regimes (RR Classification)

	(1)	(2)	(3)	(4)
Government Owned	-0.350**	-0.326**	-0.335**	-0.340**
	(0.149)	(0.145)	(0.147)	(0.154)
Size	0.096	0.064	0.071	0.062
	(0.074)	(0.074)	(0.075)	(0.068)
Log GDP/Capita	0.009	-0.009	-0.007	0.018
	(0.195)	(0.183)	(0.186)	(0.198)
M3/GDP	0.008	0.009	0.009	0.008
	(0.006)	(0.006)	(0.006)	(0.006)
Log FDI Stock/Capita	-0.212	-0.207	-0.209	-0.225
	(0.150)	(0.147)	(0.149)	(0.152)
Manufacturing		0.197***		
		(0.060)		
Tradable			0.144***	
			(0.055)	
Exporter				0.174
				(0.120)
Observations	2507	2397	2397	2450
Countries	24	24	24	24
Pseudo R-squared	0.029	0.034	0.033	0.032

Notes: Ordered probit analysis of EXCHANGE RATE PROBLEM, a discrete, ordered dependant variable of firm managers' responses to the question, "How problematic is the exchange rate for the operation and growth of your business?" (1 = "No Obstacle," 2 = "Minor Obstacle," 3 = "Moderate Obstacle," 4 = "Major Obstacle."). Robust standard errors, clustered by country, are in parentheses. ***, **, * indicate statistical significance levels of 10, 5, and 1 percent, respectively.

Table 7: Exchange Rate Attitudes in FIXED-RATE Regimes (RR Classification)

	(1)	(2)	(3)	(4)
Government Owned	-0.396*	-0.372*	-0.373*	-0.405*
	(0.225)	(0.214)	(0.211)	(0.230)
Size	0.075	0.098	0.093	0.094
	(0.084)	(0.084)	(0.087)	(0.087)
Log GDP/Capita	-0.060	-0.110	-0.105	-0.074
	(0.247)	(0.221)	(0.222)	(0.248)
M3/GDP	-0.001	-0.001	-0.001	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)
Log FDI Stock/Capita	-0.095	-0.058	-0.060	-0.082
	(0.269)	(0.242)	(0.243)	(0.268)
Manufacturing		-0.035		
		(0.072)		
Tradable			0.010	
			(0.077)	
Exporter				-0.100
				(0.125)
Observations	1311	1201	1201	1281
Countries	16	16	16	16
Pseudo R-squared	0.014	0.014	0.014	0.014

Notes: Ordered probit analysis of EXCHANGE RATE PROBLEM, a discrete, ordered dependant variable of firm managers' responses to the question, "How problematic is the exchange rate for the operation and growth of your business?" (1 = "No Obstacle," 2 = "Minor Obstacle," 3 = "Moderate Obstacle," 4 = "Major Obstacle."). Robust standard errors, clustered by country, are in parentheses. ***, **, * indicate statistical significance levels of 10, 5, and 1 percent, respectively.

Table 8: **Real Appreciation and Exchange Rate Attitudes in FLOATING Regimes (LYS Classification)**

	(1)	(2)	(3)	(4)
REER Appreciation (1yr.)	1.353	0.522	0.450	0.879
	(1.134)	(1.006)	(1.038)	(1.226)
Government Owned	-0.361***	-0.353***	-0.358***	-0.340**
	(0.137)	(0.131)	(0.133)	(0.144)
Size	0.078	0.052	0.066	0.038
	(0.075)	(0.070)	(0.071)	(0.062)
Log GDP/Capita	-0.220**	-0.230**	-0.224**	-0.230**
	(0.109)	(0.102)	(0.103)	(0.111)
M3/GDP	0.009*	0.010**	0.010**	0.009*
	(0.005)	(0.005)	(0.005)	(0.005)
Log FDI Stock/Capita	-0.227***	-0.208***	-0.216***	-0.220***
	(0.073)	(0.065)	(0.066)	(0.080)
Manufacturing		0.267***		
		(0.078)		
Manufacturing * REER Appreciation (1yr)		1.168***		
		(0.358)		
Tradable			0.212***	
			(0.063)	
Tradable * REER Appreciation (1yr)			1.249***	
			(0.330)	
Exporter				0.278***
				(0.105)
Exporter * REER Appreciation (1yr)				1.599***
				(0.615)
Observations	2323	2258	2258	2276
Countries	16	16	16	16
Pseudo R-squared	0.078	0.084	0.083	0.082

Notes: Ordered probit analysis of EXCHANGE RATE PROBLEM, a discrete, ordered dependant variable of firm managers' responses to the question, "How problematic is the exchange rate for the operation and growth of your business?" (1 = "No Obstacle," 2 = "Minor Obstacle," 3 = "Moderate Obstacle," 4 = "Major Obstacle."). Robust standard errors, clustered by country, are in parentheses. ***, **, * indicate statistical significance levels of 10, 5, and 1 percent, respectively.

Table 9: **Real Appreciation and Exchange Rate Attitudes in FLOATING Regimes (RR Classification)**

	(1)	(2)	(3)	(4)
REER Appreciation (1yr.)	0.147	-0.568	-0.648	-0.217
	(0.969)	(0.838)	(0.860)	(1.141)
Government Owned	-0.435***	-0.422***	-0.436***	-0.431**
	(0.166)	(0.154)	(0.158)	(0.168)
Size	0.165**	0.130*	0.140**	0.118*
	(0.067)	(0.067)	(0.068)	(0.066)
Log GDP/Capita	0.052	0.068	0.074	0.061
	(0.241)	(0.227)	(0.232)	(0.244)
M3/GDP	0.012**	0.013***	0.013***	0.012**
	(0.005)	(0.005)	(0.005)	(0.005)
Log FDI Stock/Capita	-0.376**	-0.395**	-0.400**	-0.386**
	(0.182)	(0.169)	(0.174)	(0.185)
Manufacturing		0.275***		
		(0.083)		
Manufacturing * REER Appreciation (1yr)		1.417**		
		(0.599)		
Tradable			0.223***	
			(0.069)	
Tradable * REER Appreciation (1yr)			1.498***	
			(0.538)	
Exporter				0.279**
				(0.112)
Exporter * REER Appreciation (1yr)				0.996
				(0.841)
Observations	2139	2069	2069	2094
Countries	19	19	19	19
Pseudo R-squared	0.059	0.067	0.066	0.064

Notes: Ordered probit analysis of EXCHANGE RATE PROBLEM, a discrete, ordered dependant variable of firm managers' responses to the question, "How problematic is the exchange rate for the operation and growth of your business?" (1 = "No Obstacle," 2 = "Minor Obstacle," 3 = "Moderate Obstacle," 4 = "Major Obstacle."). Robust standard errors, clustered by country, are in parentheses. ***, **, * indicate statistical significance levels of 10, 5, and 1 percent, respectively.