

**UNDERSTANDING EXCHANGE RATE POLICY
ANNOUNCEMENTS:
A POLITICAL ECONOMY APPROACH**

Alexander F. Wagner

Alexander F. Wagner is a Ph.D. candidate, Political Economy and Government, at the John F. Kennedy School of Government, Harvard University (awagner@fas.harvard.edu).

The stability of the international financial system depends on the consistency of announcements, beliefs, and actions by countries and international organizations like the IMF. This article considers the first element in this trinity and analyzes the incentives of a rational policy maker to announce a fixed or flexible exchange rate regime. In a cross-sectional analysis for the 1990s, I find that countries with a non-functioning legal system, a low degree of the rule of law, high expropriation risk, low infrastructure quality and similar characteristics are more likely to announce fixed exchange rates. This result is consistent with a theoretical argument about announcing a fixed regime as a signal of “goodness” to the international community.

I. INTRODUCTION¹

Understanding what drives policy announcements by governments is an important problem in the study and practice of international relations. An area where this is particularly relevant is international finance. The stability of the international economic system requires a sufficient degree of consistency between announcements, beliefs, and actions by the parties involved. When such consistency does not exist, the fragility of international financial relations becomes apparent. We have witnessed several spectacular examples of instability recently, and institutions like the IMF have come under considerable fire for not preventing financial turmoil in Asia, Russia, Latin America, and Europe. Few observers have recognized, however, that even the first piece of the puzzle, exchange rate policy announcements by countries, is not well understood.

This motivates the central question of this article: Why do some countries announce to peg while others announce to float? It seems clear that such decisions are not only driven by economic criteria, such as optimum currency union considerations, but rather, are also driven by political and strategic factors.

This article is primarily empirical in its approach. I present evidence that countries whose informal economic “institutions,”² such as bureaucratic performance, rule of law, and security of property rights, are of low quality, tend to announce a fixed exchange rate policy with a higher probability than countries with high-quality institutions. However, the empirical findings are also consistent with the core theoretical hypothesis of this article, namely that the announcement of a fixed exchange rate is a signal by which policy makers attempt to show that they are abiding by the rules of the international

community. More specifically, the logic underlying the empirical analysis is that announcing a fixed exchange rate and thereby signaling “goodness” to the international community can be used as a substitute for other desirable characteristics of an economy, such as sound institutions, which allow the country to appear a credible borrower to the international community.

This analysis contributes to the literature on exchange rate policy by explicitly considering strategic announcements and relating a comprehensive set of institutional variables to exchange rate policy. The findings of this article also have a number of policy implications. First, international lenders, multilateral organizations like the IMF and private companies need to judge the credibility of exchange rate policy (ERP) announcements. Understanding the incentives of countries to *announce* a given exchange rate policy is therefore crucial for policy decisions by these parties.

Second, the results presented in this article imply that countries with low-quality institutions have an incentive to announce fixed exchange rate regimes. If the international community forces them to announce a different policy, instability may result. Conversely, as countries implement policies to improve basic institutions, they may become less interested in announcing fixed exchange rate regimes, other things being equal. Thus, ironically, precisely those countries for which some observers recommend dollarization (i.e. pegging irrevocably to, say, the US dollar) as a policy measure complementary to improving institutional quality, may have little incentive to follow this advice.

Third, a direct implication of the findings of this study is that to judge the consistency of announcements and actions, and for the stability of the international monetary and

financial system, the international system needs comparable categorizations of both announcements and actual exchange rate policies. It has been argued that standard IMF classifications of “exchange rate policy” are flawed and need to be replaced, since they essentially provide a classification of announcements rather than actual policies. However, such an indicator may be useful as a direct measure of intentions and strategic behavior in the international finance area, as policy makers and scholars need to monitor both announcements and actual exchange rate policies.

This article deals with exchange rate policy announcements because of their inherent importance and also because the data needed for this kind of study are readily available. However, the findings may have broader relevance beyond this particular application. The notion that national needs and international strategic considerations interact is also relevant for understanding other aspects of international relations. Therefore, this article aims not only to make a contribution to the political economy of international finance, but also more generally to the study of incentives for policy announcements and actions by countries in international relations.

The rest of the article is organized as follows. Section II discusses the theoretical framework. Section III describes the data; the methods are briefly discussed in the appendix. Section IV is the main contribution of the article and contains an empirical analysis. Section V concludes.

II. A THEORETICAL FRAMEWORK

The basic framework employed in this article is simple, and depicted in figure 1. Any exchange rate policy (ERP) announcement is conceptualized as a function of three

elements. The first factor driving the announcement is considerations of the real economic effects of that policy. Second, domestic political economy factors, in particular interest group activity, affect the policy announcement as well. Finally—and this is the central concern of this article—the announcement partly depends on strategic reasoning, i.e. what type of announcement the country thinks is most beneficial for its international position, conditional on economic and politico-economic factors. The aim of this article is not to disentangle the relative importance of economic, domestic political economy and strategic considerations. Instead, the framework provides guidance for choosing control variables in the empirical part of the study.

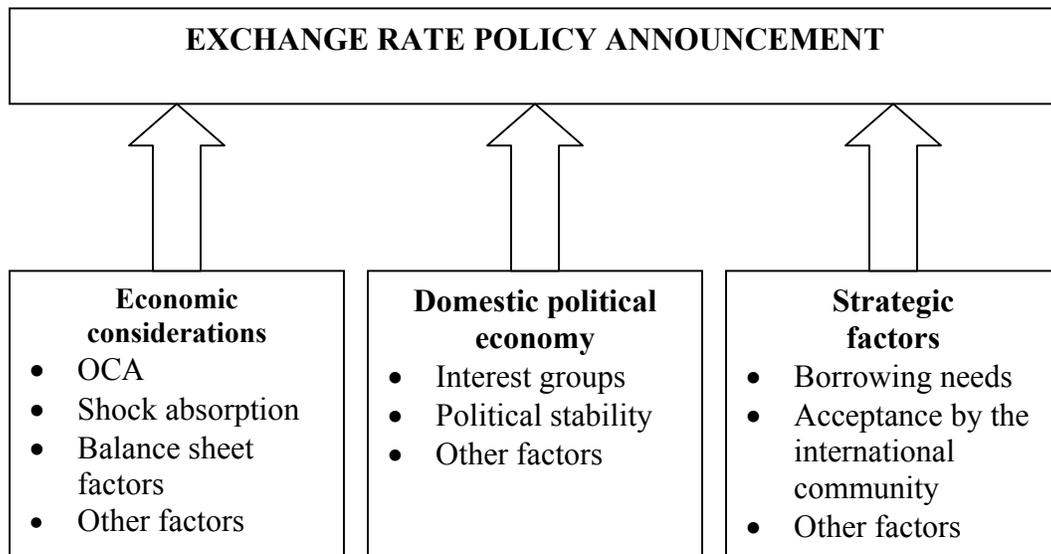


Figure 1: A stylized framework of ERP announcements

The dependent variable in this study is the announcement of a certain exchange rate policy. The concern with policy announcements distinguishes this article from most of the literature on the political economy of exchange rates, which has almost exclusively focused on explaining actual regime choice. A key problem in that literature is that it is

hard to define a precise measure of actual exchange rate regimes. Calvo and Reinhart (2002) note the important difference between de jure and de facto classifications. Recently, scholars have made attempts to construct comprehensive de facto classifications (Levy-Yeyati and Sturzenegger 1999; Reinhart and Rogoff 2002), but no consensus has been reached on what is the best way to characterize actual regimes. A background paper (Wagner 2001) presents a simple model that formalizes some of the intuition about the economic and political determinants of exchange rate regime (from now on: regime) announcements. However, the basic thrust of the argument is sufficiently straightforward to be captured in a verbal account. I discuss each of the three factors in figure 1 in turn.

Economic considerations

Let us begin by considering the incentives for choosing actual exchange rate policy. There is a huge literature on this topic, and it is only possible to list what appears to be close to a consensus of factors that play a role. The traditional view argues that exchange rate policy is determined by economic logic or objective factors, such as optimal currency area and related considerations (Mundell 1961; Tavlas 1994). The contribution of this theory is significant. As this study shows, purely economic considerations do play an important role for regime choice.³

However, the political desire to realize certain objective gains and to avoid certain losses, i.e. the political salience of these issues, depends on country characteristics.⁴ The now dominant framework for analyzing this question is that of Alesina and Barro (2002), which unifies approaches based on optimal currency area concerns with approaches

focusing on the management of monetary policy.⁵ The two major issues relevant to actual regime choice are commitment and credibility on the one hand, and loss of flexibility on the other. If policy makers observe significant differences from other countries in terms of economic cycles, they might choose not to peg the exchange rate because they value the flexibility to adjust policy to domestic conditions and to cater to their constituents. By the same token, they also have an incentive not to *announce* a pegged exchange rate.

Domestic political economy

Other studies have relaxed the assumptions of a benevolent dictator and a common national interest, at least in their empirical formulation. This is appealing, since earlier papers were not able to answer questions like the following: under what political circumstances are the advantages of tying one's hands also relevant for a rational, vote-maximizing politician? Studies on developed countries (Bernhard and Leblang 1999; Frieden 1994; Hefeker 1997) have considered the impact of institutional, electoral, and interest group factors on regime announcements. Gavin and Perotti (1997) have examined how the timing of regime changes depends on elections or government changes, and find that such events tend to delay regime shifts. This evidence is consistent with specific types of divergences between the policy maker's and society's preferences. Klein and Marion (1997) also find that both political and economic factors play a key role in determining the sustainability of exchange rate pegs. Another strand of domestic political economy focuses on groups with different preferences regarding exchange rate policy. Case studies like those of Jaramillo et al. (1998) for Colombia and

Ghezzi and Pasco-Font (2000) for Peru typically confirm the relevance of such cleavages, in particular as countries advance in the process of trade liberalization. Following parts of the literature, we can therefore hypothesize that tradables producers, in particular the manufacturing sector, should favor a flexible exchange rate regime (especially when trade is liberalized).⁶

Strategic factors

While these studies have focused on domestic aspects of the political economy of exchange rates, to my knowledge there does not exist any study that explicitly considers the link between domestic factors and strategic considerations on the international level. This article emphasizes the strategic effects of announcements as a function of the domestic political economy. In their discussion of the importance of political economy factors, Frieden et al. (2000) point out: “Countries do not choose regimes for the regime per se. Different regimes produce different outcomes, and countries choose them according to the outcomes they desire” (8). Paralleling this logic, the idea underlying this article is that countries do not announce policies per se. Different announcements produce different reactions, and countries make them according to the reactions they anticipate.

The central assumption I make is that the borrowing capacity of a country (including the terms of borrowing) derives from the perceived “goodness” of a country. In particular, governments that are perceived to have sound fiscal and monetary policy and whose policies conform to widely held norms about what constitutes good policy, such as the “Washington consensus” (Williamson 1990), are judged to be trustworthy.⁷ And

trustworthiness generally leads to lower interest rates or higher borrowing capacity.⁸ While anecdotal evidence lends support to the hypothesis that fixing the exchange rate is an important and effective signal of trustworthiness, this study tests the hypothesis empirically, drawing on a large sample of countries.

The key element of the model is that policy makers can affect their borrowing capacity by announcing a certain exchange rate regime. Suppose we start in a flexible regime that allows the country to obtain a certain amount of funds. In the simplest case considered here, fixing the exchange rate leads, *ceteris paribus*, to a better position on the international credit market. But the change will not be the same for all countries. Some countries may benefit a lot, whereas others gain less. The assumption built into this article is that the improvement is smaller for countries with high-quality institutions.

In other words, the potential gains from announcing a fixed regime versus announcing a flexible regime decrease as institutional quality increases. Countries with high-quality institutions have less to gain, *ceteris paribus*, from announcing a fixed exchange rate. By contrast, countries with low-quality institutions may find it attractive to announce a fixed exchange rate regime, even though various economic factors suggest that a floating regime might be preferable.

This issue can also be described in terms of a substitutes vs. complements argument. I have argued that fixed exchange rates could be a substitute for showing commitment: consider a country that is perceived as not conforming to the “Washington consensus” (or a similar measure of “nicety”). The substitutes argument suggests that this country is more likely to choose a fixed exchange rate to make up for some of that negative impression. However, the logic could theoretically also go the other way, which gives

rise to the complements argument. Policy makers who perceive their state as a member of the “club of good countries” might adopt a fixed exchange rate to avoid the impression that they are playing with their reputation. It is hard to tell a priori which logic is more convincing. Assessing which of the two effects dominates is an empirical matter, and this article tries to take a step towards resolving this question in section IV. For convenience, I will use the shorthand “substitutes hypothesis” to refer to the hypothesis that fixed exchange rates are a substitute for adopting high-quality institutions. I will call the hypothesis that countries with high-quality institutions are more likely to announce fixed exchange rates the “complements hypothesis.”

III. DATA

I use a cross-sectional dataset for the period 1990-1998, although I only consider explanatory variables for 1990-1996 to minimize endogeneity bias. Most economic variables are available for about 150 countries. Data on the institutional variables are only available for a smaller sample, which reduces the number of observations. Descriptive statistics of all the relevant variables can be found in table 1.

Dependent variable and main specification

The dependent variable in the main specifications is a discrete variable called ANNOUNCEMENT, which is the classification by the IMF published in the International Financial Statistics at the end of 1998. It takes on the following values: 1 (peg to the US dollar), 2 (peg to the French franc), 3 (peg to another currency), 4 (peg to the IMF’s Special Drawing Rights or SDR), 5 (peg to a basket of currencies), 6 (limited-flexibility single currency), 7 (cooperative arrangement), 8 (set to indicators), 9 (other

managed float), 10 (independent float). For example, the European Monetary System (EMS) falls under category 7. In other words, the dependent variable is defined in such a way that low values correspond to announcements of fixed exchange rate regimes and high values are announcements of more flexible regimes.

This study is based on regression analysis, where the explanatory variables are derived from the theories discussed above. Several specifications are considered, but the main model is the following:

$$ANNOUNCEMENT_i = \alpha_0 + \beta_1 INFLATION_i + \beta_2 EXTERNALVOL_i + \beta_3 MANUFACT_i + \beta_4 OPEN_i + \beta_5 RESERVES_i + \beta_6 POLRIGHTS_i + \beta_7 POLINSTABILITY_i + \beta_8 INSTITUTIONS_i$$

where the index i stands for country i . On the basis of theory one would expect $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 < 0$, $\beta_4 < 0$, $\beta_5 < 0$. The expected effect for political rights and political stability (revolutions) is not clear. If the substitutes hypothesis holds, we expect $\beta_8 > 0$, where INSTITUTIONS are a proxy for the quality of institutions. If the complements hypothesis is correct, we would expect $\beta_8 < 0$. I now turn to a more detailed discussion of these variables and their expected effects.

EXPLANATORY VARIABLES

Basic set of economic variables

The basic set of economic variables contains four variables that are included in all the main regressions in this article.⁹ They turn out to be the most robust determinants of exchange rate regime choice according to the results in table 2. Most are directly motivated by the theory (see section 2 and more comprehensively Wagner (2001)), so it

suffices to list the proxies used to measure these theoretical concepts and their expected effect.¹⁰ First, *INFLATION* is expected to make a fixed regime less likely. As usual in similar studies, I use the log of inflation, as the effects are expected to be nonlinear. Second, more open economies are expected to adopt fixed exchange rates. The share of exports and imports in GDP (average 1990-1996) is used to measure *OPENNESS*. Third, the strength and volatility of external shocks (*EXTERNAL VOL*) is expected to affect the probability of a fixed regime negatively. I measure the importance of such volatility by the standard deviation of the annual terms of trade (1990-1996). Fourth, in a dynamic context the ability to defend a peg over a longer period is possibly also an important variable. The average gross international *RESERVES* measured in terms of months of imports (1990-1996) are meant to control for this.

Additional economic variables

The analysis underlying table 2 also considers the effects of the size and the level of development of a country on exchange rate policy announcements. Four additional variables are introduced for this purpose. First, I use average real GDP in constant US\$ (1990-1996) as a proxy for the size of the economy. Second, real per capita GDP adjusted for purchasing power parity (PPP) (1990-1996) is the measure used as a proxy for the level of development. Third, I also use a hyperinflation dummy indicating whether the country experienced hyperinflation according to the IMF's definition from 1990-1998 (i.e. an inflation rate of more than 50 percent per month). Finally, in my robustness tests I employ a capital controls variable, i.e. an index of openness to international capital flows ranging from 0 (severe restrictions) to 10 (insignificant or non-

existent restrictions). It is an average value for 1990-1996 and comes from Poirson (2001). Capital controls may increase the sustainability of fixed exchange rates.¹¹

Institutional and political variables

Interest group activity may have an important effect on determining the choice of exchange rate regimes. However, even within single sectors, such as the tradables sector, there are usually diverse preferences. Since this is not the main topic of this study, I simply use a measure of the influence of the manufacturing sector as the proxy for the preferences of the entire tradables sector (*MANUFACT*). Lacking a better indicator of lobbying power, I follow Frieden et al. (2000) in assuming that the manufacturing sector's influence is proportional to its share in the country's GDP (1990-1996). Moreover, I use the level of *POLITICAL RIGHTS* (measured with the Freedom House Index) as a basic control variable, since it seems important to control for features of the political system in a study that analyzes the role of institutions. It turns out that the results are not sensitive to this variable. I control for *POLITICAL INSTABILITY*, as it tends to be a key determinant of many aspects of economic policy-making (Persson 2001). In the main analysis, the proxy for this variable is the number of revolutions (1990-1996). In the robustness analysis, I have also considered the number of government changes from 1990-1996 (both from the Arthur S. Banks Cross National Time Series Data Archive).¹²

The variables that are most relevant to the question analyzed in this article measure the quality of a country's institutions. As a proxy for the quality of institutions (*INSTITUTIONS*), I use a wide variety of institutional measures compiled from different data sources. Due to space limitations I do not describe how each variable is constructed

in great detail; see the original papers cited and Wagner (2000). Most data stem from the late '80s and early '90s. Since the dependent variable is measured at the end of the '90s, this helps at least crudely to address the endogeneity problem. The institutional variables included in this study are:

- Bureaucratic efficiency: a standard index of administrative efficiency from Mauro (1995).
- The quality of the legal system: an index constructed from several sources by La Porta et al. (2001).
- The rule of law from Levine et al. (1999).
- Infrastructure quality from La Porta et al. (2001).
- Safety of property rights (no expropriation risk) from Beck et al. (1999).
- Tax compliance: an index provided by La Porta et al. (2001).
- The extent of regulation: an index provided by La Porta et al. (2001).
- Contract enforcement: by experts from Business Environmental Risk Intelligence (BERI), as provided by Zak and Knack (2000).
- Law and contract enforcement from Levine et al. (1999).

The variables are all defined in such a way that better institutions are associated with higher scores. Low values of the dependent variable correspond to announcements of fixed exchange rate regimes, and high values are announcements of more flexible regimes. Hence a significant and positive parameter estimate implies that the “substitution” hypothesis cannot be rejected.

Table 1: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
CONTROL VARIABLES					
ANNOUNCEMENT	175	6.95	3.27	1.00	10.00
Log INFLATION	155	207.71	760.33	0.98	6424.99
EXTERNAL VOL (StdDev annual terms of trade)	169	0.10	0.13	0.00	1.09
MANUFACT (Share of manufacturing 90-96)	104	62.15	31.21	1.80	99.65
OPENNESS (Exp+im/GDP 90-96)	168	83.46	48.17	15.56	360.63
Gross Int. RESERVES 90-96	157	3.15	2.60	0.01	20.84
GDP per capita PPP	169	6301.52	6434.33	418.57	25955.71
POLITICAL INSTABILITY #Revolutions 90-96	175	0.83	1.47	0.00	8.00
Hyper Inflation Dummy	159	0.13	0.33	0.00	1.00
#GovChanges 90-96	175	0.74	1.22	0.00	7.00
Capital controls	57	3.47	2.85	0.00	10.00
POLITICAL RIGHTS	169	4.40	2.19	1.00	7.00
INSTITUTIONS					
Bureaucratic delays	66	4.71	1.43	2.50	7.78
Quality of legal system	54	0.05	0.96	-2.32	1.40
Rule of law	51	7.07	2.65	1.90	10.00
Infrastructure quality	66	5.55	1.91	1.50	9.15
No expropriation risk	41	8.19	1.59	5.22	9.98
Tax evasion	56	3.17	1.03	1.43	5.05
Regulation	140	2.71	0.93	1.00	5.00
Enforcement	71	7.40	2.12	3.58	9.99
Contract law	63	2.63	0.66	1.68	3.57
Legal Origin UK	169	0.33	0.47	0.00	1.00
Legal Origin FR	169	0.44	0.50	0.00	1.00
Legal Origin Germany	169	0.02	0.15	0.00	1.00
Legal Origin Scandinavia	169	0.03	0.17	0.00	1.00

IV. RESULTS

Since the dependent variable is a discrete dependent variable, ordered probit regressions are appropriate to determine the effects of institutions on ERP announcements.

Estimation results

I begin by checking whether the traditional determinants of exchange rate regime choice also affect exchange rate policy announcements in this model. If the commonly found effects are not present in my sample, this might reduce the level of confidence in the

general findings of this article. The results of the ordered probit estimations are presented in table 2.

Table 2: Traditional determinants of exchange rate regimes

Dependent variable: Announcement (1=peg, 10=float) in 1999. For the description of the methodology, see text. Z-values are in parentheses; **: significant at the 1 percent level; *: significant at the 5 percent level.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INFLATION	0.000 (1.97)*	0.000 (2.23)*	0.000 (2.25)*	0.000 -1.800	0.000 -0.840	0.000 (2.29)*	0.000 -1.010	0.000 (2.30)*
EXTERNAL	2.443	2.386	2.423	2.689	2.387	2.491	8.811	2.329
VOL	(2.09)*	(2.07)*	(2.03)*	(2.19)*	(2.00)*	(2.06)*	(2.37)*	-1.920
MANUFACT	0.013 (3.07)**	0.013 (2.83)**	0.012 (2.70)**	0.014 (2.93)**	0.012 (2.57)*	0.012 (2.70)**	0.026 (3.56)**	0.012 (2.31)*
OPENNESS	-0.007 (2.17)*	-0.006 -1.730	-0.006 -1.780	-0.006 -1.730	-0.005 -1.690	-0.006 -1.780	-0.005 -1.700	-0.006 -1.790
RESERVES		-0.092 -1.740	-0.091 -1.740	-0.100 (2.02)*	-0.102 (2.06)*	-0.093 -1.740	-0.018 -0.260	-0.093 -1.740
GDP per capita			0.000 -0.340	0.000 -0.910	0.000 -0.600	0.000 -0.350		
POL. IN-STABILITY				0.188 (2.19)*				
Hyper Inflation					0.609 -1.240			
Number of gov. changes						-0.038 -0.450		
Capital controls							0.058 -0.850	
Legal origin UK								0.325 -0.730
Legal origin France								0.088 -0.230
Legal origin Scand.								0.168 -0.330
Legal origin Germany								0.738 -0.860
Observations	96	93	93	93	92	93	46	92

The models explain about 5-20 percent of variation in the dependent variable, as the pseudo-R-squared's—one standard measure of goodness of fit for probit models—suggest. This goodness of fit is low in absolute value but is comparable to that found in most studies of the choice of exchange rate regimes, like those cited in the literature review.

The coefficients on inflation, openness, external volatility, the share of the manufacturing sector and international reserves are significant and have the expected sign. (The coefficient on inflation is small because of the logarithmic transformation). Political rights (not shown) and the number of revolutions are significant, but it is not clear why the political instability character has a positive sign. The size of the economy (results not shown), the level of development (GDP per capita), the hyperinflation dummy, the number of government changes, capital controls, and legal origins do not have any significant effect. Overall this preliminary analysis suggests that the present sample exhibits similar characteristics to those considered in other studies of exchange rate policies. Therefore it is also reasonable to keep the standard set of explanatory variables as described in the baseline regression, and I will now turn to a discussion of the institutional variables.

Table 3 shows a striking picture. The standard control variables have the same sign as before (with a few exceptions). More interestingly, many of the institutional variables are significant, and the signs of the parameter estimates are consistent with the “substitutes” hypothesis: the findings suggest that policy makers who live in countries with high-quality institutions tend to announce more flexible exchange rate regimes. This result follows for a wide variety of institutional variables.

In other words, if a country has a more inefficient bureaucracy, a legal system of lower quality, a weaker rule of law, poorer infrastructure, higher expropriation risk, weaker tax compliance, and weaker enforcement of contracts than other countries, it is more likely that the policy maker will choose to announce a fixed exchange rate regime. The extent of regulation is the only completely insignificant variable. This result is all the more remarkable if we consider the role of Europe in this sample. Many of the countries that have what would be commonly regarded as high-quality institutions are in Europe. These countries have also widely adopted fixed exchange rates. One might therefore have expected high-quality institutions to be associated with fixed exchange rates and the results to be consistent with the complements hypothesis. Remarkably, despite the role of Europe in the sample, the results show a negative association between institutional quality and the probability of announcing a fixed exchange rate.

Table 3: Institutions and exchange rate policy announcements

Dependent variable: Announcement (1=peg, 10=float) in 1999. For the description of the methodology, see text. Z-values are in parentheses: **: significant at the 1 percent level; *: significant at the 5 percent level.

	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
INFLATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.001
	-1.02	-0.03	-0.5	-0.85	-0.1	(2.20)*	-1.89	-0.08	-1.64
EXTERNAL VOLATILITY	4.16	34.315	16.031	3.928	21.98	1.705	2.498	19.251	25.408
MANUFACT	-0.76	(2.55)*	(2.50)*	-0.78	(2.68)**	-0.24	(2.03)*	(2.73)**	(2.00)*
	0.008	-0.006	-0.006	0.009	-0.009	0.005	0.011	-0.009	0.02
	-0.92	-0.41	-0.74	-1.08	-1.14	-0.41	(2.03)*	-1.11	-1.28
OPENNESS	-0.007	-0.01	-0.008	-0.005	-0.008	-0.009	-0.005	-0.009	-0.037
	-1.82	-1.38	-1.05	-1.29	-1.04	(2.21)*	-1.24	-1.13	(4.56)**
RESERVES	0.035	-0.095	-0.174	0.028	-0.168	-0.04	-0.056	-0.185	0.008
	-0.62	-0.69	(2.12)*	-0.48	(2.00)*	-0.52	-1.06	(2.23)*	-0.06
POL RIGHTS	0.004	-0.095	0.01	0.029	-0.063	-0.054	0.082	-0.088	0.171
	-0.04	-0.32	-0.04	-0.3	-0.28	-0.69	-1.16	-0.35	-0.66
POL IN-STABILITY	0.337	0.397	0.292	0.279	0.325	0.391	0.157	0.337	0.479
	(3.22)**	(3.34)**	(2.89)**	(2.89)**	(2.83)**	(3.54)**	-1.91	(3.10)**	(2.77)**
Efficiency of bureaucracy	0.423								
	(2.20)*								
Quality of legal system		0.997							
		(2.48)*							
Rule of law			0.165						
			-1.89						
Infrastructure quality				0.199					
				-1.66					
Expropriation risk					0.488				
					(2.40)*				
Tax compliance						0.672			
						(4.05)**			
Regulation							-0.072		
							-0.41		
Enforcement								0.339	
								(2.59)**	
Contract law									1.821
									(2.36)*
Observations	57	42	49	57	39	52	86	69	60

Economic interpretation

So far the analysis has focused on assessing the statistical significance of the explanatory variables included in the model. In general, the economic importance of ordered probit coefficients is hard to interpret, but it is precisely a quantitative assessment of the effects under consideration that may be needed to derive policy implications. I use statistical simulation based on a very simple scenario to provide such quantitative interpretations.¹³

I start by setting all the explanatory variables at their median. Then I ask, how much does the expected probability of a country adopting a particular type of exchange rate regime change, as the institutional variables considered in table 3 change? I consider a change in the institutional variables from the 25th to the 75th percentile. Table 4 reports the expected change in probabilities for all the institutional variables considered in table 3. It also presents the 95 percent confidence interval obtained from the simulations. The overall picture that emerges is striking: Announcements of managed floats and independent floats become much more likely as institutional quality improves, whereas announcements of pegs and cooperative arrangements become much less likely. For example, if bureaucratic efficiency increases from Colombia's level to that of Japan or the UK (i.e. increases from the 25th to the 75th percentile), the probability of a dollar peg announcement decreases by 5 percent whereas the probability of a floating announcement increases by 28 percent. The quality of the legal system seems to have a particularly strong impact on the choice between announcing a cooperative agreement or floating. An increase in the quality from the 25th to the 75th percentile increases the probability of announcing a float by 43 percent.

It should be noted that as the quality of institutions improves, only announcements of managed floats or pure floats become more likely, while all other announcements become less likely. Indeed, the quantitative effect of the likelihood of announcing a cooperative arrangement is particularly strong (on the order of 25 percent for most institutional variables).

To conclude, improvements in institutional quality from the 25th percentile to the 75th percentile—changes not uncommon after structural and institutional reform—decrease the probability of announcing a peg by between 5 and 20 percent, depending on the institutional factor. As can be seen from the lower confidence intervals, most of these effects are significantly different from zero. The upper confidence intervals often reach and surpass 50 percent (recall that this is a percentage point change in probability, implying that what we observe here is a very sizable effect).

Overall, the results (including some of the robustness tests reported in the appendix) suggest that the “substitutes” hypothesis of international policy announcements is correct not only with respect to the *sign* of the effect but also with respect to the *importance* of the argument.

Table 4: Economic Interpretation

All explanatory variables set at median. Change in institutional variable from 25th to 75th percentile.

Change in probability of announcement	Mean	[95% Conf. Interval]		Mean	[95% Conf. Interval]	
	Bureaucratic efficiency			Quality of the legal system		
dPr(peg US\$)	-0.057	-0.255	-0.001	-0.130	-0.521	-0.002
dPr(peg FF)	-0.038	-0.159	0.042			
dPr(peg basket)	-0.093	-0.255	0.014	-0.064	-0.271	0.110
dPr(ltd. flex.)	-0.024	-0.086	0.025			
dPr(cooperative)	-0.132	-0.268	-0.018	-0.308	-0.586	-0.046
dPr(man. float)	0.068	-0.062	0.241	0.068	-0.126	0.332
dPr(float)	0.276	0.054	0.500	0.434	0.108	0.712
	Rule of law			Infrastructure quality		
dPr(peg US\$)	-0.061	-0.294	0.011	-0.044	-0.206	0.009
dPr(peg FF)				-0.026	-0.133	0.038
dPr(peg basket)	-0.034	-0.186	0.043	-0.066	-0.208	0.020
dPr(ltd. flex.)				-0.016	-0.068	0.020
dPr(cooperative)	-0.177	-0.436	0.095	-0.084	-0.214	0.038
dPr(man. float)	0.031	-0.085	0.211	0.054	-0.035	0.227
dPr(float)	0.241	-0.128	0.554	0.181	-0.072	0.388
	No expropriation risk			Tax compliance		
dPr(peg US\$)	-0.124	-0.536	0.000			
dPr(peg FF)						
dPr(peg basket)	-0.074	-0.299	0.092			
dPr(ltd. flex.)				-0.200	-0.427	-0.045
dPr(cooperative)	-0.264	-0.531	0.011	-0.199	-0.380	-0.047
dPr(man. float)	0.114	-0.067	0.356	0.121	-0.040	0.316
dPr(float)	0.347	-0.007	0.610	0.278	0.104	0.477
	Regulation			Enforcement		
dPr(peg US\$)	0.013	-0.040	0.093	-0.105	-0.465	0.002
dPr(peg FF)	0.010	-0.040	0.072			
dPr(peg other)	0.002	-0.013	0.022			
dPr(peg basket)	0.017	-0.070	0.109	-0.060	-0.257	0.071
dPr(ltd. flex.)	0.003	-0.011	0.022			
dPr(cooperative)	0.009	-0.036	0.056	-0.247	-0.514	0.034
dPr(man. float)	-0.006	-0.059	0.028	0.089	-0.076	0.338
dPr(float)	-0.048	-0.292	0.185	0.322	-0.038	0.608
	Contract law					
dPr(peg US\$)	-0.210	-0.723	-0.003			
dPr(cooperative)	-0.438	-0.760	-0.057			
dPr(man. float)	-0.012	-0.267	0.258			
dPr(float)	0.659	0.177	0.931			

V. CONCLUSION

Understanding the factors involved in exchange rate regime announcements is important not only for theoretical reasons, but also because it has important normative implications.

First, if key actors in the international arena (e.g. large lender countries and international organizations) want to devise sustainable policies, they should learn as much as possible about policy makers' incentives. My findings suggest that the incentive to signal "nice" behavior to the international financial system by announcing a fixed exchange rate to compensate for the "bad vibrations" caused by low-quality domestic institutions is important.

It should be noted that other interpretations of these statistically and economically significant findings are possible. Indeed, it is likely that other reasons also contribute to the empirical regularities observed. For example, one might argue that countries with poor institutions prefer fixed exchange rates since this allows more scope for corruption. Such effects may well be important, but it is equally essential to point out that most political economy explanations of this type are geared towards explaining actual exchange rate policy. By contrast, announcements inherently have a strategic character. Given that the main addressees of exchange rate policy announcements are other countries and the IMF, the strategic considerations identified in this article are likely to play an important role. However, the empirical findings of this article alone do not enable us to identify the relative importance of real (politico-) economic and strategic factors. The question of whether it is possible to separate these effects, which are likely to be observationally equivalent, will have to await further research. In such studies,

more advanced empirical techniques and possibly a dynamic theoretical model capturing regime changes over time may be required.

Second, policy recommendations to promote institutional reform—as frequently given by the IMF and the World Bank, for example—need to take policymakers’ incentives into account. A country that improves its institutional quality will, *ceteris paribus*, have smaller incentives to announce a fixed exchange rate regime. This effect may conflict with suggestions to dollarize at the same time. Further research is needed to clarify whether and under which conditions such a trade-off exists.

Third, the IMF, as the key institution responsible for international financial stability, should continue to collect exchange rate policy announcements by countries. However, it should also develop a comprehensive classification system for actual exchange rate regimes, possibly along the lines of Reinhart and Rogoff (2002) and Levy-Yeyati et al. (1999). Analyzing the link between the quality of institutions and actual policy is another extremely important research question. In my own ongoing work, I am using data from various *de facto* classifications to investigate this question. By combining *de jure* and *de facto* regime classifications, it is also possible to identify countries that tend frequently to deviate from announcements (in one direction or another) and to ask what drives such “broken promises” (Alesina and Wagner 2003).

APPENDIX: SELECTED ECONOMETRIC ISSUES

For a discussion of specific empirical problems and extensions, I refer the reader to Wagner (2001). An obvious concern is multicollinearity. The measures of the efficiency of governance considered are typically correlated with GDP (per capita). Richer

countries may simply have better legal systems, and any given country with a good legal system tends to be rich. One might therefore suppose that the effect picked up in the regressions has nothing to do with the efficiency of governance per se. However, it turns out that this conjecture is not correct. GDP alone does not enter the regressions significantly. Virtually all studies published on the subject do not include GDP per capita as a control variable. It is also difficult to imagine a convincing theoretical reason why the *level* of income should affect policy choice directly.

Although a comprehensive robustness study for the topic considered in this article must await further research, the results presented here are robust to several simple sensitivity tests with other variables and specifications.

In Table 3, I left out both GDP (a measure of economic size) and GDP per capita (a measure of the development level), since they were not significant in the preliminary calculations done for table 2. Putting them back in does not change anything; they are still insignificant, and the institutional variables are also significant. Capital controls, the hyperinflation dummy, and legal origins do not alter the significance or size of the institutional effects much. In fact, regulation becomes significant and negative when capital controls are taken into account, a result that is also consistent with the "substitution" hypothesis.

It is also possible to include a measure of the government's temptation to inflate into the computations. Following Edwards (1996) and Collins (1996), I use a dummy variable for negative growth for 1990-1996 as well as the average unemployment rate for 1990-1996. The idea is the following: the lower past growth performance (or the higher past unemployment) was, the higher is the temptation to inflate (i.e. to cheat in the game

played against the public, cf. Barro and Gordon (1983)). The inclusion of these variables does not change the results markedly, although regulation now becomes significant, while enforcement and contract law become insignificant.

Interacting the measure of terms of trade volatility with openness gives a significant effect, but does not generally affect the coefficients on the institutional variables. Measures of informal institutions of conflict management (trust, group membership, confidence in society and government (all from Knack and Keefer (1995)) do not change the significance of the institutional variables and are themselves mostly insignificant.

NOTES

¹The author is a Ph.D. student in Political Economy and Government, John F. Kennedy School of Government, Harvard University. I thank Alberto Alesina, Jeff Frieden, Gary King, Friedrich Schneider, Ken Shepsle, Oved Yosha and seminar participants at Harvard for valuable comments. Several editors (Magnus Feldmann and Suerie Moon) and anonymous referees have greatly contributed to improving the manuscript. All errors are my own.

²“Institutions” are understood as comprising all the “rules of society” (North 1981). I use the phrase “high-quality institutions” as a catch-all phrase for effective rule of law, safe property rights, a working judicial system, good infrastructure, and low corruption.

³ See Levy-Yeyati et al. (2002) for a discussion of optimum currency areas, balance sheets and absorption of shocks as they relate to the choice of exchange rate regimes.

⁴ While the present study deals exclusively with the last years of the twentieth century, the argument that economic policy is determined by the influence of losers and gainers and that movements towards fixed or flexible exchange rates are determined by (implicit) coalitions of economic and political interests, can be shown to be valid in earlier times as well (Hefeker 1995).

⁵ Giavazzi and Pagano (1998) and Weber (1991) had argued that governments could gain anti-inflationary credibility by fixing to a nominal anchor currency. Aghevli et al. (1991) argue that, in addition, a fixed exchange rate disciplines the government because any fiscal excess might end in a currency collapse. A related argument is that by adopting a fixed exchange rate, a country can send a signal of commitment to the international community and thereby avoid problems on international markets.

⁶ By contrast, Hefeker (1996) assumes—quite plausibly, one might add—that the larger the tradables sector, the greater the pressure for a fixed exchange rates policy will be. There is an important literature on this, whose findings I do not aim to replicate here (Frieden et al. (2000) provide an excellent overview).

⁷ It is assumed that lenders understand the causal links between institutions and policy and between policy and economic outcomes. In other words, trustworthiness derives from the underlying institutions and not from good outcomes like high growth or high income.

⁸ This logic seems to have operated already during the Middle Ages (Bordo and Rockoff 1996; Fishlow 1985; North and Weingast 1989).

⁹ I thank Helene Poirson (IMF) for providing parts of these data.

¹⁰ Averages for 1990-1996 are used to avoid endogeneity problems. When I use the complete average for 1990-1998, I obtain essentially the same substantive results.

¹¹ Inconsistencies between fiscal and monetary policies on the one hand and exchange rate policies on the other typically put pressure on regimes by triggering capital outflows. Countries with capital controls can fix their exchange rate without sacrificing autonomy over their monetary policy. However, these considerations appear to play a more important role outside the realm of developed countries, which have significantly reduced or even eliminated capital controls (the best example being the EMU). Studies that focus exclusively on developing countries, like the Frieden et al. (2000) study of Latin America, find that capital controls have significant effects.

¹² In one particular regression that I present, I briefly check for any “historical path-dependency” of the form of the legal system, which typically was determined centuries ago. The legal origin dummies (for UK, French, Scandinavian, and German legal origin) come from La Porta et al. (2001).

¹³ King et al. (2000) provide a user-friendly introduction to this topic.

REFERENCES

- Aghevli, B., M. Khan, and P. Montiel. 1991. Exchange Rate Policy in Developing Countries: Some Analytical Issues. Washington, D.C.: IMF Occasional Paper No. 78.
- Alesina, Alberto, and Robert J. Barro. 2002. Currency Unions. *Quarterly Journal of Economics*, 117 (May): 409-430.
- Alesina, Alberto, and Alexander F. Wagner. 2003. *Broken promises* (work in progress).
- Barro, Robert J., and David B. Gordon. 1983. Rules, discretion, and reputation in a model of monetary policy. *Journal of Monetary Economics* 12 (1): 101-121.
- Beck, Thorsten, Ross Levine, and Norman Loayza. 1999. Finance and the Source of Growth. Working Paper.
- Bernhard, William, and David Leblang. 1999. Democratic Institutions and Exchange-rate Commitments. *International Organization* 53 (1): 71-97.
- Bordo, Michael, and Hugh Rockoff. 1996. The Gold Standard as a "Good Housekeeping Seal of Approval." *Journal of Economic History* 56 (3): 389-428.
- Calvo, Guillermo, and Carmen Reinhart. 2002. Fear of Floating. *Quarterly Journal of Economics* 117 (2): 379-408.
- Collins, S.M. 1996. On Becoming More Flexible: Exchange Rate Regimes in Latin America and the Caribbean. *Journal of Development Economics* 51 (1): 117-138.
- Edwards, Sebastian. 1996. The Determinants of the Choice Between Fixed and Flexible Exchange Rate Regimes. Cambridge, MA: NBER Working Paper 5756.
- Fishlow, Albert. 1985. Lessons from the Past: Capital Markets During the 19th Century and the Interwar Period. *International Organization* 39 (3): 140-160.
- Frieden, Jeffrey. 1994. Exchange Rate Politics: Contemporary Lessons from American History. *Review of International Political Economy* 1 (1): 81-103.
- Frieden, Jeffrey, Piero Ghezzi, and Ernesto Stein. 2000. Politics and Exchange Rates: A Cross-Country Approach to Latin America. Inter-American Development Bank Research Network Working Paper #R-421.
- Gavin, M., and R. Perotti. 1997. Fiscal policy in Latin America. *NBER Macroeconomics Annual*.
- Ghezzi, P., and A. Pasco-Font. 2000. Exchange Rates and Interest Groups in Peru, 1950-1996. Washington, D.C.: Inter-American Development Bank Research Network Working Paper R-422.

- Giavazzi, Francesco, and Marco Pagano. 1998. The Advantage of Tying One's Hands: EMS Discipline and Central Bank Credibility. *European Economic Review* 32 (2): 1055-1075.
- Hefeker, Carsten. 1995. Interest Groups, Coalitions and Monetary Integration in the XIXth Century. *Journal of Economic History* (1): 48-68.
- Hefeker, Carsten. 1997. *Interest Groups and Monetary Integration*. Boulder: Westview Press.
- Jaramillo, J. C., R. Steiner, and N. Salazar. 1998. The Political Economy of Exchange Rate Policy in Colombia. Washington, D.C.: Inter-American Development Bank Research Network Working Paper R-336.
- King, Gary, Michael Tomz, and Jason Wittenberg. 2000. Making the Most of Statistical Analyses: Improving Interpretation and Presentation. *American Journal of Political Science* 44 (2): 341-355.
- Klein, Michael W., and Nancy P. Marion. 1997. Explaining the duration of exchange-rate pegs. *Journal of Development Economics* 54 (2): 387-404.
- Knack, Stephen, and Philip Keefer. 1995. Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Measures. *Economics and Politics* 7 (3): 207-227.
- LaPorta, Rafael, F. Lopez-de-Silanes, Cristian Pop-Eleches, and Andrei Shleifer. 2001. *The Guarantees of Freedom*. Cambridge, MA: Harvard University.
- Levine, Ross, Norman Loayza, and Thorsten Beck. 1999. Financial Intermediation and Growth: Causality and Causes. Washington, D.C.: World Bank Working Paper.
- Levy-Yeyati, Eduardo, and Federico Sturzenegger. 1999. *Classifying Exchange Rate Regimes: Deeds versus Words*. Universidad Torcuato Di Tella.
- Levy-Yeyati, Eduardo, Federico Sturzenegger, and Iliana Reggio. 2002. *On the Endogeneity of Exchange Rate Regimes*: Universidad Torcuato Di Tella and UCLA.
- Mauro, Paolo. 1995. Corruption and Growth. *Quarterly Journal of Economics* 110 (3): 681-712.
- Mundell, Robert A. 1961. A Theory of Optimum Currency Areas. *American Economic Review* 51 (3): 657-664.
- North, Douglass. 1981. *Structure and Change in Economic History*. London: Norton.
- North, Douglass C., and Barry R. Weingast. 1989. Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England. *Journal of Economic History* 49 (4): 803-832.
- Persson, Torsten. 2001. Do Political Institutions Shape Economic Policy? Cambridge, MA: NBER Working Paper 8214.
- Poirson, Helene. 2001. How Do Countries Choose Their Exchange Rate Regime? Washington, D.C.: IMF Working Paper WP/01/46.
- Reinhart, Carmen M., and Kenneth S. Rogoff. 2002. *The Modern History of Exchange Rate Arrangements: A Reinterpretation*. Washington, D.C.: IMF.
- Tavlas, George. 1994. The Theory of Monetary Integration. *Open Economies Review* 5 (2): 211-230.
- Wagner, Alexander F. 2000. Institutions and Growth: Theoretical foundations and empirical evidence. Department of Economics, University of Linz, Linz.

- Wagner, Alexander F. 2001. *Why Do Countries With Low-Quality Institutions Announce Fixed Exchange Rate Regimes?* Cambridge, MA: Harvard University.
- Weber, A. 1991. Reputation and Credibility in the European Monetary System. *Economic Policy* 12 (3): 507-512.
- Williamson, John. 1990. What Washington Means by Policy Reform, in John Williamson (ed.), *Latin American Adjustment: How Much Has Happened?* Washington, D.C.: Institute for International Economics.
- Zak, Paul, and Stephen Knack. 2000. *Trust and Growth*. Washington, D.C.: Claremont Graduate University, American University, and IRIS.