

# Institutionally Structured Preferences over Macroeconomic Outcomes and the Selection of Policy Instruments

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# Institutionally Structured Preferences over Macroeconomic Outcomes and the Selection of Policy Instruments

Written by: Dominick Wright

*Institutions are the rules of the game in a society or, more formally... the humanly devised constraints that shape human interaction...* (North 1990, 3)

Scholars in political economy have long dealt with issues surrounding the choice of a monetary exchange instrument, the interaction of this choice with political institutions, and the character of macroeconomic outcomes conditioned on the interaction of the choice and structure variables (e.g., Bernhard and Leblang 1999; Broz 2002; Eichengreen 1996; Leblang 1999; and Simmons 1994). Recently, scholars have focused the debate surrounding institutions by putting the question of institutional influence to task. If the shape of an institution matters, then different structures should produce explicitly different outcomes. An approach based along this line of reasoning in the positive analysis of monetary exchange regimes asks the following questions: are different institutional structures systematically related to one form of currency exchange as opposed to another; is there a general feature spanning governmental regimes that provides theoretical leverage in explaining the differences between and within regime types? To date, the collective reasoning of scholars in the field find that non-democratic and democratic institutions do vary in the overall likelihood of *fixing*, but there is little consensus regarding how (Broz 2002; Leblang 1999; and Simmons 1994). An application of selectorate theory (Bueno de Mesquita, Siverson, Smith, and Morrow 2003) and its insights regarding the dual nature of institutions (i.e., preference generating and environmental properties) shows that both sides of the debate are both correct and incorrect, while providing the foundation for a more general view on the intersection of domestic institutions macroeconomic policy formulation.

A relatively recent surveying of the literature shows that there are at least two sides to this debate (Broz and Frieden 2002, 330). One view holds that the prevailing degree of political insulation protects autocracies from domestic opposition to the controversial policies sometimes required to maintain pegs.<sup>1</sup> Autocratic systems are significantly more insulated than democracies and hence more likely to employ pegging as a means to counter inflation (Leblang 1999; Simmons 1994). One question that this view does not adequately address is why an autocratic state would employ such a constraining instrument as pegging when other equally effective tools are available (Broz and Frieden 2001, 330). An alternative view holds that it is the institutional opacity of non-democracies that most distinguishes them from democracies in the signaling of anti-inflationary intentions to market agents (Broz 2002).

Institutional transparency (Powell and Whitten 1993; Powell 2000) is the degree to which the public can observe the internal behaviors of the governing process. The public contestation over power in democracies imbues the political process with a sense of transparency to which the surreptitious dealings of non-democracies pale in comparison. Bunce (2001) calls this the difference between “uncertain outcomes and certain procedures” versus “certain outcomes and uncertain procedures” (45-6). Broz finds empirical support for the theoretical insight that non-democracies have a higher likelihood of fixing currency exchange than their democratic counterparts do. A shortcoming to this finding is that it rests on the broad assumption that all leaders prefer low levels of inflation. Per this view, historically observed levels of high inflation in African and Latin American countries that were using pegs occurred because of reputation-induced (i.e., repeated confidence destabilizing devaluations) signaling failures. Selectorate theory provides a parsimonious

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<sup>1</sup> A larger literature internalizing this view is the debate surrounding the question of positive or negative feedback in a system facing concurrent economic and political development (e.g., Bunce 2001). The position that certain economic policies require that the government *force* a portion of the public absorb exceedingly high costs is one that makes logical sense but finds mixed results in the empirical record.

means for explaining these apparently anomalous observations (e.g., fixed currency regime non-democratic states with relatively higher levels of inflation than their democratic counterparts).

In order to support this assertion, the paper will extend the base model of Broz (2002) by using the selectorate model and its expectations regarding the general operations of political economies in non-democratic regimes to further refine the hypothesized relationships.<sup>2</sup> The overlying outcomes of these sections produce a set of hypotheses with a few core predictions. First, non-democracies are more likely to implement higher degrees of fixity than are their democratic counterparts. Second, small winning coalition non-democracies are more likely to implement higher degrees of fixity than are their relatively larger winning coalition, non-democratic counterparts. Third, the use of pegs in small winning coalition non-democracies produces only a negligible effect of levels of inflation. A panel corrected error model of ordered choice confirms most of these hypotheses and provides the empirically supported theoretical leverage required to further generalize the influence of institutions in non-democracies.

### *Selectorate Theory*

While theories about institutions and the effects of democratization abound, selectorate theory is unique in its attempt to present a parsimonious yet spatially strong and temporally robust theory describing the influence that varying institutional structures have on the foreign and domestic policy behavior of leaders. Selectorate theory posits that all states possess the three following characteristics: selectorate size, winning coalition size, and the absolute ratio of the winning coalition and selectorate sizes. For each national population there exists a subset of individuals within it having the potential to influence whether a leader attains power, and once gained, whether she

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<sup>2</sup> To a lesser extent, the paper also extends Leblang (1999) by explicitly considering the effects that institutional structures have on the policies that a government considers desirable. The empirical model does not include such features as indicators for electoral law and therefore does not constitute a full replication and extension of the previous study.

retains it or not. This subset of the population is the selectorate (S). Another institutional feature that states possess is the number of individuals within S whose support the leader requires to attain and retain power. This is the winning coalition (W). A last and final feature that all states possess is the ratio between W and S ( $WS^{-1}$ ), which describes the prevailing level of each state's loyalty norm.<sup>3</sup> Loyalty norms ( $WS^{-1}$ ), the relational bonds between leaders and their followers, *ceteris paribus*, decrease in W, since it represents the probability that a coalition member can become a coalition member in a prospecting challenger's regime (with  $1 - (WS^{-1})$  representing individuals' risk of exclusion from possible regimes).<sup>4</sup> Using the three components of S, W, and  $WS^{-1}$ , the authors make predictions regarding leaders' likely policy mixes when presented with a fixed set of resources. Figure 1 presents a graphical representation of how varying combinations of S and W produce fluctuating levels of loyalty norms.

<< Insert Figure 1 Here >>

In a very basic sense, leaders attain and maintain power by satisfying the material and immaterial preferences of individuals within W, which they achieve through a combination of private and public goods policies. Theoretically and empirically, Bueno de Mesquita, Morrow, Siverson, and Smith (2003) find that leaders of small winning coalitions are most apt to maintain empowerment by providing a policy mix dominated by private goods provisions, while leaders of large winning coalitions achieve this same end with a policy mix dominated by public goods provisions (164).<sup>5</sup> Clark (2005) extends the authors' original work by further examining the relationship between the joint movements of selectorate and winning coalition size, hypothesizing that the theorized "Swoosh" effect that differentiates qualitatively better small winning coalition systems from

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<sup>3</sup> Refer to Bueno de Mesquita, Morrow, Siverson, and Smith (2003) for a more thorough discussion on the selectorate model's basic parameters.

<sup>4</sup> The basic concept embodied in a depiction of loyalty norms is that the degree to which a coalitional member feels beholden to a leader depends upon their likelihood of being able to join in on an alternative coalition. So, with a fixed S and an increasing W, as the probability that one can successfully change coalitions increases, their degree of loyalty to the current leader in turn decreases (Bueno de Mesquita, Morrow, Siverson, and Smith 2003, 60-68).

<sup>5</sup> In their initial tests of the model, the authors distinguish between core (i.e., civil liberties and other commonly democratic values) and general (i.e., education rates, health policies, and the like) public goods, finding that large winning coalition systems on average tend to produce relatively higher levels of these goods as compared to their small winning coalition counterparts.

marginally larger ones will extend to other conceptualizations of public goods categories (e.g., low levels of inflation). Figure 2 presents a reproduction of Clark's (2005) schematic describing the distribution of goods according to selectorate and winning coalition sizes.

<< Insert Figure 2 Here >>

Following Figure 2's illustration of goods provision according to S and W, we see that the qualitative state of living for those in the winning coalition is moderately good (*m*) at lower levels of S and W, relatively low (*l*) at levels of large S and small W, and relatively high (*h*) at levels of large S and large W.<sup>6</sup> The reason for the difference between Quadrants I and III in Figure 2, derives from the change in the loyalty norm as S increases but W remains relatively low. Under these circumstances, while leaders are always face a risk of losing power, members of W face a higher risk of exclusion from successor coalition due to the fact that their probability of inclusion monotonically decreases as S increases while W remains constant. Clark (2005) uses the distinctions between Quadrants I and III to categorically dub such small W with varying S systems as "bad" and "good" respectively. This selectorate-based understanding of how institutional factors contribute to the calculus of private-public policy mixes now leads to an exploration of how such factors contribute to the particular choice of exchange rate regimes as commitment mechanisms; and result in the prevailing interest rate differentials as private and public goods.

### *The Selectorate Model, Exchange Rate Regimes, and Inflation*

The discussion on W and S parallels Broz's (2002) theories on transparency in the sense that political openness is a public good. Transparency, the ability to oversee and "check" governmental processes is an institutional feature determined by a society's formalized electoral laws and legal

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<sup>6</sup> I thank William Clark for sharing with me this simple strategy for conceptualizing the difference in numerous policies across regime types. I also thank James Morrow for further emphasizing that the receipt of goods heavily depends upon group membership (i.e., whether the individual is a member of W, S, or neither). Morrow also pointed out that there is a lot more variation in W and S than small and large, which is a point that the book does not emphasize.

system. Given that even autocracies possess some rule of law, the remaining question is not one as to whether a legal system is present or not. Instead, it is a question that asks for whom do the laws and norms apply? Furthermore, how are they enforced? Theoretically, for a fixed level of  $S$ , the rights and privileges conferred upon individuals within a society is proportional to the size of  $W$ . Combining this logic with the potential for oversight and the selectorate model's theories of *affinity*, one can easily see how the leader faces little need to present a transparent political system when the majority of those possessing the credible ability to influence their handling of the polity are already intrinsically involved in their daily affairs. Simple theories of social networks' density properties, the resulting communication structures, and the diffusion rate of information all attest to why highly affined coalition members in opaque systems do not demand that the government be publicly transparent (DeMarzo, Vayanos, and Zwiebel 2003)<sup>7</sup>. A more intuitive understanding of this relationship is that leaders find the "uncertain procedures"—inherent to opaque systems—necessary tools for the manipulation required to produce "certain" political and economic outcomes.

However, the lack of incentive for a transparent political process does not necessarily imply the same lack of incentive for a transparent monetary exchange mechanism. Without belaboring the point, one can easily imagine the time inconsistency problems present in even a relatively small winning coalition system.<sup>8</sup> Broz (2002) notes that even autocratic leaders face a time inconsistency problem, because they face the same incentive to present *ex post* economic policies that maximize their gains to the potential detriment of their coalition's members (863). Quinn's (2002) analysis of irredentist policies in African states throughout the last quarter of the 20<sup>th</sup> century reinforces the notion that even non-democratic leaders need a credible means to signal their commitment to the provision of side-payments. Per the selectorate model, a corollary to this argument is that while all

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<sup>7</sup> The authors construct a listening structure model and vary its relational components ("ties" and dyadic influence) in their evaluation of persuasion within social networks. Although the model is general in nature, its insights extend to any type of situation where social relations and a difference of opinion are present.

<sup>8</sup> Similarly, one can also imagine the coordination problems inherent in a small  $S$ , small  $W$  system with multiple actors having a say as to what type of monetary policy the central bank should enact in order to produce the desired, Pareto optimal economic outcome.

large W and S system leaders will have an incentive to choose between a fixed currency regime and increased CBI, only autocratic leaders with a relatively low loyalty norm (small W and S) will have an incentive to commit themselves to anti-inflationary policies. Combining these two perspectives, we have the following hypotheses:

*Hypothesis 1: The likelihood that a state employs increasingly fixed currency regimes varies inversely to the size of its institutionally defined winning coalition.  
(Selectorate and Transparency models)*

*Hypothesis 2: Increases in a state's selectorate (the number of "enfranchised" individuals) will not systematically correspond to an increase in its likelihood to employ a fixed exchange rate regime, due to an increasing loyalty norm.  
(Selectorate model)*

Hypothesis 1 shows how the selectorate model comes to the same conclusion that Broz's concept of transparency does, while Hypothesis 2 describes the selectorate model's expectation that there will be non-stochastic variance within the broad category of autocracies. The logic behind Hypothesis 2 is that increases in S with fixed levels of W correspond to increasing loyalty norms that make coalition members more beholden to empowered leaders, because of the increased risk that they face of exclusion from alternative regimes. An extension of selectorate model insights to the area of inflation shows that there should be no systematic relationship between the use of pegs in small W and S systems (e.g., those with moderate levels of loyalty norms) and the prevailing levels of inflation. The basis for this reasoning is that the use of other macroeconomic mechanisms by leaders (e.g., capital controls, industrial subsidies, and trade barriers) helps to further insulate members of the winning coalition to the point where levels of inflation are of little concern. This last statement produces the third and final hypothesis:

*Hypothesis 3: States containing small W and S systems and employing fixed currency regimes will not show a significantly greater ability produce lower amounts of inflation than the following types of alternative systems: small W and large S; and small W and small S without fixed currency regimes.  
(Selectorate Model)*

Table 2 summarizes the empirical models' different expectations according to Broz's original theories of transparency and the selectorate model's theories regarding the differentiated effects of varying winning coalition and selectorate sizes. Transparency predicts a relatively higher likelihood of implementing fixed exchange regimes for opaque systems than transparent ones. Selectorate theory presents a prediction similar to that of transparency with the added refinement that small W and S systems will be more likely to fix exchange rates than small W large S systems. With respect to the prevailing levels of inflation, the empirical model focuses on a subset of the data set and evaluates whether there is a systematic difference in levels of inflation between small W and S compared to small W and large S systems. Using insights drawn from deriving the loyalty norm, selectorate theory predicts that small W and S systems following fixed exchange regimes will not have significantly lower levels of inflation than those small W and S as well small W and large S systems.

### *Data*

The empirical tests contained in this paper use, with just a few exceptions, Broz's (2002) original data containing cases of developing and developed countries for the years 1973-1995.<sup>9</sup> Added to the author's original data set are selectorate variable values (W and S) made available on Bruce Bueno de Mesquita's website. Besides the addition of the selectorate values, all of the following empirical analyses follow directly from Broz (2002).

### *The Empirical Models and Results*

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<sup>9</sup> The following cases were dropped due to an insufficient amount of selectorate variable data: Netherlands Antilles, Aruba, Greenland, Hong Kong, Côte d'Ivoire, and Tonga. The data for Kribati and Sao Tomé were combined where necessary.

Following Broz (2002), evaluating states' propensity to peg according to regime type will use an ordered probit with robust standard errors.<sup>10</sup> Since the data set employed in this paper is a slight modification to the one used by the author originally, I will first run his full model as a basic check to ensure that the dropped cases have not produced a significantly biased sample. The second model will drop the POLITY variable, because of its high correlation with W and S (0.85 and 0.42, respectively). Theoretically, the selectorate and POLITY variables are highly correlated, since the former are components derived from the latter (Bueno de Mesquita, Morrow, Siverson, and Smith 2003, 134-39). Recall that the justification for substituting the selectorate variables for the POLITY variable is the attempt to refine Broz's (2002) original arguments about the effects of transparency, which cannot be done if high levels of multi-collinearity result in improperly calculated coefficients (Greene 2003, 56-59 and 170). That said, the effects found by "swapping" variables only serve to further describe the heterogeneity present in autocratic regimes and to test for this heterogeneity's significance. Using the author's original model as a base model, I conduct tests on the three hypotheses listed in Table 1 and Hypothesis 3's unconditional corollary. Please see the attached Appendix for the model's exact specification, and refer to Table 2 for the models' summarized results.<sup>11</sup>

<< Insert Table 2 Here >>

Comparing the modified model's results presented in Table 2 to those presented in Broz (2002), we see that increasing levels of transparency are still inversely related to the likelihood of choosing fixed exchange rates.<sup>12</sup> Additionally, we also see in Table 2 that the results of the empirical models also support the predictions made by selectorate theory. Recalling that the likelihood of

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<sup>10</sup> The inclusion of robust errors and a lagged dependent variable is an attempt to account for the autocorrelation that certainly occurs in this truncated time series.

<sup>11</sup> The ordered probit estimator's notation in this paper follows directly from that presented in Johnston and DiNardo (1997, 435). STATA v.8 calculates the cut-points or thresholds ( $c_1$ ).

<sup>12</sup> In fact, there is little difference in the coefficients and levels of statistical significance produced between the original sample and its smaller sub-sample.

choosing a fixed currency regime should be significantly related to increases in  $W$  and not  $S$ —due to variation in the loyalty norm—the data show that, *ceteris paribus*, small  $W$  and  $S$  autocratic leaders have a significantly higher likelihood of employing fixed currency regimes than do their democratic and small  $W$ , large  $S$  counterparts.<sup>13</sup> In other words, the data show that leaders of small  $W$  and large  $S$  regimes—where coalition members possess a relatively high risk of exclusion from future regimes—do not theoretically face the same set of incentives of credibly committing to anti-inflationary policies as leaders in small  $W$  and  $S$  systems do. Additionally, although controlling for  $W$ , increases in  $S$  does lead to a higher likelihood of fixing exchange rates, but this result is not statistically significant.<sup>14</sup> In light of the loyalty norms inverse effects on autocratic leaders’ choice of exchange regime, the question remains as to whether the observed difference in exchange regime choice corresponds with a similar difference in protecting against inflation.

Table 1 listed the qualified hypothesis that leaders of small  $W$  and  $S$  regimes would provide for relatively lower levels of inflation (hence, higher levels of private/public goods in the form of lower prices and overall economic stability) on the condition that they had chosen to employ fixed exchange rates. Although Broz (2002) presents a case where leaders must choose between a combination of fixed exchange rates and increased CBI in order to credibly commit to anti-inflationary policies, Obstfeld (1997) leads us to believe that this binary version of joint choice may not represent the extent of leaders’ options. Obstfeld (1997) describes that an alternative not considered in the present study, is the choice of using “escape clauses” where leaders commit to

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<sup>13</sup> An unreported regression evaluating monotonically increasing  $WS^{-1}$  values followed the results expected from Figure 2 ( $\beta = -0.58$ ; Std. Err. = 0.150;  $P < |z| = 0$ ). Substituting  $WS^{-1}$  and maintaining all of the control variables presented in Table 2, we see that increasing values of  $WS^{-1}$  correspond to cases of progressively democratizing states and result in an increasing likelihood of implementing increasingly floating currency regimes. The  $WS^{-1}$  variable was not included in the presented regressions, because of its high degree of collinearity with  $W$  (0.99).

<sup>14</sup> Clark’s (2005) interpretation of Figure 2’s four quadrants sheds some light on the indeterminacy of  $S$ ’ coefficient, with his categorization and theories about “good” and “bad” autocracies. Autocracies’ nomenclature derives from the state of an institution’s prevailing loyalty norm, with “good” autocracies characterized by relatively moderate ones (members face low risk) and “bad” ones having higher ones. Under these conditions, leaders in “good” systems should act in a describable and systematic fashion due to the constancy of pressures that they face from  $W$ . Alternatively, leaders of “bad” systems should act stochastically, perhaps having a higher probability of fixing exchange rates—perhaps due to Broz’s identification of their relative opacity—but not doing so in a predictable manner. Hence, the statistical insignificance on  $S$ ’ coefficient, which describes the behavior of leaders located in Quadrant I. Of particular interest in this case is that the behavior of those located in Quadrant I provides fertile ground for evaluating the effect of international pressures (such as donating states, trade and alliance partners, international organizations, and the like) on leaders’ choosing of commitment mechanisms, since the influence of internal pressures is relatively low.

inflation targets concurrent to their setting of other monetary policies. Acknowledging that leaders of different regime types have a variety of mechanisms at their disposal with which they can seek to satisfy their winning coalitions, a corollary hypothesis to Hypothesis 3 is simply to assert that small and large W leaders will meet the “Swoosh” result’s expectations by whatever means possible. Therefore, the unconditional adjustment to Hypothesis 3 is that a case need not be a small W and S system employing a fixed currency regime in order to fulfill the selectorate model’s theorized level of private-public goods provisions.

I employ a simple OLS model and a panel adjusted OLS time series model to test Hypothesis 3 and its unconditional corollary. Again, using the modified Broz (2002) data, I test for the effect that regime type has on prevailing levels of inflation differentials.<sup>15</sup> The explanatory variables are that of institutional regime type, controlling for exchange rate regime and a host of economic factors (i.e., degrees of trade and financial openness). Hypothesis 3 predicts that leaders of small W and S regimes who employ fixed currency regimes will not systematically oversee significantly lower levels of inflation than all other autocratic leaders.<sup>16</sup> The underlying logic to this view was that leaders of small coalition systems possess a variety of means for the provision of side-payments, which prevents them from relying upon low levels of inflation as a private good. A competing hypothesis posits that when leaders of small W and S systems have responded to loyalty norm pressures by fixing currency regimes, it may follow that lower levels of inflation occur due to these same loyalty norm pressures. On the alternate end of the W and S spectrum, controlling for S, we expect that leaders of large W systems will provide for low levels of inflation based upon the combination of relatively low loyalty norms and large numbers of individuals within winning

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<sup>15</sup> Inflation differentials are Broz’s (2002) measure of the absolute difference between a state’s inflation rate and globally averaged inflation rate. A lack of CBI data inevitably contributes to the low R<sup>2</sup> scores reported in Table 4. I will account for this in future iterations of the paper.

<sup>16</sup> For the purposes of this secondary analysis, Broz’s (2002) coding of currency regimes (1 to 4) was dichotomized to distinguish between those that are relatively floating to fully floating (1 and 2) and those that are relatively fixed (3 and 4).

coalitions. Table 3 reports the results of an OLS regression calculated with robust standard errors and an OLS regression calculated with panel-corrected standard errors.

<< Insert Table 3 Here >>

A quick perusal of Table 3's results shows that while the data do not support the conditional expectations of Hypothesis 3, they do support the expectation of its competing hypothesis. Controlling for other economic factors and  $S$ , while treating moderately sized  $W$ s ( $0.25 < W < 0.75$ ) as the base-line, we do in fact see a significant (although substantively marginal) statistical relationship attesting to the selectorate model's hypothesized "Swoosh" effect on the provision of states' general welfare. From these results we can draw the tentative conclusion that while all autocratic leaders face an incentive to weight their policy mixes more strongly toward private goods, leaders of small  $W$  and  $S$  systems provide for relatively lower levels of inflation than their moderately sized  $W$  counterparts do. In a similar vein, leaders of large  $W$  and  $S$  systems also provide for statistically significant lower levels of inflation, albeit in the pursuit of public rather than private goods.

### *Conclusions*

In this paper, I reviewed and extended Broz's (2002) original evaluation of transparency's effects on leaders' propensity to employ fix currency regimes. Seeking to refine the theory with respect to autocratic regimes, I employed the selectorate model's insights and found that variance in winning coalition sizes within the autocratic regime category do partially account for the observed variance on the choice of exchange rate regime for leaders of these systems. Additionally, an assessment of the selectorate model's expectations for a "Swoosh" effect on levels of goods provisions according to winning coalition size and resulted in moderate support for the theorized curvilinear relationship.

Out of the current paper's many shortcomings, one glaring defect is its inability to account for leaders' joint-choice over commitment mechanisms. The relatively low  $R^2$ s reported throughout the various tables attest to the fact that we require a combined model describing the likely behavior for both variant behaviors across and within regime types before we can fully explore such questions as leaders' choice over commitment mechanisms and such choices' influence on states' relative inflation rates. Additionally, the theories tested in this paper evaluate leaders' choice of commitment mechanisms as induced by internally derived preferences. In other words, thus far an account has only been made that evaluates the influence of varying domestic factors, while treating international factors as stochastically exogenous. Quadrant I in Figure 2 theorizes that leaders in small  $W$  and large  $S$  systems will face little internal pressures that motivate their behaviors. One might draw the conclusion from this proposition that leaders' choices in such regimes are stochastic and due solely to the empowered individual's caprice. However, Hallerberg's (2004) evaluation of EU states' coordination of fiscal policies for EMU standards may lead us to an alternate conclusion.

Assessing EU states' propensity to run budget deficits from throughout the last quarter of the 20<sup>th</sup> century (1973-2000), the author finds that while many states sought to minimize their budget deficits due to internal pressures, there were those that did so predominantly on account of EMU (i.e., the Treaty of Maastricht) pressures for policy coordination (220). Although Hallerberg used his model of varying party structures and political competition to evaluate the internal incentives that influence leaders' preference for and actions toward fiscal governance, the author's insights as to when international organizations are most influential should readily extend to other analyses of macroeconomic policy formulation. With Hallerberg's results in mind, we might conclude that leaders modify their behavior in accordance to external actors' preferences when they face relatively low, domestic pressures. Recalling potentially non-stochastic choice of commitment mechanisms for those cases falling in Quadrant I of Figure 2, one possible venue of exploration is to

evaluate the effect that international organizations have on inducing the committed behaviors of leaders in small W and large S systems.

Vreeland (2003; 2004) presents studies evaluating the influence that the International Monetary Fund has on significantly states' choice of macroeconomic policies and these policies' subsequent, developmental results. A primary conclusion that one can draw from the author's evaluation of the conditional influence of the IMF is that just as states' internal relations with domestic actors produced incentives for certain behaviors and their resulting outcomes, the states' external relations—bi-lateral relations, perceptions of non-indigenous private actors (i.e., private lending institutions), and ties to the International Monetary Fund (representation within combined with IMF loan histories)—also potentially serve as incentives for a leader's choice to politically commit. Similar to the logic contained in analyses of the institutional factors affecting leaders' ability to signal credible commitments for anti-inflationary policies and outcomes, Vreeland (2004) shows how variance in external relations with such actors as the United States and the IMF influences the degree to which private and public actors perceive states' actions as credible. At heart is the question as to whether a state's pledge for adhering to IMF conditions (i.e., austere fiscal and monetary policies and sometimes devaluations) is sincere or not. Vreeland (2004) theorizes that private actors assess the credibility of states' commitments according to the likelihood that they will face punishment for not meeting IMF conditions while failing to repay their loans. Separating influential external actors into three categories—creditor states, private lenders, and the IMF—the author theorizes that states will most likely face significant punishment from the IMF if they are strategically unimportant to the US<sup>17</sup>, which is a credible signal that private lenders use to update their beliefs regarding expected returns on their investments (2-5).

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<sup>17</sup> In other words, not an ally of the US and therefore not perceived by private lenders as receiving the loan as an unconditional "reward" (Vreeland 2004, 2-4).

Recognizing that accepting an IMF loan is only one way for leaders to credibly signal their commitment for anti-inflationary policies, Vreeland (2003, 2004) models leaders' internal impetus for choosing the IMF participation according to a "veto player" logic.<sup>18</sup> Positing that the preference for anti-inflationary policies differs according to the number of politically relevant actors involved such policies' approval, the author refers to his empirical findings showing that the likelihood of IMF participation is curvilinear with respect to the number of "veto players" present (2004, 10-11).<sup>19</sup> In line with other authors' spatial analyses of leaders' choice of commitment mechanisms, the author uses a single category to define autocracies (i.e., Veto Players = 1, used to define single-party governments as well as dictatorships and other forms of autocracy). Again, we have an opportunity to expand upon the author's initial findings with the inclusion of the selectorate model.

Incorporating Vreeland's insights with the results found in this paper, an extension of this paper seeks to do a number of things. First, a completely modified version of Broz's (2002) data set that includes CBI data will allow for the internal factors found to influence leaders' joint choice of commitment mechanisms (i.e., exchange rate regime and degree of CBI). Second, an improved evaluation of factors that influence states' inflation rates will result from the newly modified Broz data. Third, merging the additionally modified Broz data set with Vreeland's (2003) data will allow for an evaluation as to the influence that an external actors (i.e., the United States and the IMF) has on leaders' choice of commitment mechanisms once internal factors have been fully accounted for. Lastly, the merged, Broz and Vreeland data sets will allow for a proper evaluation of the internal and external factors that influence leaders' provision of low inflation as a private and public good.

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<sup>18</sup> Additionally, the author acknowledges that participation in IMF is a joint choice between a state's leadership and the IMF itself, the latter using the number of "veto players" present to assess the likelihood that a state will implement and adhere to the stated IMF conditions.

<sup>19</sup> The likelihood of participation peaks at two "veto players" (11).

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# Tables and Figures

Figure 1, A Numerical Representation of S, W, and  $WS^{-1}$

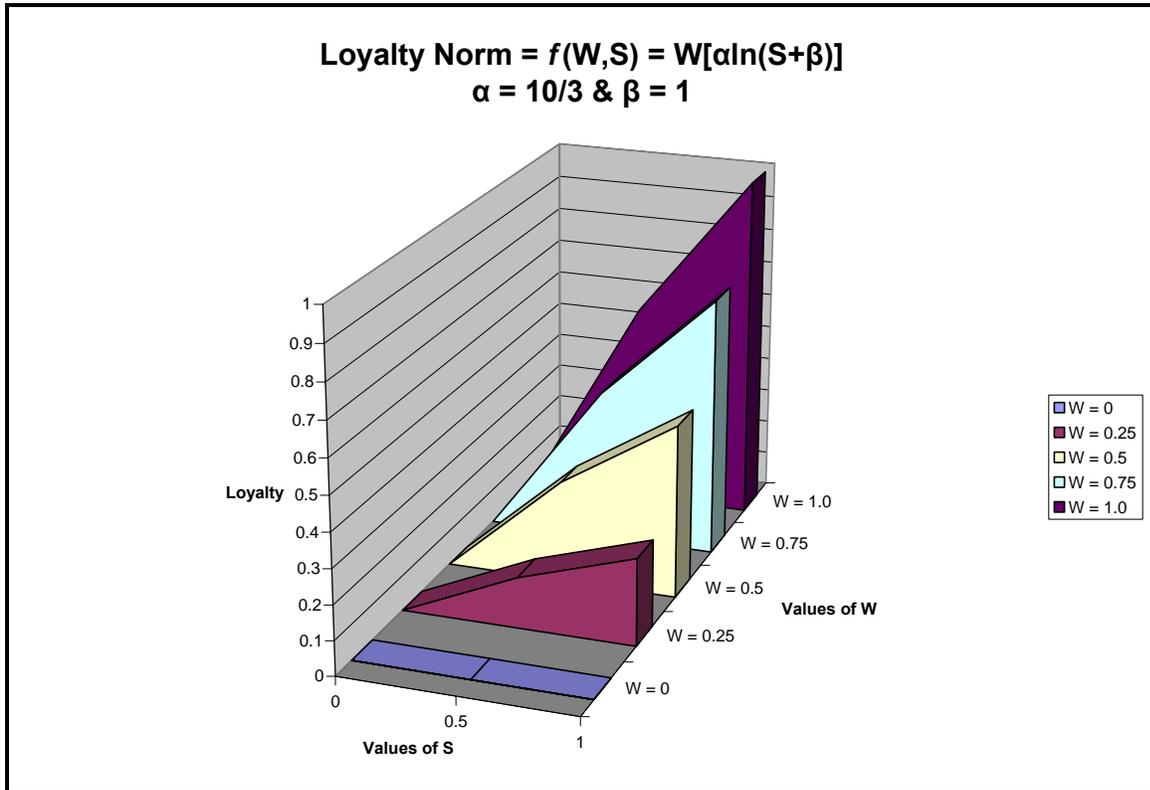
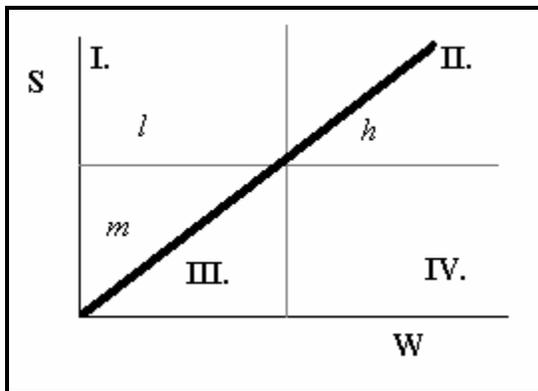


Figure 2, General Goods Provision Given S &  $W^{20}$



<sup>20</sup> Adapted from Clark (2005).

**Table 1, Transparency and Selectorate Hypotheses**

<i>System Type</i>	<i>Likelihood of Choice for Fixed Exchange</i>		<i>Predicted Inflation Levels</i>	
	<b>Transparency</b>	<b>Selectorate</b>	<b>Transparency</b>	<b>Selectorate</b>
Opaque or Autocratic Systems	+	+	-	+
Small W and S	--	+	--	NA
Small W and Large S	--	-	--	+
Transparent or Large W and S	-	-	--	--

NA = no effect

~ Conditioned on another factor (e.g., CBI)

-- Prediction for this category either not theorized about or not evaluated in this paper

**Table 2, Exchange Rate Regime, Transparency, and the Selectorate Model**

$Y_i^j$  = Exchange Rate Regime ( $Y_i^1 = 1$ , Floating;  $Y_i^4 = 1$ , Fixed)

	<u>Model 1</u>			<u>Model 2</u>		
	$\beta$	Std. Err.	P >  z	$\beta$	Std. Err.	P >  z
Exchange Regime <sub>(t-1)</sub>	1.22	0.073	0	1.277	0.072	0
<sup>1)</sup> POLITY	-0.02	0.006	0.008			
W				-0.49	0.169	0.004
S				0.141	0.15	0.348
Wealth	0.004	0.013	0.005	0.027	0.009	0.002
Size	-0.267	0.143	0	-0.262	0.009	0.002
Trade Openness	0.023	0.103	0.227	0.117	0.97	0.227
Inflation Difference	-0.24	0.258	0.478	-0.184	0.259	0.478
Financial Openness	-0.066	0.026	0.028	-0.058	0.026	0.028
Institutional						
Reserves	0.043	0.015	0.001	0.048	0.015	0.001
Feasibility	1.203	0.445	0.007	1.203	0.445	0.007
Governmental Crises	-0.087	0.075	0.249	-0.087	0.076	0.249
Pseudo R <sup>2</sup>	0.46			0.46		

Prob > $\chi$	0	0
Number of Cases	1,487	1,487

**Table 3, Inflation Differentials as Private and Public Goods<sup>21</sup>**

<i>Regime Type, Exchange Rate Regime, and Inflation Differentials</i>				
	<u>OLS 1</u>		<u>Panel</u>	
	$\beta$	P >  z	$\beta$	P >  z
Exchange Regime	-0.059	0	-0.038	0
W $\leq$ 0.25 = sW	-0.048	0.002	-0.047	0.007
W > 0.75	-0.038	0	-0.031	0.172
sW*Fixed Exchange	0.016	0.317	0.029	0.084
S	-0.015	0.102	0.011	0.357
Wealth	-0.001	0.007	-0.004	0.117
Size	0.001	0.765	-0.197	0
Trade Openness	-0.045	0	-0.014	0.516
Financial Openness	-0.004	0.003	0.022	0
Governmental Crises	0.008	0.246	-0.007	0.269
Constant	0.206	0	0.766	0
<hr/>				
R <sup>2</sup>	0.09		0.03 <sup>a</sup> , 0.02 <sup>b</sup> , 0.001 <sup>c</sup>	
Prob > F or $\chi$	0		0	
Number of Cases	2,202		2,202	

a = R<sup>2</sup> within, b = R<sup>2</sup> between, and c = R<sup>2</sup> overall

<sup>21</sup> Not reported in the table are the results produced from running the presented models but substituting WS<sup>-1</sup> ( $\beta = 0.120$ ; Std. Err. = 0.021; P < |z| = 0) for the other selectorate variables. Recalling the bold line shown in Figure 2, the regressed model's results show that states' inflation differentials increase with increases in democratization. As further discussed in the paper's conclusion, the model's coefficients potentially suffer from bias due to the omission of CBI data and other relevant descriptions of joint choice. Future iterations of this paper will account for this shortcoming and serve as a proper test of institutionally induced preferences for commitment mechanisms and such choices resulting levels of inflation.