

# The Effect of Authoritarian Regime Type on Exchange Rate Policy\*

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Abstract: Conventional wisdom holds that autocracies are more likely than democracies to adopt interventionist and protectionist economic policies, including fixed and undervalued exchange rates. This paper suggests that this view is only partially correct: non-democracies are a heterogeneous grouping, and only some types of authoritarian regimes adopt different foreign economic policies from their democratic counterparts. Using the example of exchange rate policy, we show that foreign economic policy varies across monarchic, military, and civilian dictatorships. More specifically, we hypothesize that monarchies and military regimes are more likely to maintain fixed exchange rate regimes than democracies and civilian dictatorships because the former regimes have smaller “selectorates” than the latter. We also expect that monarchies and civilian dictatorships maintain more undervalued exchange rates than democracies and military regimes because the former regimes provide their leaders with greater tenure security than the latter regimes. These hypotheses are evaluated using a time-series—cross-sectional dataset of a large sample of developing countries from 1973 to 2006. Our statistical results accord with these predictions. These findings indicate that the ways in which democracies engage with the global economy may be less unique than many believe.

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The prevailing view among scholars of International Political Economy (IPE) is that authoritarian regimes act as a major force against contemporary trends of economic globalization. Autocracies are believed to maintain inefficient, protectionist policies in order to channel economic rents to their cronies. Previous studies find that, relative to democracies, autocracies maintain higher barriers to international trade, more extensive capital controls, are less reliant upon foreign direct investment, maintain more fixed exchange rate regimes, and are more likely to keep their exchange rates undervalued as part of a mercantilist currency policy.<sup>1</sup>

This conventional wisdom provides an accurate portrayal of an important sub-set of authoritarian countries, but authoritarian regimes are a much more heterogeneous grouping than existing research in IPE might lead one to believe. For example, it is true that China's Communist Party has sustained a highly undervalued exchange rate, but it is also true that military dictatorships from Argentina to Nigeria have adopted massively overvalued exchange rates. Similarly, while the Saudi Arabian monarchy continues to maintain a fixed exchange rate, single-party regimes in Botswana, Hungary, and Romania persisted with flexible exchange rate regimes throughout their tenures. These striking divergences in foreign economic policy among authoritarian regimes beg for an explanation.

This article shows that institutional variations within authoritarian regimes influence dictators' foreign economic policies. Our overarching argument is that

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<sup>1</sup> On trade policy, see Milner and Kubota 2005; Milner and Mukherjee 2009; and Eichengreen and Leblang 2008. On capital controls, see Eichengreen and Leblang 2008; and Milner and Mukherjee 2009. Jensen 2003 analyzes FDI flows. Leblang 1999, Broz 2002, and Bearce and Hallerberg 2011 examine the exchange rate regime. On undervalued exchange rates, see Eichengreen 2007.

different types of authoritarian regimes face different constraints and incentives, and they adopt divergent economic policies as a result. We apply this argument to one important area of foreign economic policy: exchange rate policy. Exchange rate policy is an ideal issue-area for examining the effect of authoritarian regimes on the global economy. The exchange rate, the price of foreign currency, is the “single most important price in any economy, and it is a price that is routinely set, or at least targeted, by many governments.”<sup>2</sup> The exchange rate policy of one authoritarian country—China—is also one of the most contentious issues in contemporary world politics. An additional advantage of focusing on exchange rate policy is that it encompasses two distinct policy decisions, the exchange rate regime and exchange rate level. Analyzing the two issues separately strengthens our understanding of the effect of authoritarian regimes on foreign economic policy.<sup>3</sup>

Authoritarian regime type affects both the exchange rate regime and the exchange rate level. For both aspects of exchange rate policy, differences between the three main types of authoritarian regimes—civilian dictatorships, monarchies, and military regimes—are at least as important as the differences across the dictatorship-democracy divide. First, we hypothesize that some, but not all, authoritarian regimes are likely to fix their exchange rates. Previous research posits that fixed exchange rates regimes are most likely in political regimes with small “selectorates”: those where only a small portion of

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<sup>2</sup> Broz et al 2008, 419.

<sup>3</sup> Recent research has demonstrated that autocratic regime type influences a variety of political outcomes, including regime stability, protests, and foreign security policy. Geddes 1999; Kim and Gandhi 2010; Weeks 2008. Limited attention has been paid to the effect of authoritarian regime type on foreign economic policy, though Hankla and Kuthy’s Forthcoming study of trade politics is one notable exception.

the population is enfranchised.<sup>4</sup> Building off this argument, we hypothesize that military and monarchic dictatorships are likely to maintain fixed exchange rates because they have small selectorates. Fixed exchange rates are less likely in civilian dictatorships and democracies because their selectorates are larger than in other types of political regimes. Political regime type also influences the exchange rate level, though the mechanism is different here. Next, we argue that tenure security promotes undervalued exchange rates because undervaluation is economically painful in the short run but economically beneficial in the long run. We hypothesize that exchange rates tend to be more undervalued in monarchies and civilian dictatorships, regimes that provide their leaders with highly secure tenures, than in democracies and military dictatorships, where leaders' tenures are less secure.

Our empirical analyses, based upon a time-series—cross-sectional dataset with annual observations on a large sample of developing countries between 1973 and 2006, provide support for these hypotheses. These results suggest that non-democracies are a heterogeneous grouping and it is often inappropriate to lump them all together in a single category. Only some authoritarian regimes maintain illiberal economic policies. Other authoritarian regimes do not adhere to this popular stereotype, and behave more similarly to democracies than is typically recognized.

## **I. DISAGGREGATING AUTHORITARIAN REGIME TYPES**

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<sup>4</sup> Leblang 1999; Bearce and Hallerberg 2011; Eichengreen 1996; Singer 2010, 316.

Political regimes refer to the rules according to which lawmakers are selected. The defining characteristic of a democracy is the use of contested elections to select leaders.<sup>5</sup> Therefore, non-democratic regimes, also known as autocratic or authoritarian regimes, do not use competitive elections to fill governmental offices. Following Cheibub, Gandhi, and Vreeland, we classify authoritarian regimes into three categories—monarchies, military regimes, and civilian dictatorships—according to the distinct institutional structures that they use to acquire and maintain power.<sup>6</sup> A regime is defined as *monarchic* if legitimate succession can only occur within the ruling family and the ruling family is in charge of major political decisions. Decision-making authority in *military* regimes rests with the officer corps, frequently in the form of consultative councils or juntas comprised of key members of the armed services. Finally, *civilian dictatorships* are a residual type of authoritarian regime in which autocrats rule without relying upon a ruling family or the military as its main support base. Civilian dictatorships include single-party regimes, in which leaders are chosen from within the ruling party, and limited multiparty regimes, which employ highly compromised electoral processes.

Figure 1 displays the distribution of political regime types in the developing world between 1973 and 2006. Democracies were the most common type of political regime in this period, making up 38% of observations, followed by civilian dictatorships (31%), military dictatorships (22%) and monarchies (9%). Though the presence of military

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<sup>5</sup> Cheibub et al 2010.

<sup>6</sup> Cheibub, Gandhi, and Vreeland 2010. There are several alternative typologies of authoritarian regimes, the most prominent being Geddes' 1999 version, which includes personalist dictatorships as an additional authoritarian regime type. Although our empirical analyses examine Geddes' typology, our theory does not focus on personalist regimes due to disagreements about the coding of this category and concerns that personalist regimes are not really a distinct regime type. Hadenius and Teorell 2007; Lai and Slater 2006; Magaloni 2008.

regimes has receded at the expense of democracies, the prominence of other autocratic types has remained fairly stable.

**[Insert Figure 1 & Table 1 here]**

Democrats, monarchs, military rulers, and civilian dictators face different requirements for maintaining power. This section examines two important differences between political regime types: the size of the selectorate and leaders' tenure security.<sup>7</sup> First, political regimes determine whether leaders are beholden to large swathes of the population or only a small subset. Following Bueno de Mesquita et al, we use the term "selectorate" to refer to the portion of the populace that is able to determine the government's leadership.<sup>8</sup> The first column of Table 1 presents data on Bueno de Mesquita et al's (2003) preferred measure of selectorate size: whether a country has no legislature (0); a non-elective legislature (1); or an elected legislature (2).<sup>9</sup> Increasing the size of the selectorate encourages policymakers to adopt economic policies that benefit the majority of citizens and discourages them from adopting policies that only benefit parochial groups.

Political regimes also vary along a second important dimension: the degree of tenure security that they provide for their leaders. We focus on one crucial facet of tenure security, the degree to which a leader's tenure is sensitive to economic conditions, which

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<sup>7</sup> Variation in leaders' fates after losing office is a third potentially important dimension (Debs and Goemans 2010), though this is a topic we leave for future research.

<sup>8</sup> Bueno de Mesquita et al 2003, 42. Though Bueno de Mesquita et al emphasize the relationship between the size of a polity's selectorate and its winning coalition, we follow other research in political-economy (e.g. Milner and Kubota 2005; Hankla and Kuthy Forthcoming), and focus only on selectorate size. We do so because we expect that this variable matters more for exchange rate policy.

<sup>9</sup> This is a highly imperfect measure of selectorate size. The descriptive statistics presented in Table 1 and discussed in this section are intended for illustration, not as definitive evidence of our theoretical claims.

we refer to as “tenure sensitivity.”<sup>10</sup> Here, the idea is that leaders’ tenures are more secure if they can survive in power during troubling times, such as economic crises. One way to capture the degree of tenure sensitivity is by comparing leaders’ propensity to be removed from office in good times and their propensity to leave office in bad economic conditions. The second column of Table 1 reports leaders’ turnover rates, the proportion of observations in which a leader exits from power, conditional on positive economic growth. Column 3 of the Table reports how often leaders lose power in years with negative economic growth. Our main interest lies in column 4, which provides the difference between leaders’ turnover rates in “bad” times (column 3) and their turnover rates in “good” times (column 2). A large (and statistically significant) increase in turnover rates during economic downturns indicates that leaders’ tenures are sensitive to economic conditions.

It is reasonable to assume that political leaders can accurately assess whether economic crises are a serious threat to their political survival in a manner that is consistent with actual historical patterns.<sup>11</sup> Leaders that believe that economic downturns substantially increase their risk of losing office have short time-horizons and prefer to avoid policies that impose high short-term costs on their society. Rulers that expect to survive in office through hard times do not discount the future as heavily, and are more likely to implement policies that enhance long-term efficiency at the expense of a

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<sup>10</sup> Our conceptualization of tenure sensitivity is similar to Debs and Goemans 2010; Escriba-Folch and Wright 2010.

<sup>11</sup> Way 2005, 136; Wright 2008, 980.

recession in the short-run.<sup>12</sup> The remainder of this section describes how selectorate size and tenure security vary across different political regime types.

### A. Democracies

Democracies have large selectorates, which include all eligible voters.<sup>13</sup> Table 1 confirms the conventional wisdom that democratic leaders are responsible to large constituencies. Democratic leaders also lack tenure security because they need to compete in elections frequently.<sup>14</sup> Not only do democratic leaders have higher turnover rates in both good and bad economic times than non-democratic leaders, but Table 1 also shows that economic downturns significantly increase the likelihood that a democratic leader loses office. One reason why leaders of developing democracies have highly sensitive tenures is that they are less likely to be re-elected when the economy is growing slowly.<sup>15</sup> Democrats therefore have strong incentives to avoid economic policies that have damaging short-term ramifications.

### B. Monarchic Dictatorships

Monarchies differ from democracies in a variety of ways.<sup>16</sup> Monarchies have small selectorates. Acquiring power in a monarchy typically requires only the support of those in the royal palace. For instance, the ruling family alone decides who is in charge in

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<sup>12</sup> Haggard and Kaufman 1995; Przeworski 1991; Schamis and Way 2003; Way 2005; Wright 2008.

<sup>13</sup> Milner and Kubota 2005; Bueno de Mesquita et al 2003.

<sup>14</sup> Olson 1993, 572; Li 2009; Way 2005.

<sup>15</sup> Brender and Drazen 2008.

<sup>16</sup> This description of monarchies builds from: Brownlee 2009; Bueno de Mesquita et al 2003; Cheibub et al 2010; Hadenius and Teorell 2007; Herb 1999; Wright 2009.



monarchies such as Kuwait, Oman, and Saudi Arabia. Moreover, legislatures rarely have much influence in monarchies, as shown in Table 1.

Monarchic regimes provide their leaders with highly secure tenures. Their institutionalized systems for leadership succession through familial ties allow members of the royal family to continue extracting benefits over generations. Regime insiders therefore have strong incentives to continue supporting the regime, which enhances leaders' tenure security.<sup>17</sup> Olson hypothesizes that dynastic succession reduces the probability of succession crises, and thus “give[s] monarchs more concern for the long run and the productivity of their societies.”<sup>18</sup> Table 1 shows that executive turnover rates in monarchies are extremely low regardless of whether the economy grows or shrinks.

### C. **Military Dictatorships**

Military regimes also have small selectorates. According to Bueno de Mesquita and colleagues, “military juntas include very few people. Typically, a military junta depends on a handful of colonels or generals to form the selectorate.”<sup>19</sup> Like monarchies, military regimes tend to concentrate policymaking authority in the executive branch (see Table 1). Since military regimes are capable of ruling with force, military rulers tend to repress, rather than incorporate, organized groups, such as labor unions, as occurred with the

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<sup>17</sup> Magaloni 2008, 724.

<sup>18</sup> Olson 1993, 572.

<sup>19</sup> Bueno de Mesquita et al 2003, 71. This section borrows heavily from: Bueno de Mesquita et al 2003; Cheibub et al 2010; Geddes 1999; Haggard and Kaufman; Lai and Slater 2006; Wright 2009.

military regimes in Chile and Korea.<sup>20</sup> Military rulers' main bases of support, and threats to their rule, come from within the barracks.

Table 1 shows that economic downturns increase the probability that a military dictator loses office by over 50%, and this difference in turnover rates is statistically significant. Viola in Argentina and Suharto in Indonesia are two of the many military dictators that lost power during economic crises. There are several reasons why military dictators' tenures are highly vulnerable to economic downturns: economic crises exacerbate factional divisions within the military; military regimes rarely construct cohesive ideologies for justifying their continued rule during hard economic times; and military regimes lack the institutional infrastructure to mollify social groups that are harmed by economic downturns. As a result of their insecure tenures, military dictators are often desperate to avoid policies that precipitate short-term economic crises.

#### **D. Civilian Dictatorships**

Civilian dictatorships display the opposite features from military dictatorships.<sup>21</sup> The selectorates of civilian dictators are often quite large. Although the general populace cannot vote in civilian dictatorships, these regimes employ a number of institutional devices that expand their coalitions of support. As Table 1 shows, most civilian dictatorships have incorporated legislatures that give a measure of influence to a legalized opposition and, by extension, to a larger number of interest groups.<sup>22</sup> Some single-party

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<sup>20</sup> Haggard and Kaufman 1995.

<sup>21</sup> This section is based upon Brownlee 2009; Bueno de Mesquita et al 2003; Gandhi and Przeworski 2007; Geddes 1999; Hankla and Kuthy Forthcoming; Lai and Slater 2006; Magaloni 2008; Smith 2005; Wright 2009.

<sup>22</sup> Gandhi and Przeworski 2007; Gandhi 2008.

regimes, such as the PRI in Mexico, maintain organizational links with mass groups such as organized labor.<sup>23</sup> Other single-party regimes like China are composed of distinct factions that represent different social groups and geographic regions.<sup>24</sup> Still other civilian dictatorships, such as Malaysia, allow limited multiparty elections, in which some (though not all) opposition parties are allowed to contest elections, effectively giving voice to a larger set of actors.<sup>25</sup> These various institutional devices “allow for outside interests, such as labor, to...voice its own demands”, thus enlarging the selectorate.<sup>26</sup> Thus, even though the selectorate in civilian dictatorships is not quite as large as in democratic regimes, a larger number of organized interest groups have an influence upon the policymaking process in civilian dictatorships than in other types of authoritarian regimes.

Civilian dictators have highly secure tenures. As Geddes observed, “single-party regimes have been remarkably resilient even in the face of long, severe economic crises.”<sup>27</sup> Table 1 confirms that economic downturns have only a small and statistically insignificant effect on turnover rates in civilian dictatorships. The use of independent legislatures and limited electoral competition enhance leaders’ tenure security because they give rulers a forum for solidifying power-sharing agreements with their support coalitions, and they help dictators solicit cooperation from broader swathes of the polity.<sup>28</sup> For instance, in Mexico, the PRI’s domination of the bureaucracy and its control

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<sup>23</sup> Magaloni 2006.

<sup>24</sup> Li 2005.

<sup>25</sup> Pepinsky 2009.

<sup>26</sup> Kim and Gandhi 2010, 649.

<sup>27</sup> Geddes 1999, 139.

<sup>28</sup> Gandhi and Przeworski 2007; Magaloni 2008; Smith 2005.

over state resources helped its leader, Miguel de la Madrid, retain power throughout the 1980s debt crisis when many of Latin America's military dictators lost power.<sup>29</sup>

**[Insert Figure 2 here]**

### **E. Summary & Implications**

Figure 2 summarizes how the four political regime types relate to the two dimensions of selectorate size and tenure security. This analysis implies that autocracies are a heterogeneous grouping, and different types of autocratic sub-types are likely to adopt dissimilar economic policies. This discussion also suggests that most types of autocracies share at least some similarities with democracies. We therefore expect that democracies adopt similar economic policies to certain authoritarian sub-types. The next section applies these intuitions to two aspects of exchange rate policy.

## **II. AUTOCRATIC REGIME TYPES AND EXCHANGE RATE POLICY**

This section applies our arguments about autocratic regimes to the two dimensions of exchange rate policy discussed in Frieden's seminal study: the exchange rate regime and the exchange rate level.<sup>30</sup> The exchange rate regime refers to the rules used to determine the currency's nominal exchange rate (number of units of domestic currency/foreign currency). Fixed exchange rate regimes refer to systems where the government keeps the currency's foreign exchange value stable. Exchange rate regimes are considered flexible when the currency's external value fluctuates regularly. Flexible regimes include both

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<sup>29</sup> Greene 2007.

<sup>30</sup> Frieden 1991. These two policies are not entirely independent of one another, but they are distinct issues that are only weakly associated with one another. The correlation between our preferred measures of each policy is 0.11 in our sample.

freely floating and managed floating regimes. Policymakers keep their exchange rate fixed by buying or selling foreign currency, which influences the supply of foreign and local currencies, and by raising or lowering interest rates, which alters the demand for foreign and local currencies.

The second dimension of exchange rate policy, the exchange rate level, refers to the currency's real exchange rate, which is defined as the price of foreign goods relative to domestic goods. The real exchange rate is calculated as the nominal exchange rate multiplied by the ratio of foreign to domestic price levels. An “undervalued” (“overvalued”) exchange rate refers to one where domestic goods are cheaper (more expensive) than foreign goods. The real exchange rate depreciates (appreciates) when the nominal exchange rate depreciates (appreciates) or when domestic inflation is lower (higher) than foreign inflation. The real exchange rate is a “policy variable”:  
governmental policymakers have various tools through which they can affect the real exchange rate's level, including foreign exchange market interventions that affect the nominal exchange rate, and fiscal policy, which influences national price levels. To be sure, governments do not have complete control over the exchange rate level; in particular, policymakers may be unable to prevent depreciation in the face of massive capital flight. However, policymakers have proven highly successful in maintaining over/undervalued exchange rates for prolonged periods of time.<sup>31</sup>

Decision-making authority over exchange rate policy almost always resides with political elites, particularly national leaders and their cabinet officials.<sup>32</sup> Political

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<sup>31</sup> Eichengreen 2007; Rodrik 2008.

<sup>32</sup> Independent central banks rarely, if ever, choose their policy objectives. Thus, while independent central banks are able to set interest rates and reserve levels to achieve their

considerations influence how political leaders choose the exchange rate's regime and level. Maintaining support from powerful actors and minimizing threats to a leader's rule are the most important political criteria that influence exchange rate policy.<sup>33</sup>

While political considerations are equally important for the exchange rate regime and exchange rate level, these two dimensions of exchange rate policy feature very different political dynamics. Distributional conflict between different interest groups has an important influence on the exchange rate regime. The choice between a fixed or flexible exchange rate is invariably affected by the fact that, in most developing countries, the majority of the population prefers a flexible exchange rate to a fixed exchange rate. The size of the selectorate should therefore be a major determinant of exchange rate regimes. However, traditional interest group models do not work as well for explaining the exchange rate level. The exchange rate level undoubtedly redistributes income between different social groups, but the aggregate effects of over/undervalued exchange rates are often more noticeable than the distributional effects. Undervaluation is unappealing to almost all societal actors in the short run. However, sustaining an undervalued exchange rate delivers a number of important economy-wide benefits over the long-run and has few detractors. The exchange rate level therefore features a different type of political problem: inter-temporal trade-offs. Thus, we posit that a

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mandated objectives, they do not decide whether a fixed or undervalued exchange rate is a major policy objective. Even in Germany, which had one of the world's most independent central banks, elected officials chose whether and when exchange rate policy changed. Henning 1994.

<sup>33</sup> Gowa 1988 argues that collective action problems prevent interest groups from lobbying over exchange rate policy. However, groups with pre-existing lobbying organizations should not find it prohibitively costly to lobby over exchange rate policy. Broz and Frieden 2001, 333. Interest groups have lobbied over exchange rate policy in many countries. See Kessler 1998; Steinberg and Shih 2012; Walter 2008; Woodruff 2005; Pepinsky 2009.

leaders' tenure security should influence the exchange rate level. Selectorate size and tenure security are surely not the only factors that influence the exchange rate regime and exchange rate level, respectively, but they should be among the most fundamental determinants of each policy.<sup>34</sup>

Political regime type should influence exchange rate policy because political regimes vary considerably in terms of selectorate size and tenure security. Numerous previous studies, discussed below, have found that democracies are less likely to maintain fixed exchange rates than non-democracies. Fewer studies have investigated the determinants of the exchange rate level, though some analyses find that exchange rates tend to be more overvalued in democracies than in autocracies.<sup>35</sup> We hypothesize that fixed exchange rates are more likely in military and monarchic regimes than in democracies or civilian dictatorships, and that exchange rates are more undervalued in monarchic and civilian dictatorships than in democratic and military regimes. Figure 3 summarizes these predictions, illustrating our expectation that each of the four political regime types pursues a different mixture of exchange rate policies.

Before proceeding, it is important to emphasize that our theory of exchange rate politics applies only to developing countries during periods of high international capital mobility. Some aspects of exchange rate policymaking are likely to differ between developing and developed economies because developing economies are unique in a number of important regards, such as their under-developed domestic financial systems

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<sup>34</sup> Since the exchange rate regime has ambiguous effects on long-run growth (Frankel 1998), tenure security is unlikely to have a substantial impact on this policy. The size of the selectorate is unlikely to determine the exchange rate level because mass groups may support undervaluation or they may oppose it depending upon their time horizons.

<sup>35</sup> Eichengreen 2007; Steinberg 2011.

and high reliance upon debts denominated in foreign currency. In addition, our arguments apply only to periods where the global economy is characterized by high international capital mobility, and in which individual countries find it difficult to restrict cross-border capital flows. While some of our hypotheses may have broader applicability, our arguments are only intended to apply within this specified scope.

**[Insert Figure 3 here]**

#### **a. The Political-Economy of the Exchange Rate Regime**

Numerous studies find that democratic regimes are less likely than autocratic regimes to maintain fixed exchange rates, making this perhaps the most robust and widely accepted finding in the literature on exchange rate politics.<sup>36</sup> The most common explanation for this empirical regularity is that democratization enfranchises additional interest groups, and these groups oppose fixed exchange rates.<sup>37</sup> We extend these selectorate-based theories of exchange rate regimes to the non-democratic world and argue that authoritarian regimes with large selectorates should also avoid fixed exchange rates.<sup>38</sup>

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<sup>36</sup> Bearce and Hallerberg 2011; Broz 2002; Frieden et al 2001; Leblang 1999; Simmons 1994; Singer 2010. One exception is Frieden et al's 2010 study, which found that democracies are more likely to fix their exchange rates in Eastern Europe. This anomalous result may be driven by the fact that most dictatorships in Eastern Europe are single-party regimes.

<sup>37</sup> Bearce and Hallerberg 2011; Eichengreen 1996, ch. 1; Leblang 1999; Simmons 1994; Singer 2010, 316.

<sup>38</sup> Another popular argument is that non-transparent political regimes, namely autocracies, adopt fixed exchange rates to help them credibly commit to monetary stability. Broz 2002. The two theories would produce identical hypotheses if civilian dictatorships were more transparent than other authoritarian sub-types, but this is unlikely. According to Hollyer et al's 2011 measure of transparency, the percentage of economic indicators that a country provides to the World Bank, civilian dictatorships are among the least transparent regime types. The average civilian dictatorship reports data



Exchange rate stability is the principal benefit of a fixed exchange rate regime. Fixed exchange rates increase exchange rate predictability, which reduces the costs of cross-border economic transactions and contributes to higher volumes of international trade and investment.<sup>39</sup> Fixed exchange rates therefore produce similar effects to subsidizing international trade and investment. On the other hand, fixed exchange rates are costly because they reduce monetary policy autonomy. According to the open-economy trilemma model, under conditions of international capital mobility, maintaining a fixed exchange rate requires countries to forego an independent monetary policy.<sup>40</sup> When exchange rates are under market-based pressure to appreciate, keeping the exchange rate fixed often requires governments to cut interest rates; this can be problematic because it may contribute to excessive inflation. In the opposite situation, when the currency is under pressure to depreciate, keeping the exchange rate fixed requires governments to raise interest rates, which reduces growth and increases unemployment. Countries with fixed exchange rates experience greater economic volatility—including more severe economic downturns—than countries with flexible regimes because they are unable to adjust interest rates to achieve domestic economic objectives.<sup>41</sup> In short, fixed exchange rates pose a trade-off between two key objectives: exchange rate stability and monetary policy autonomy.

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for 71% of World Bank variables, which is slightly higher than monarchies (68%), but well below democracies (86%) and even military regimes (78%).

<sup>39</sup> Broz and Frieden 2001; Lopez-Cordova and Meissner 2003; Klein and Shambaugh 2006.

<sup>40</sup> Evidence confirms that flexible exchange rate regimes increase monetary policy autonomy in the post-Bretton Woods period. Obstfeld et al 2005.

<sup>41</sup> di Giovanni and Shambaugh 2008; Levy-Yeyati and Sturzenegger 2003.

The exchange rate regime pits internationally-oriented industries against domestically-oriented industries.<sup>42</sup> Exporters and international investors are the two groups that benefit most from fixed exchange rates. By contrast, domestically-oriented industries that do not export their products or engage in international borrowing gain little from a fixed exchange rate regime. The latter includes nontradable industries, such as retail, construction, and most services, as well as import-competing industries, such as inefficient producers of agricultural and manufacturing goods.

Supporters of flexible exchange rates typically outnumber advocates of fixed exchange rates by large margins.<sup>43</sup> Data on the composition of developing economies from the *World Development Indicators* database supports this claim.<sup>44</sup> During the post-Bretton period (1973-2006), the average developing country exported about 37% of its production, meaning that the remaining 63% of production was sold domestically. In fact, the service sector, the archetypal nontradable industry, is the largest industry of most developing economies, and accounts for about 50% of production and employment on average. Firm-level data from the World Bank Enterprise Survey, a survey of 70,000 firms conducted between 2002 and 2005, also indicates that, even in today's more globalized world economy, most businesses continue to focus on the domestic economy.

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<sup>42</sup> Frieden 1991.

<sup>43</sup> Bearce and Hallerberg 2011; Leblang 1999; Simmons 1994. Situations of hyperinflation may be one rare case in which fixed exchange rates are widely supported. Adopting a fixed exchange rate is a relatively popular tool for eliminating hyperinflation. However, fixed exchange rates are unlikely to remain popular once inflation returns to more normal levels, and exchange rates fixed for such purposes do not tend to last long. Schamis and Way 2003.

<sup>44</sup> World Bank 2010. Bearce and Hallerberg 2010, 178 report similar figures.

Only 25% of businesses in the developing world export any of their production, and a mere 4% of firms borrowed funds from foreign banks.<sup>45</sup> To be sure, there is a small but important group of firms that are heavily oriented towards the international economy and thus strongly benefit from a fixed exchange rate.<sup>46</sup> However, the economic wellbeing of most businesses and their employees still depends primarily on national economic conditions. In most developing countries, the majority of the population benefits more from domestic monetary autonomy than from currency stability.

Political regimes with large selectorates face strong incentives to maintain flexible exchange rate regimes. Since the majority of the population prefers a flexible exchange rate, regimes with large selectorates have strong incentives to adopt a flexible exchange rate. Many scholars believe that democracies tend to maintain flexible exchange rates because the median voter usually prefers this outcome.<sup>47</sup> These selectorate-based arguments should also expect civilian dictatorships to favor flexible exchange rate regimes because these regimes also have large selectorates. The recent shift towards a more flexible exchange rate regime in China illustrates this logic: domestically-oriented industries pressed the government to abandon the fixed exchange rate, and China would have been less likely to respond to these pressures if the societal actors that opposed fixing did not have access to policymakers through the bureaucracy, legislature, and other avenues.<sup>48</sup> Thus,

*Hypothesis 1: Civilian dictatorships are not more likely to maintain fixed exchange rates than democratic regimes.*

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<sup>45</sup> World Bank Enterprise Survey (2002-2005).

<sup>46</sup> For instance, 10% of firms export over half of their production. World Bank Enterprise Survey (2002-2005).

<sup>47</sup> Bearce and Hallerberg 2010; Leblang 1999.

<sup>48</sup> Steinberg and Shih 2012.

Political regimes with small selectorates should be more likely to fix their exchange rates than those with large selectorates. In order to survive in office, military rulers and monarchs only need to maintain the allegiance of a small number of individuals in the armed forces and royal family, respectively. The diffuse groups that oppose fixed exchange rates lack political influence in military and monarchic dictatorships. Military and monarchic rulers face especially strong pressure to fix the exchange rate when their small selectorates are comprised predominantly of internationally-oriented businesses. For instance, Saudi Arabia's longstanding fixed exchange rate contributed to rising inflation in the 2000s. However, in spite of "public pressure during 2007 and 2008 to revalue the riyal to mitigate the impact of inflation on consumers", the Saudi monarchy ignored consumers' demands and chose to keep the exchange rate fixed because it benefited the regime's main supporters, which include foreign investors and the state oil company.<sup>49</sup> In another example, Chile's military dictatorship was supported primarily by export-oriented industries and an internationally-oriented financial sector, which helps explain why they adopted a fixed exchange rate in 1979.<sup>50</sup> At least some small-selectorate regimes should face strong pressures to maintain a fixed exchange rate. By contrast, very few regimes with large selectorates have strong incentives to maintain a fixed exchange rate because these regimes enfranchise various groups that strongly oppose fixed rates. This difference leads to our second hypothesis.

*Hypothesis 2:* Military regimes and monarchic regimes are more likely to maintain fixed exchange rates than democratic regimes.

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<sup>49</sup> Al-Hamidy 2011, 302; Looney 2008.

<sup>50</sup> Schamis 1999.

Although we expect regimes with small selectorates to fix their exchange rates more often than regimes with large selectorates, we do not expect *all* small-selectorate regimes to fix their exchange rates. Our logic implies that the choice of exchange rate regime in monarchic and military dictatorships should depend upon the preferences of economic elites in the selectorate. Fixed exchange rates are highly likely when internationally-oriented businesses are members of the selectorate in monarchic and military regimes, but fixed exchange rates are unlikely when internationally-oriented businesses are excluded from these regimes' selectorates. Since more businesses become internationally-oriented as economies become more open to international trade and financial flows, our selectorate theory would expect that fixed exchange rates should be most likely when small-selectorate regimes are highly integrated with the international economy. To put it differently, selectorate size should have a larger effect on the exchange rate regime in open economies than in closed economies. The empirical analyses conducted below also evaluate this supplementary hypothesis.

**b. The Political-Economy of the Exchange Rate Level**

The second aspect of exchange rate policy, the exchange rate level, poses a different set of political challenges from the exchange rate regime. There is a consensus among economists that undervalued exchange rates are superior to overvalued exchange rates.<sup>51</sup> Nevertheless, exchange rate depreciation brings many painful effects in the short run. We argue that tenure security contributes to undervalued exchange rates, and hypothesize

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<sup>51</sup> Williamson 1990.

that undervalued exchange rates are more common in monarchies and civilian dictatorships than in military dictatorships and democracies.

Almost all segments of society oppose an initial depreciation of the real exchange rate. The most common way to depreciate the real exchange rate, a depreciation of the currency, is economically disruptive. One recent study estimates that currency devaluations typically reduce output by over five percent during a two-year period.<sup>52</sup> Another study found that output falls by eight percentage points more, on average, in devaluation-induced recessions than in other types of recessions.<sup>53</sup> Few are spared these damaging effects. Devaluation reduces workers' real wages because it raises the costs of tradable goods that workers consume.<sup>54</sup> Devaluation also reduces many businesses' profits in the short-run because it raises the cost of businesses' tradable inputs and increases their foreign debt burdens.<sup>55</sup> Even exporters struggle in the immediate aftermath of a devaluation because they have difficulty obtaining credit to finance their exports during these periods.<sup>56</sup> Furthermore, as Hirschman observed, in order to reap the benefits of an undervalued exchange rate "an industrialist must frequently make special investments...which will only be recoverable over a comparatively long period of successful exporting."<sup>57</sup> The alternative route to undervaluation, price deflation, is no more appealing and requires very restrictive monetary and fiscal policies that reduce growth and increase unemployment. Rulers rarely find the short-term effects of real depreciation attractive.

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<sup>52</sup> Hutchison and Noy 2005.

<sup>53</sup> Bordo et al 2001.

<sup>54</sup> Cooper 1971.

<sup>55</sup> Broz and Frieden 2001; Kessler 1998; Walter 2008; Woodruff 2005.

<sup>56</sup> Love and Zaidi 2010.

<sup>57</sup> Hirschman 1968, 28.

Undervalued exchange rates, however, are highly beneficial over the longer run. Undervaluation increases the price of tradable goods and encourages firms to produce export-oriented industrial goods. While tradable firms are the most direct beneficiaries of an undervalued exchange rate,<sup>58</sup> the long-run benefits of undervaluation extend far beyond the export-oriented business sector. A large body of evidence finds that undervalued exchange rates promote long-run economic growth.<sup>59</sup> One explanation for this finding is that undervaluation encourages the production and export of manufactured goods, which has positive externalities for the rest of the economy, such as technological spillovers that increase other sectors' productivity.<sup>60</sup> Even nontradable sectors such as banking often benefit from an undervalued exchange rate because higher growth in tradable sectors will increase the demand for loans.<sup>61</sup> An undervalued exchange rate also ultimately benefits the working class: undervaluation increases the cost of foreign inputs relative to wages, leading firms (over the long run) to shift their production methods towards more labor-intensive techniques, causing higher employment levels.<sup>62</sup> Undervaluation is also beneficial for the economy as a whole because it increases net exports, which reduces the risk of financial crises.<sup>63</sup> Undervalued exchange rates eventually generate broad-based economic growth and its concomitant political support.

Whether political decision-makers choose to overvalue or undervalue their exchange rates depends upon how heavily they weight short-term welfare relative to long-run wellbeing. Even though the overall benefits of undervaluation should exceed

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<sup>58</sup> Frieden 1991.

<sup>59</sup> Bereau et al 2012; Dollar 1991; Rodrik 2008; Razin and Collins 1999.

<sup>60</sup> Hausmann et al 2007; Rodrik 2008.

<sup>61</sup> Henning 1994.

<sup>62</sup> Frenkel and Ros 2006.

<sup>63</sup> Frankel and Saravelos 2012; Reinhart and Rogoff 2009.

the costs, politicians may prefer to avoid undervaluation because “institutional and political factors can lead the politician to discount future gains steeply.”<sup>64</sup> The short-term political costs of undervaluation are not only more immediate, but they are often large: previous studies estimate that exchange rate devaluations nearly double the likelihood that leaders lose power.<sup>65</sup> While few leaders are likely to ignore the immediate risks that depreciation poses to their rule, the short-term costs of undervaluation should be less salient in some political regimes than in others.

Undervalued exchange rates are unlikely in political regimes where leaders’ tenures are highly sensitive to current economic conditions. Leaders with sensitive tenures have a strong incentive to avoid depreciating the real exchange rate because it would compromise their ability to retain power. Hence, democratic and military regimes are likely to maintain overvalued exchange rates. Democratic leaders must frequently contest elections, and they therefore repeatedly face pressures to appreciate the real exchange rate. Consistent with this intuition, previous research shows that democratic leaders are less likely to devalue their currencies and more likely to appreciate their real exchange rates in the months preceding an election—the period in which their tenures are least secure.<sup>66</sup> Military rulers also have difficulty surviving in office during hard economic times. For example, economic crises associated with exchange rate devaluations have contributed to the downfall of many military regimes, including in Argentina, Indonesia, Sierra Leone, Turkey, and Uruguay.<sup>67</sup> Although they are not

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<sup>64</sup> Haggard and Kaufman 1995, 157.

<sup>65</sup> Cooper 1971; Frankel 2005.

<sup>66</sup> Frieden et al 2001; Leblang 2003; Schamis and Way 2003; Walter 2009.

<sup>67</sup> Pepinsky 2009. Many of these military regimes tried to avoid devaluation, but they were unable to do so indefinitely.



always successful in preventing devaluations, military leaders typically try to avoid doing so because they realize that devaluations make it harder for them to retain power. In fact, military leaders often intentionally overvalue their exchange rates to maximize their popularity and minimize threats to their rule. For instance, military leaders in Ghana and Nigeria, fearful that their rule would be threatened by urban protests, overvalued their exchange rates to improve the purchasing power of city-dwellers.<sup>68</sup> This leads to our third hypothesis.

*Hypothesis 3:* Military regimes are not more likely to maintain undervalued exchange rates than democratic regimes.

Political regimes that provide their leaders with highly secure tenures should be more likely to undervalue their exchange rates. Monarchs and civilian dictators have been rather successful at surviving economic crises. For instance, between 1973 and 2006, civilian dictators only lost power during 5 of the 62 years with large devaluations (8%) and monarchs did not lose power in any of the four devaluation episodes; by contrast, military dictators lost power during 17% of their 48 devaluation episodes and democratic leaders did so in 38% of their 79 devaluations.<sup>69</sup> The short-term risks of undervalued exchange rates are less severe for monarchs and civilian dictators than for democratic and military rulers. Compared to other regimes, civilian dictators and monarchs should place less weight on these short-term costs and they should weight the long-run benefits of undervaluation more heavily because they expect to remain in office when these benefits emerge. For instance, the secure rule of the Botswana Democratic

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<sup>68</sup> Bates 1981, 30-38.

<sup>69</sup> We use Laevan and Valencia's 2010 data on currency devaluations.

Party encouraged party leaders to keep their exchange rate undervalued.<sup>70</sup> Similarly, when Chinese policymakers debated devaluing their currency in 1994, some “expressed profound worries about...inherent big risks.”<sup>71</sup> While some of these risks, such as higher inflation, did materialize initially, the leaders of China’s Communist Party easily survived the 1994 devaluation and they have since been reaping the benefits of an undervalued exchange rate. Thus,

*Hypothesis 4: Civilian dictatorships and monarchic regimes are more likely to maintain undervalued exchange rates than democratic regimes.*

### **III. DATA & METHODS**

We constructed a time-series—cross-sectional dataset that includes data on exchange rate policy, political regimes, and other variables, to test our hypotheses. The completed dataset includes data on as many as 146 developing countries over the period of 1973-2006. We selected 1973 as the beginning of our sample period because this was the first year in which the advanced industrialized nations began floating their exchange rates. This post-Bretton Woods era is also characterized by high and rising international capital mobility, which is an important scope condition for our hypotheses.

Our two dependent variables are the exchange rate regime and the exchange rate level. We measure a FIXED EXCHANGE RATE regime using Reinhart and Rogoff’s data on *de facto* exchange rate regimes, as updated by Ilzetki, Reinhart and Rogoff.<sup>72</sup> Reinhart and Rogoff classify exchange rate regimes based on the actual behavior of exchange rates

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<sup>70</sup> Acemoglu et al 2003.

<sup>71</sup> Zhou 2003.

<sup>72</sup> Reinhart and Rogoff 2004; Ilzetki, Reinhart and Rogoff 2008.

and inflation rates. The exchange rate is considered *de facto* fixed, and coded as a 1, if the country has no separate legal tender, follows a pegged exchange rate, or a narrow (+/- 2%) pre-announced horizontal band. All other regimes are coded as a zero.<sup>73</sup>

Rodrik's method is used to measure the level of the real exchange rate.<sup>74</sup> Using data from Penn World Tables<sup>75</sup>, Rodrik constructs an index of the real exchange rate as follows:  $RER = \ln(XRAT/PPP)$ , where XRAT refers to the nominal exchange rate, and PPP is a purchasing power parity conversion factor, also known as a GDP deflator, which measures inflation by dividing nominal GDP by real GDP. It is necessary to adjust this measure to account for the fact that equilibrium real exchange rates are more appreciated in wealthier countries because richer countries have higher productivity, and thus higher average wage and price levels. To do so, Rodrik estimates the following model via ordinary least squares:  $RER_{it} = \alpha + \beta GDPPC_{it} + f_t + u_{it}$ , where GDPPC refers to real per capita GDP,  $f_t$  is a year fixed effect, and  $u_{it}$  is the error term. OVERVALUATION is defined as the difference between the actual real exchange rate and the predicted value, which proxies for the equilibrium real exchange rate. Negative values imply that the exchange rate is undervalued, while positive values signify overvaluation of the real exchange rate relative

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<sup>73</sup> The Reinhart-Rogoff classification was selected because it is most consistent with our conceptualization of fixed exchange rate regimes. By contrast, Levy-Yeyati and Sturzenegger's 2005 alternative coding is based in part upon the volatility of foreign reserves, which conflicts with our emphasis on exchange rate stability as the defining feature of fixed regimes. A supplementary appendix shows that the results are similar if observations that Reinhart and Rogoff 2004 code as "freely falling regimes" and "dual market with parallel data missing" are dropped; if we use Reinhart and Rogoff's ordinal measure, which includes four categories of exchange rate regimes; or if we use their measure of *de jure* exchange rate regimes. We focus on the binary *de facto* exchange rate regime data because our theory does not address either *de jure* policy commitments or the choice between various types of non-fixed regimes.

<sup>74</sup> Rodrik 2008.

<sup>75</sup> Heston et al 2009.

to its equilibrium rate. The resulting measure provides a useful comparison of real exchange rate levels across countries and over time.<sup>76</sup>

We use two different measures of political regimes, from Cheibub, Gandhi, and Vreeland (henceforth CGV) and from Hadenius and Teorell (henceforth HT), to help ensure the robustness of our results.<sup>77</sup> First, we examine whether autocracies as a whole adopt different exchange rate policies from democracies using two dichotomous measures of autocracy. HT code countries as autocracies if the average of their Freedom House and Polity scores, converted to a scale from 0 to 10, is below 7.5 and they code countries as democratic if they score above 7.5. Second, CGV define a country as a democracy if the chief executive is selected via direct elections or an elected legislature, the legislature is elected, more than one party competes, and an alternation in power consistent with the rule of law has taken place; countries are coded as autocratic if one or more of these conditions is absent.

Our main analyses include three different variables, each indicating the presence or absence of a particular authoritarian sub-type. CGV's binary measures of monarchic, military, and civilian dictatorships are labeled as MONARCHY (CGV), MILITARY (CGV), and CIVILIAN DICTATORSHIP (CGV), respectively. MONARCHY (HT), and MILITARY REGIME (HT) are each coded as one if HT code the country as a monarchy or military regime, respectively, while CIVILIAN DICTATORSHIP (HT) is scored as one if HT code the country as neither a democracy, monarchy, or military regime. Democracy is the baseline

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<sup>76</sup> This measure of over/undervaluation is useful for analyzing the causes or effects of overvaluation, but if one seeks to make descriptive inferences about the degree of misalignment in an individual country it is imperative to take into account the uncertainty surrounding these point estimates. Our main substantive conclusions do not change if we use the real exchange as the dependent variable and control for per capita GDP.

<sup>77</sup> Cheibub, Gandhi, and Vreeland 2010; Hadenius and Teorell 2007.

category in these models and thus the regression coefficients indicate the effect of each autocratic regime type vis-à-vis democracy.

Table 1 presents summary statistics for the two dependent variables across the four types of regimes based upon CGV's coding. The data illustrate that exchange rate policies vary substantially across different types of political regimes, and the direction of variation is largely consistent with our hypotheses. Fixed exchange rates are most common in monarchies, least likely in civilian dictatorships, and democracies and military regimes lie near the average. Monarchies and civilian dictatorships have more undervalued exchange rates than democracies while military regimes have the most overvalued exchange rates. While these summary statistics are suggestive, it is necessary to conduct more rigorous analyses that control for other causal variables.

Our statistical models therefore include various control variables that may influence exchange rate policy.<sup>78</sup> We control for production of the MANUFACTURING SECTOR as a share of GDP because several previous studies found that this variable influences exchange rate policy.<sup>79</sup> Frieden's interest group theory also expects that the service sector, the archetypal nontradable industry, should be associated with flexible and appreciated exchange rates.<sup>80</sup> We therefore control for the SERVICE SECTOR's share of GDP. We also control for whether the country is an OIL EXPORTER, which is defined, as in Fearon and Laitin, as fuel exports exceeding one third of total exports.<sup>81</sup> Although the literature on exchange rate politics has not developed clear hypotheses about this industry, it is important to include this variable because many autocracies, and

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<sup>78</sup> Unless noted otherwise, all control variables are obtained from World Bank 2010.

<sup>79</sup> Frieden et al 2010; Singer 2010.

<sup>80</sup> Frieden 1991.

<sup>81</sup> Fearon and Laitin 2003.

monarchies in particular, have an abundance of oil wealth. We control for the country's stockpile of FOREIGN RESERVES (in billions of dollars), which may affect policymakers' ability to sustain a fixed and overvalued exchange rate. Since capital controls may reduce the costs of fixed exchange rate regimes and make it easier to maintain misaligned exchange rates, we include Karcher and Steinberg's measure of CAPITAL ACCOUNT OPENNESS.<sup>82</sup> Our models include INTERNATIONAL TRADE (exports + imports) as a share of GDP, and the size of the economy (REAL GDP, in billions of US dollars) since the theory of optimal currency areas asserts that smaller and more trade-dependent economies should fix their exchange rates. Our analyses of the exchange rate regime also control for the level of economic development (log of REAL PER CAPITA GDP) but this is not included in the models for the exchange rate level as per capita income is already incorporated in the construction of this variable. All independent and control variables are lagged by one year to mitigate the possibility of simultaneity or reverse causality bias.

**[Insert Table 2 & Figure 4 here]**

#### **IV. EMPIRICAL RESULTS**

##### **a. The Effect of Autocratic Regimes on Exchange Rate Regimes**

The results presented in Table 2 support our argument that military and monarchic regimes are more likely to maintain fixed exchange rate regimes than democracies and civilian dictatorships. Since the exchange rate regime variable is binary, we estimate the models using a probit regression, and use standard errors clustered by country.<sup>83</sup>

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<sup>82</sup> Karcher and Steinberg 2013.

<sup>83</sup> Following Frieden et al 2010, we do not include a lagged dependent variable. According to Beck 2001, 298, it is not appropriate to include lags of the dependent

The first two models examine the common distinction between democratic and non-democratic regimes using HT and CGV's respective measures of autocracy. The HT variable returns a positive and statistically significant coefficient. The CGV measure also has a positive effect, though its coefficient falls slightly below standard levels of statistical significance ( $p = 0.12$ ). These results therefore largely confirm the well-established link between non-democracies and fixed exchange rates. Consistent with previous research<sup>84</sup>, these models also find that countries with large manufacturing sectors are less likely to maintain fixed exchange rates. More surprisingly, large service sectors are positively associated with fixed exchange rate regimes.<sup>85</sup>

The next models include separate variables for three types of autocratic regimes to test our argument that only some autocratic sub-types have a high propensity to fix their exchange rates. Model 3 uses the HT measures and model 4 uses the CGV measures. Figure 4 displays the marginal effects of these authoritarian regimes along with their associated 90 and 95% confidence intervals, when holding the remaining variables at their mean values (medians for nominal variables). The results are highly similar across the two models. Consistent with hypothesis 1, which states that civilian dictatorships are no more likely to have fixed exchange rates than democracies, the coefficients for civilian dictatorships are not only statistically insignificant, but they are also small in magnitude

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variable when the dependent variable is binary. The pooled probit estimator is more suitable for our purposes than either the fixed-effect or random-effects alternatives. Greene 2004 demonstrates that the random-effects probit performs far worse than pooled or fixed-effects probit. The fixed-effects estimator is highly problematic for our purposes because it excludes information from the many countries where either the exchange rate regime or political regime is time-invariant.

<sup>84</sup> Frieden et al 2001; Frieden et al 2010.

<sup>85</sup> One possible explanation of this result is that other sectors such as banking and agriculture are even more opposed to fixed exchange rates than the service sector.

in both models. As seen in Figure 4, a fixed exchange rate is only about four to ten percentage points more likely in a civilian dictatorship than in a democracy when holding the other variables in the model at their means. The marginal effect for military regimes is larger than for civilian dictatorships, and it is statistically significant in both models. Figure 4 shows that military regimes increase the probability of a fixed exchange rate by 16 to 25%. Finally, monarchic regimes have the largest effect on the exchange rate regime in all three models, increasing the probability of fixing by about 30% in these models. The effect of monarchies is estimated less precisely than other types of authoritarian regimes, likely because there are fewer monarchies, but their marginal effect is statistically significant at the 90% level in both models.<sup>86</sup>

In short, the data support our hypothesis that military and monarchic regimes are more likely to fix their exchange rates than democracies. However, the evidence suggests that one type of authoritarian regime—civilian dictatorships—does not differ substantially from democracies in this area. These results are consistent with the argument that regimes with small selectorates are more likely to fix their exchange rates than regimes with large selectorates.

#### **b. Political Regimes and Fixed Exchange Rates: An Extension**

This section expands upon the previous analyses by examining whether certain conditions strengthen or weaken the relationship between political regimes and fixed exchange rates. Our theory implied that the adoption of fixed exchange rates in military

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<sup>86</sup> Military and monarchic dictatorships are also more likely to maintain fixed exchange rates than civilian dictatorships (i.e. the first-differences between civilian dictatorships and the other two types of authoritarian regimes is statistically significant).



and monarchic regimes should depend upon the preferences of those regimes' small selectorates. We posited that trade and financial integration should intensify interest group demands for a fixed exchange rate, and thus encourage leaders of small-selectorate regimes to fix their exchange rates. This logic implies that selectorate size should have a larger impact on the exchange rate regime in economies that are highly exposed to international trade and financial flows than in closed economies.

**[Insert Figures 5 & 6 here]**

First, we investigated whether the effect of political regimes on fixed exchange rates depends upon trade openness. To do so, we added multiplicative interaction terms between trade openness and each type of authoritarian regime to the models presented in the previous section. Figure 5 presents our main findings based upon the HT data.<sup>87</sup> Specifically, Figure 5 displays the predicted probability of a fixed exchange rate at different levels of trade openness for each political regime type when the other variables in the model are held at their means. Trade openness increases the probability of fixed exchange rates in all political systems. However, the effect of trade openness is quite weak in civilian dictatorships, and it is strongest in monarchies. Moreover, there is little association between the size of a regime's selectorate and its exchange rate regime in closed economies. By contrast, the two small-selectorate regimes are much more likely to fix than the two large-selectorate regime types when economies are highly dependent upon international trade.

Next, we examined whether capital account openness alters the relationship between political regimes and fixed exchange rates by including interaction terms between each

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<sup>87</sup> The results of the interaction models are quite similar using the CGV data. The supplementary appendix provides the full results of these models and additional figures.

authoritarian regime type and capital account openness in the models. Figure 6 presents our main findings, again using the HT data. The differences between small- and large-selectorate regimes are even more striking in this case. Capital account liberalization increases the probability that military and monarchic regimes maintain a fixed exchange rate, likely because financial integration increases economic elites' support for fixed exchange rates. By contrast, capital account liberalization has a small, but negative, effect on the probability of fixing in democracies and civilian dictatorships; this presumably occurs because the general population becomes more opposed to fixed exchange rates as capital mobility increases. Political regime type has a limited impact on fixed exchange rates when countries maintain intense capital controls, but military and monarchic regimes are far more likely than democracies and civilian dictatorships to maintain a fixed exchange rate when the capital account is open. Both sets of interaction models indicate that monarchies and military regimes only promote fixed exchange rates when their economies are open.

**[Insert Table 3 here]**

### **c. The Effect of Autocratic Regimes on the Exchange Rate Level**

Table 3 presents our analyses of the effect of political regimes on the exchange rate level. The models are estimated using ordinary least squares, and include a lagged dependent variable to alleviate serial correlation, and panel-corrected standard errors to address problems of panel heteroskedasticity and contemporaneous correlation.<sup>88</sup> The results are

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<sup>88</sup> Beck and Katz 1995. A Lagrange multiplier test fails to reject the null of no serial correlation. Alternative dynamic specifications, such as correcting for AR1 with a Prais-Winsten estimator and an error correction model, produce similar results.

consistent with our two hypotheses about the effects of autocratic regimes on the exchange rate level.

As in the previous section, we begin by comparing democracies with autocracies as a whole. Autocracy has a negative and statistically significant effect on overvaluation in the first and second models of Table 3, which use the HT and CGV measures, respectively. The average autocracy's exchange rate is 2.3% more undervalued than the average democracy's exchange rate in model 1 and 1.4% more undervalued in model 2. These models also find that exchange rates tend to be more undervalued in countries with large manufacturing sectors, more intense capital controls, smaller economies, and those that are less dependent upon international trade.

The next models, which include separate variables for the different categories of autocracies, show that only some types of authoritarian regimes undervalue their exchange rates. In models 3 and 4, the coefficients for civilian dictatorship are negative and statistically significant. Their effect is estimated to be 2.9% and 1.8% in models 3 and 4, respectively, which is more than 25% larger than the estimated effect of autocracies as a whole from the first two models. Monarchies also return negative and statistically significant coefficients in both models, and their effects are slightly larger than the effect of civilian dictatorships. The coefficients for military regimes are much smaller—military regimes' exchange rates are estimated to be 0.2% to 0.5% more undervalued than democracies—and statistically insignificant.<sup>89</sup>

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<sup>89</sup> We also examined whether the coefficients for military regimes are significantly different from the coefficients for civilian and monarchic dictatorships. The differences were statistically significant in three cases, though the difference between MILITARY REGIME (CGV) and CIVILIAN DICTATORSHIP (CGV) falls just short of standard levels of statistical significance ( $p = 0.14$ ).

These results provide strong support for the hypothesis that monarchies and civilian dictatorships maintain more undervalued exchange rates than democracies, as well as for the hypothesis that military regimes do not maintain more undervalued exchange rates than democracies. The pattern in the data is consistent with our expectation that undervalued exchange rates are only common in political regimes that provide incumbents with highly secure tenures.

## **V. Robustness**

Additional analyses were conducted to ensure the robustness of the main findings.<sup>90</sup> Our first set of robustness tests involved altering which control variables are included in the models. We estimated the model without controlling for foreign reserves, and also did the same for capital account openness due to concerns that these variables may be endogenous to exchange rate policy. Next, rather than control simply for trade's share of GDP, we entered separate variables for exports/GDP and imports/GDP. We also tried adding the following variables to our models: consumer price inflation; the presence of hyperinflation (inflation above 100%); and a dummy variable that indicates a high turnover rate of central bank governors as a proxy for low central bank independence.<sup>91</sup> The percentage of all developing countries with fixed exchange rates was also added to our exchange rate regime models since it may affect the feasibility of maintaining a fixed

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<sup>90</sup> These results are available in a supplementary appendix.

<sup>91</sup> Cukierman et al 1992 argue that this is a useful indicator of central bank independence for developing countries. Following Cukierman et al 1992, we use a turnover rate of 0.25 per year as the cut-off, on the grounds that a turnover rate this rapid is highly suggestive of a lack of central bank independence. Although this "behavioral" measure of independence is far from perfect, we prefer it to Cukierman's "legal" measures because it has much better country coverage.

exchange rate. Finally, we added year dummies to our exchange rate regime models. None of these alternative model specifications altered the sign or statistical significance of the effect of political regimes on the exchange rate level. The effect of political regimes on the exchange rate regime was also extremely robust for the HT dataset. For the exchange rate regime models, the sign of the CGV variables never changed but these variables did not always retain statistical significance. Overall, the main findings are robust to changing which control variables are included in the model.

Next, we investigated the effect of authoritarian regime type on exchange rate policy, using Geddes, Wright and Frantz's (GWF) dataset of authoritarian regimes.<sup>92</sup> The distinctive feature of the GWF data is the inclusion of a fourth type of authoritarian regime—personalist dictatorships, which are defined as regimes where a single individual runs the state without being constrained by any domestic audiences.<sup>93</sup> Although some scholars question whether personalist regimes truly represent a separate type of authoritarian regime,<sup>94</sup> it is still useful to examine whether the results are similar using this alternative schema. The GWF typology produced very similar results to the other datasets. Using this dataset, military and monarchic dictatorships have positive and statistically significant effects on the probability of fixed exchange rates. The personalism and single-party regime variables are statistically insignificant determinants of the exchange rate regime. As before, the coefficients for monarchic and civilian dictatorship are negative and statistically significant predictors of overvaluation while military regimes are statistically insignificant in this model. However, personalist

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<sup>92</sup> Geddes, Wright and Frantz 2012.

<sup>93</sup> Geddes 1999, 121; Weeks 2008, 46.

<sup>94</sup> Hadenius and Teorell 2007, 145; Lai and Slater 2006, 115; Magaloni 2008, 730.

regimes have a negative and statistically significant effect on overvaluation. Although we have not theorized about why personalist regimes might undervalue their exchange rates, personalist rulers' relatively secure tenures may explain this finding.<sup>95</sup>

The findings also remained similar after expanding our sample in various ways. First, we expanded our sample by using multiple imputation techniques to fill in missing observations.<sup>96</sup> The results were largely similar, though somewhat weaker, when the models were re-estimated using complete datasets of 6303 observations from 191 developing countries. Estimating the same models using the imputed datasets, monarchies were the only regime that had a positive and statistically significant effect on fixed exchange rates and civilian dictatorships were the only regime type that was significantly associated with undervalued exchange rates. We also expanded our sample in a second way: by adding the advanced industrialized economies to our dataset. The inclusion of these additional countries did not change the sign or statistical significance of our regime variables. These additional analyses demonstrate that our findings are quite robust.

## **VI. CONCLUSIONS**

Why do many authoritarian regimes adopt interventionist or mercantilist foreign economic policies? Why do some authoritarian regimes instead maintain market-oriented economic policies? This article argued that different types of authoritarian regimes face distinct political incentives, causing them to adopt divergent foreign economic policies.

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<sup>95</sup> Geddes 1999.

<sup>96</sup> Multiple imputation was conducted with Amelia II. Honaker et al 2011. The supplementary appendix provides a detailed explanation of our imputation model.

We investigated this argument by examining how authoritarian regime type affects two important foreign economic policies: the exchange rate regime and the exchange rate level. The empirical analyses confirmed that authoritarian regime type is an important driver of foreign economic policy.

Our findings shed new light on the political-economy mechanisms that drive exchange rate policy. The data indicate that military and monarchic dictatorships are more likely to fix their exchange rates than democracies, but that civilian dictatorships are no more likely than democracies to fix their exchange rates. The fact that fixed exchange rates are uncommon in one type of opaque political regime—civilian dictatorships—casts some doubt on the hypothesis that political transparency contributes to flexible exchange rates.<sup>97</sup> The pattern in the data is more consistent with the argument that large selectorates, and the resulting political imperative to satisfy diverse groups of actors, encourages policymakers to adopt flexible exchange rates.<sup>98</sup> The analyses of exchange rate valuation also revealed that not all dictatorships are alike. Monarchies and civilian dictatorships maintain more undervalued exchange rates than democracies. However, military regimes do not maintain more undervalued exchange rates than democracies. This pattern across political regimes, as well as previous research on exchange rate policy in democratic regimes, which shows that exchange rates tend to appreciate prior to elections<sup>99</sup>, strongly suggest that tenure security influences the exchange rate level.

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<sup>97</sup> Broz 2002. Footnote 38 provides some evidence indicating that civilian dictatorships lack transparency.

<sup>98</sup> Bearce and Hallerberg 2001; Leblang 1999.

<sup>99</sup> Frieden et al 2001.

Authoritarian regime type is also likely to influence a number of other important economic outcomes. One such outcome is economic development. Authoritarian regime type may help explain why some authoritarian countries have experienced rapid economic growth while others have stagnated. For instance, part of the economic success of countries like Botswana and China, which experienced rapid export-led growth due to undervalued exchange rates, may ultimately be attributed to their single-party structures. Similarly, since undervalued exchange rates substantially reduce the likelihood that a country experiences a banking crisis, the prevalence of undervalued exchange rates in civilian and monarchic dictatorships may help explain why banking crises are less common in autocracies compared to democracies.<sup>100</sup> It is also likely that certain types of authoritarian political structures have contributed to the emergence and persistence of global macroeconomic imbalances. Today's major surplus countries include single-party regimes such as China and monarchies like Saudi Arabia that have strong institutional imperatives to continue undervaluing their exchange rates. The major deficit countries are democracies with equally strong incentives to keep their exchange rates overvalued. Global imbalances partly reflect institutionally-driven incentives of the world's largest economies.

At the broadest level, this article serves as an important reminder that differences in economic policy within the authoritarian world are often as stark as those between autocrats and democrats. There is no intrinsic association between authoritarian regimes and protectionist or interventionist policies. In other words, it does not appear to be a lack of free and fair elections that causes autocrats to adopt illiberal foreign economic

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<sup>100</sup> Reinhart and Rogoff 2009, 280; Lipsy 2011.



policies. Instead, autocracies' foreign economic policies seem to be driven by some common—yet variable—attributes of these regimes, such as small selectorates and highly secure tenures. This is consistent with Hankla and Kuthy's recent study, which found that the size of the selectorate and tenure security explain variation in trade policy across authoritarian regimes.<sup>101</sup> The stark differences within the authoritarian world demand more attention from political-economists in the future. Disaggregating authoritarian regimes into their various sub-types should give scholars a better understanding about the specific political conditions that are most conducive to an open global economy and which institutional attributes bear most responsibility for international economic tensions.

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<sup>101</sup> Hankla and Kuthy Forthcoming.

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*Figure 1: Political Regimes in the Developing World, 1973-2006*

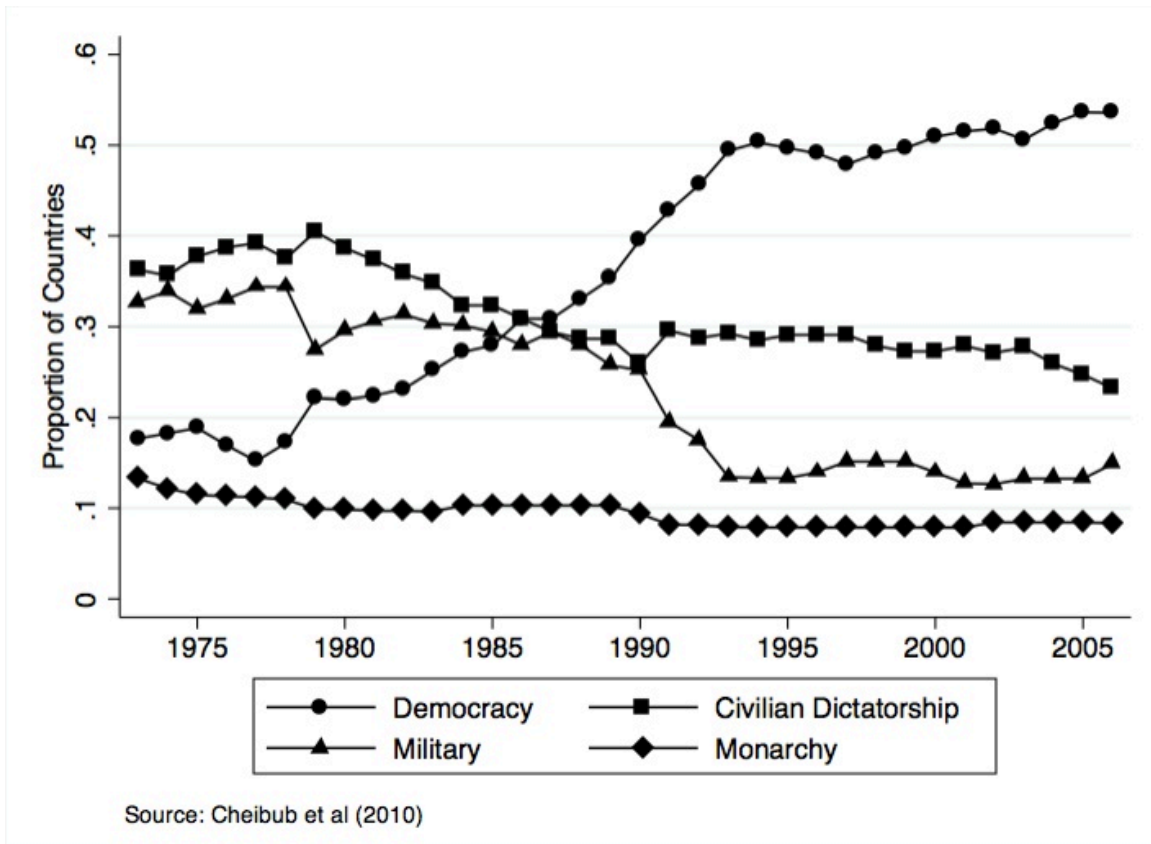


Figure 2: Characteristics of Political Regimes

		<u>Selectorate Size</u>	
		<i>Small</i>	<i>Large</i>
<u>Incumbent Tenure Security</u>	<i>Low</i>	Military	Democracy
	<i>High</i>	Monarchy	Civilian Dictatorship

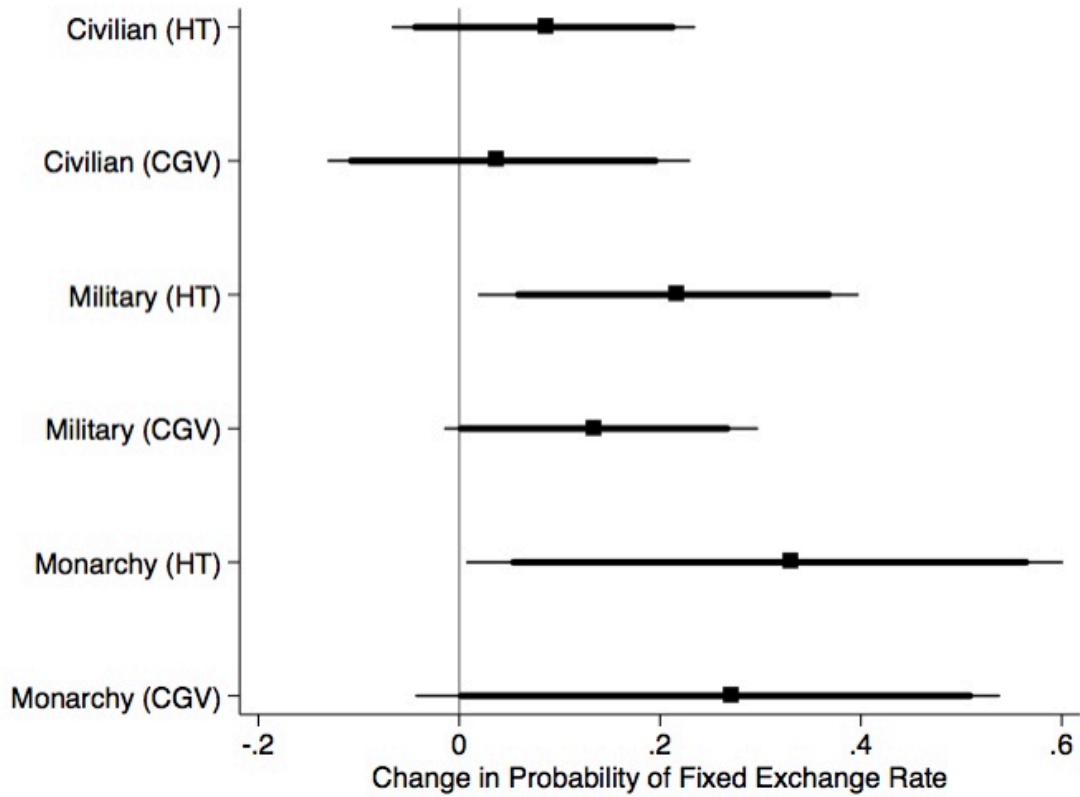


***Figure 3: The Effect of Political Regimes on Exchange Rate Policy***

		<b><u>Exchange Rate Regime</u></b>	
		<i>Fixed</i>	<i>Flexible</i>
<b><u>Exchange Rate Level</u></b>	<i>High/Overvalued</i>	Military	Democracy
	<i>Low/Undervalued</i>	Monarchy	Civilian Dictatorship

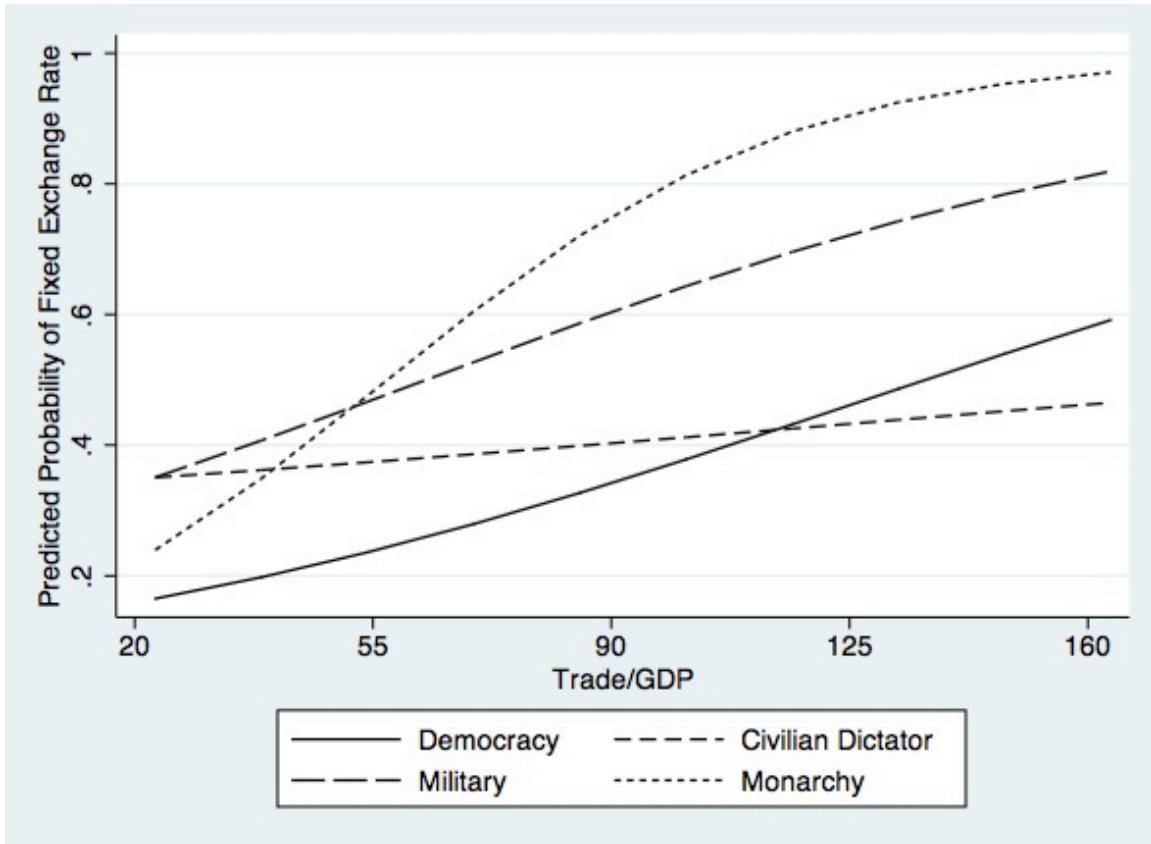
Note: This typology of exchange rate policy is from Frieden (1991). The hypothesized effect of political regimes is based on the text.

***Figure 4: The Estimated Effect of Authoritarian Regimes on Fixed Exchange Rates***

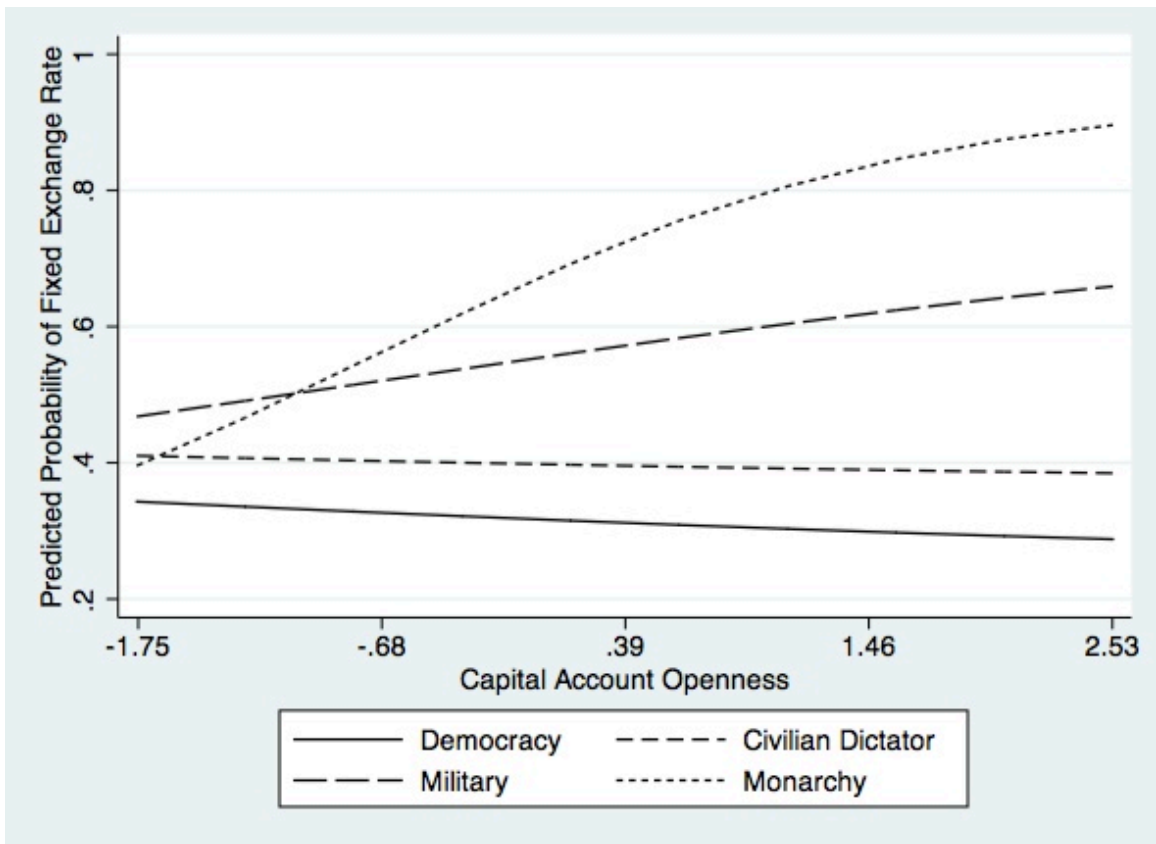


Note: The squares in the figure indicate the change in the probability of a fixed exchange rate in comparison to democratic regimes, which are the baseline category, when all other variables in the model are held at their means (medians for nominal variables). The thick lines provide the 90% confidence interval for these first-differences and the thin lines represent the 95% confidence intervals.

*Figure 5: The Estimated Effect of International Trade on Fixed Exchange Rates*



***Figure 6: The Estimated Effect of Capital Market Openness on Fixed Exchange Rates***



***Table 1: Summary Statistics for Four Political Regimes***

	<b>Selectorate/ Legislature</b>	<b>P(Turnover Growth)</b>	<b>P(Turnover Contraction)</b>	<b>Difference in Turnover</b>	<b>Fixed Exchange Rate</b>	<b>Overvaluation</b>
<b>All Countries</b>	1.70 [1.68, 1.72]	0.15 [0.14, 0.16]	0.18 [0.16, 0.20]	0.03 [0.01, 0.05]	0.41 [0.40, 0.43]	0.00 [-0.01, 0.01]
<b>Democracy</b>	1.99 [1.99, 2.00]	0.25 [0.22, 0.27]	0.33 [0.29, 0.37]	0.08 [0.03, 0.12]	0.38 [0.35, 0.40]	0.01 [-0.01, 0.03]
<b>Monarchy</b>	1.26 [1.18, 1.33]	0.03 [0.02, 0.06]	0.03 [0.01, 0.07]	0.001 [-0.03, 0.03]	0.58 [0.52, 0.64]	-0.06 [-0.09, -0.03]
<b>Military</b>	1.27 [1.22, 1.33]	0.09 [0.07, 0.12]	0.14 [0.10, 0.18]	0.05 [0.01, 0.09]	0.40 [0.37, 0.44]	0.06 [0.03, 0.09]
<b>Civilian Dictatorship</b>	1.78 [1.75, 1.80]	0.09 [0.07, 0.11]	0.12 [0.09, 0.15]	0.03 [-0.003, 0.06]	0.33 [0.30, 0.36]	-0.04 [-0.06, -0.01]

Note: Cell entries are the mean and 95% confidence interval of the mean values for each political regime type. The coding of political regimes is from Cheibub et al (2010). Selectorate/Legislature is coded as 0 if a country has no legislature; 1 if a non-elected legislature exists; and 2 if an elected legislature exists (Source: Cheibub et al 2010). P(Turnover|Growth) is defined as the proportion of observations with a positive economic growth rate (change in GDP per capita > 0) in which the head of state changes. P(Turnover|Contraction) is defined as the proportion of observations with zero or negative economic growth rates (change in GDP per capita ≤ 0) in which the head of state changes. (Sources: Cheibub et al 2010; Heston et al 2009). Difference in Turnover is calculated by subtracting column 2 from column 3. Fixed Exchange Rate is coded as 1 if a country has a fixed exchange rate and is coded as 0 otherwise (Source: Ilzetzi et al 2008). Overvaluation indicates the degree of real exchange rate over/undervaluation, and is constructed by the authors following the approach of Rodrik (2008).

***Table 2: The Determinants of Fixed Exchange Rates***

	(1)	(2)	(3)	(4)
Autocracy (HT)	0.402** [0.192]			
Autocracy (CGV)		0.279 [0.182]		
Civilian Dictatorship (HT)			0.238 [0.209]	
Military Regime (HT)			0.568** [0.247]	
Monarchy (HT)			0.878** [0.447]	
Civilian Dictatorship (CGV)				0.080 [0.248]
Military Regime (CGV)				0.351* [0.207]
Monarchy (CGV)				0.727* [0.429]
Real Per Capita GDP	-0.042 [0.116]	-0.059 [0.116]	-0.073 [0.118]	-0.085 [0.115]
Real GDP	0.0006 [0.001]	0.0005 [0.001]	0.0007 [0.001]	0.0007 [0.001]
Manufacturing Sector	-0.059*** [0.018]	-0.056*** [0.018]	-0.058*** [0.017]	-0.056*** [0.017]
Service Sector	0.0191** [0.00931]	0.018* [0.009]	0.022** [0.009]	0.020** [0.009]
International Trade	0.007** [0.003]	0.006** [0.003]	0.007** [0.003]	0.007** [0.003]
Foreign Reserves	0.001 [0.003]	0.002 [0.003]	0.001 [0.003]	0.001 [0.003]
Oil Exporter	-0.262 [0.249]	-0.230 [0.252]	-0.274 [0.265]	-0.245 [0.247]
Capital Account Openness	0.033 [0.059]	0.037 [0.059]	0.029 [0.059]	0.036 [0.059]
n	135	137	135	137
T	33	33	33	33
N	2678	2716	2678	2716
Pseudo R <sup>2</sup>	0.13	0.12	0.14	0.13

**NOTE:** Clustered standard errors are in parentheses. \*p< .1 \*\*p< .05 \*\*\*p< .01.

***Table 3: The Determinants of Overvalued Exchange Rates***

	(1)	(2)	(4)	(5)
Autocracy (HT)	-0.023*** [0.006]			
Autocracy (CGV)		-0.014** [0.006]		
Civilian Dictatorship (HT)			-0.029*** [0.006]	
Military Regime (HT)			-0.002 [0.012]	
Monarchy (HT)			-0.030*** [0.010]	
Civilian Dictatorship (CGV)				-0.018*** [0.006]
Military Regime (CGV)				-0.005 [0.010]
Monarchy (CGV)				-0.024** [0.010]
Lagged Dependent Variable	0.920*** [0.016]	0.924*** [0.016]	0.917*** [0.016]	0.923*** [0.016]
Real GDP	0.0001* [0.00004]	0.0001** [0.00004]	0.0001** [0.00003]	0.0001** [0.00003]
Manufacturing Sector	-0.001*** [0.0004]	-0.001*** [0.0004]	-0.001*** [0.0004]	-0.001*** [0.0004]
Service Sector	-0.0003 [0.0002]	-0.0003 [0.0002]	-0.0003 [0.0002]	-0.0003 [0.0002]
International Trade	0.0002*** [0.0001]	0.0003*** [0.0001]	0.0003*** [0.0001]	0.0003*** [0.0001]
Foreign Reserves	-0.0002 [0.0001]	-0.0002 [0.0001]	-0.0002 [0.0001]	-0.0002* [0.0001]
Oil Exporter	0.005 [0.010]	0.004 [0.010]	0.006 [0.010]	0.005 [0.010]
Capital Account Openness	0.005* [0.003]	0.004* [0.003]	0.005** [0.002]	0.005* [0.002]
n	144	146	144	146
T	33	33	33	33
N	3094	3137	3094	3137
R <sup>2</sup>	0.87	0.87	0.87	0.87

**NOTE:** Panel-corrected standard errors are in parentheses. \*p< .1 \*\*p< .05 \*\*\*p< .01.