Policy Choices in Tough Times:
The case of democratization and currency defense

Byunghwan Son
Assistant Professor of Global Affairs
George Mason University

4400 University Dr. 6B4
Fairfax VA22030
bson3(at)gmu(dot)edu
Phone: 703-993-9185 | Fax: 703-993-1244

2015 (working paper version)

Word Count: 7622 (excluding the online appendix)

FORTHCOMING AT *INTERNATIONAL POLITICAL SCIENCE REVIEW*

Abstract

Do policymakers under financial and political distresses make otherwise undesirable policy choices? This paper attempts to answer this question by studying the relationship between democratization and currency devaluation under speculative pressures. The central argument is that leaders of young democracies lack policy credibility and instead engage in clientelistic politics. The empirical expectation based on this argument is that young democracies, when compared to autocracies and established democracies, exhibit high chances of succumbing to speculative attacks as the political cost of economic adjustment needed for defense is relatively high to these nascent regimes. The paper further contends that this relationship holds stronger when the regime can mobilize less resources to defend their currencies. To test these arguments, I use monthly data for 117 countries from 1977 to 2006. The results from statistical models provide corroborative evidence for this argument.

Previous versions of this paper were presented at MPSA 2012 and ISA 2012. I thank Menna Bizuneh, Jonathan Krieckhaus, Stormy-Annika Mildner, David Steinberg, and Thomas Pepinsky for extremely helpful comments.

When Isabel Peron abruptly succeeded to the presidency of re-democratized Argentina in 1974 following the death of her husband, Juan Peron, she faced a sharp antagonism from both within and outside the Peronist party, most of whom believed that "Mrs. Perón has a long way from proving her capacity to lead, or even to survive" (Time 1974). Desperate to cling to the support from the Peronists, she resorted to traditional populist economic policies, which culminated in almost drying up the foreign exchange reserves to pay for the 'oil bills' in 1975. Thus, it does not come as a surprise that, later in the same year, the government gave up defending peso and instead quickly devalued it by 160% when the currency came under strong speculative pressures (Rock 1985).

This anecdote is illustrative of the unfortunate economic trajectories of many young democracies: nascent democracies are susceptible to the unshackled public demand for monetary/fiscal expansion, arriving at otherwise undesirable policy decisions. This intuition is in line with earlier theoretical literature, which emphasizes that the explosive demands for redistribution following democratization impairs effective governance (De Schweinitz 1964; Huntinotn 1968). Nor is it rare to find empirical studies focusing on the catastrophic consequences of this unshackled demand (O'Donnell 1973; Haggard and Kaufman 1995; Bender and Drazen 2005; Keefer 2007; Gasiorowski and Poptani 2006).

The politics of exchange rates, however, is not explored in this line of literature. To date, there have been only few qualitative, small-n studies attempting to unravel the relationship between regime transition and exchange rate policy dynamics. This is troubling given the continuing, if not accelerating, trend of democratization and financial globalization. While the enhanced capital mobility has enabled financial markets to encroach the traditional domain of domestic governance with greater chances of financial crises (Bernhard and Leblang 2006), the

extant political economy literature does not provide policymakers of transitioning societies with sufficient guidance to navigate this increasingly hazardous financial environment.

This paper is the first systematic attempt to fill this lacuna. I argue that in the wake of speculative attacks, leaders in newly democratized countries occasionally grow reluctant to defend their currencies, resulting in relatively easy, quick devaluation. Although devaluation as a capitulation to speculative attacks is usually considered a political suicide, currency defense also comes with significant political costs when it involves painful economic adjustments. Leaders in young democracies, when this cost becomes politically unbearable with regard to social demands for financial expansion, would rather choose not to defend the status quo exchange rate. To test this argument, I use monthly time-series cross-section data for 117 countries from 1977 to 2006.

This paper is comprised of five sections. In the following section, I discuss what are the costs involved in currency defense and why young democracies are less likely to defend their currencies than are other types of regimes. The third section introduces the strategies of the empirical test of this proposition along with the description of the data and variables. The fourth section presents the result of the statistical analysis and discusses its implications. The final section discusses the contribution of this paper to the broader literature on exchange rates and other macroeconomic policies.

Political Economy of Currency Defense and Young Democracies

Existing Studies

As Krugman's (1979) pioneering work implies, a currency crisis occurs when currency traders change their portfolios *en masse* during a relatively short period of time in a way that a government suddenly finds itself at the verge of reluctant devaluation of its currency. Naturally, therefore, mainstream studies on exchange rates have focused on the determinants of speculative

behaviors of currency traders. One implicit assumption common in this line of studies is that speculative attacks are conceptually identical to currency crises. Indeed, the three 'generations' of theories on currency crises have all been developed to unravel what triggered speculative attacks (Obstfeld 1986; Krugman 1999; Morris and Shin 1998).

However, speculative attacks are not ontologically same as devaluations. Some attacks 'succeed' by resulting in governments' capitulation, which is devaluation. Others, however, 'fail' since governments have successfully fended off the speculative pressure (Kraay 2003; Eichengreen, Rose, and Wyplosz 1995). Therefore, the observable end result of currency crisis—devaluation—is actually a function of both currency traders' decision to attack and governments' decision to defend. Yet, with the exception of few earlier studies (e.g. Denoon 1986), the political economy literature has largely overlooked the latter in analyzing currency crises.

A few recent studies have attempted to overcome this problem. Leblang (2003), Walter (2008), and Han (2008), for example, recognize the strategic interaction between governments and currency traders and find that such factors as elections, veto players, and party ideologies significantly shape the probability of individual governments' defense of their currencies. Although this is certainly an improvement, these studies have one common limitation: they explicitly exclude non-democratic cases from their sample to study the effect of democratic institutions on currency crises. Consequently, the literature currently lacks a study linking political regimes to currency defense.

This lacuna is puzzling. The vast literature on economic performance of political regime type—the 'regime debate'—clearly documents that democracies and autocracies yield divergent outcomes (Boix 2012; Przeworski, Cheibub, Limongi, and Alvarez 2000; Krieckhaus 2006) and forced currency devaluation is indeed one dramatic indicator of national economic performance

often capturing headlines in developing economies. Filling this gap, the following section presents a theoretical framework through which young democracies stand out as a different political regime than others on the choice of currency devaluation and defense.

Political Economy of Defense and Devaluation

As Leblang (2003) explicitly models, the probability of currency devaluation/defense is a function of the government's *willingness* and *ability* to do so. Under the assumption that the ability for currency defense is exogenous to both willingness and regime type,[1] the paper focuses on the varying degree of perceived costs of currency defense, which dictates the 'willingness'. To gauge such perceived costs, this section first discusses 'objective' economic consequences of devaluation and currency defense and moves on to analyzing how this economic cost is viewed by the leaders of different regimes.

Economic Cost of Defense and Devaluation

Starting from the economic cost, the price tags attached to both currency defense and devaluation are formidable to governments. The immediate effects of currency devaluation include increased difficulty in foreign debt services and skyrocketing foreign borrowing costs (Eichengreen and Rose 2003), reducing the domestic purchasing power of imported goods drastically (Krugman and Taylor 1979). Unexpected devaluations also undermine the credibility of the government's commitment to sound economic policy performance (Weymouth 2011) crippling its economic potential in the long-run.

Currency defense also bears two well-known macroeconomic consequences: fiscal deficits and output contraction (Eichengreen and Rose 2003). Each of these is generated by the use of the two common defense tactics. First, fiscal deficit is driven by excessive use of foreign

[1] This assumption is relaxed below.

exchange reserves. National governments, or central banks, would use their current foreign exchange reserves to buy the local currency to keep their value against the speculative pressure for depreciation. Because they are essentially mobilized from revenues, the exhaustion of reserves implies impending fiscal deficits and subsequent problems such as external debts. Alternatively, when governments try to shore up budget balance and building up reserves at the same in times of crisis (Rodrik 2006b), shrinking government spending is inevitable. Second, output contraction is induced by interest rate hikes. Short-term interest rates are often raised to attract investors to hold local currency-denominated assets and send the market positive signal regarding the government's commitment to defense, thereby increasing the opportunity cost of attacks (Kraay 2003). Interest rate hikes would, however, render domestic borrowings difficult, eventually discouraging investment, retarding output growth, and causing credit crunch (Lahiri and Vegh 2007), all of which would amount to high unemployment rates. (Eichengreen and Jeane 2000).

On balance, there does not seem to exist any *a priori* answer for which economic cost is higher than the other. In principle, the cost of defense can outweigh that of devaluation and vice versa depending on the economic conditions of individual countries. For governments with heavy foreign debts, for example, the net cost of devaluation would be higher than that of defense. The opposite could be said about those in severe recessions.

This presumption, of course, is not realistic. Policymakers are not "benevolent social planners" and their behaviors are strongly shaped by the prospect of their political survival (Broz and Frieden 2001; Bueno de Mesquita et al. 2003). In making choices between devaluation and defense, therefore, how much each type of economic costs damages the chances of the current political leaders' staying in power, namely, political cost, is of critical importance.

Different Political Cost of Devaluation among Regimes

The contemporary political economy literature establishes that political leaders' survival hinges upon their support groups', or "selectorate's", approval of their political legitimacy (Bueno de Mesquita et al. 2003) and thus, economic policies are reflective of their preferences. Monetary policies are no exceptions. Frieden, Ghezzi, and Stein (2001), for example, find that the chances of devaluation are strongly correlated with its effect on the societal groups that buttress the regime's survival.

In this sense, political regimes' varying predisposition to defense/devaluation can be understood by analyzing who their support groups are and what those groups prefer regarding monetary policies. I assume that all societies are comprised of a few rich elites and massive poor public, and the degree to which the survival of the leaders of each political regime depends on these two groups differs significantly.[2]

Autocracy

In autocracies, the leader's survival hinges upon the 'elites'. Here, the distributional consequences of defense and devaluation tilt the balance in favor of defense. The major negative effect of defense such as increasing unemployment rates and government spending cuts concentrates mostly on the poor ordinary citizens. The output contraction and high borrowing cost induced by interest rate hikes might impair some of the business interests as well, but autocrats can easily transfer this cost to the poor, which indirectly enrich the financially rich elites (Halac and Schmukler 2004).

[2] This is not an oversimplification. Although 'elites' can include a wide array of social groups ranging from *nomenklatura* to business associations to military juntas, it is widely accepted that their interests are generally intertwined and revolve around that of property owners (Acemoglu and Robinson 2006; O'donnell 1973; Haggard and Kaufman 1995).

The economic cost of devaluation, on the other hand, is all-encompassing. Reduced purchasing power would impact not only domestic consumers, but also importers, who are likely to be elites. Likewise, holders of local currency-denominated assets, many of whom are the rich, would be also damaged by devaluation (Frieden, Ghezzi, and Stein 2001). When the business interests are hampered, as Latin American experience of democratization during the 1970s and 1980s demonstrates, devaluations lead to "elite division," culminating in coups or democratizations (Haggard and Kaufman 1995). Since defense appears to be costless whereas devaluation costly to dictators, the probability of currency defense in autocracies is expected to be high.

Established Democracy

Democratic leaders also prefer defense to devaluation, but for different reasons. Contrary to autocracies, policy choices in democracies reflect the interest of the general public. Since the effect of either policy choice might appear menacing to the public, the distributional effect of devaluation/defense might not directly determine the policy outcome in democracies. Instead, in democracies, two different factors are at work to drive up the cost of devaluation and discount that of defense: the symbolism of devaluation and policy credibility of democratic leaders.

Unlike "orderly realignments" (Rodrik 2006b) in tranquil times, reluctant devaluation forced by speculative pressures is deemed by the public as a "humiliating" capitulation to foreign forces (Blaazer 1999) and, thus, an "indication of fundamental policy failure and serious economic disequilibrium" (Remmer 1991, 784). This symbolism is predicated on the salience of devaluation. The significant changes in exchange rates are highly visible to the public in a pegged exchange rate regime (Herrendorf 1999) and, specifically, forced devaluations usually capture news headlines particularly where freedom of speech and press is guaranteed. Moreover,

the major effects of devaluation such as reduction in purchasing power and difficulty in foreign debt services are almost instantaneous, quickly reinforcing the public's despair. This salience of devaluation as a seeming policy failure might take incumbent candidates a great toll in elections (Frankel 2005) and indeed democratic leaders often adjust the timing of necessary devaluations to electoral calendars (Walter 2008; Leblang 2003).

Currency defense is, on the other hand, relatively invisible to the public. The willingness for defense is essentially private information of policymakers (Morris and Shin 1998). The effect is not so spontaneous either. Unemployment rates might rise, for instance, but not at the same pace as purchasing power plummets after devaluation. Thus, the public might not very easily monitor if their government is engaging in currency defense. This difference in visibility of policies makes defense preferable to devaluation in the eyes of democratic leaders.

One can argue, however, that it is plausible only in the short-run that the imminent salience of devaluation distracts voters from the inconspicuous cost of defense. In the process of currency defense, the cost such as unemployment and credit crunch will eventually materialize, haunting the government that devalued.[3] Democratic leaders might very well recognize this possibility and find the political cost of defense not negligible.

Institutions in well-functioning democracies, however, entail "commitment technology" that mitigates such backfires (Rodrik 2000, 10), which helps the leaders discount the cost of defense. As the vast literature on economic reform commonly posits, economic adjustments are politically difficult as the cost is unevenly distributed among social groups (e.g., Alesina and Drazen 1991). This is more so for currency defense, whose burden falls disproportionately on the

[3] In this case, it is highly likely that the public do not realize that the rising unemployment rates and domestic borrowing difficulties are the cost they are paying for defense. However, this does not affect leaders' policy choice because what matters for politicians is whether voters electorally punish them, not the reason for the punishment.

poor public. A necessary condition for successful adoption and implementation of defense, therefore, is the credibility of policy makers' promise that defense is a public good and the 'losers' sacrifice will be compensated in the future (Przeworski 1991; Schamis 1999).

Democratic leaders enjoy relatively high degrees of such credibility as it is born out of "repeated interactions between voters and candidates" (Kapstein and Converse 2008, 11). In the end, the public is convinced that politicians' campaign promises are credible to a certain extent since they have witnessed broken promises leading to electoral punishments. In fact, years of electoral politics make voters in advanced democracies blame their leaders for the *lack* of necessary adjustments (Alesina, Perotti, and Tavares 1998). In short, democracies exhibit institutional properties that render defense feasible and devaluation infeasible. Hence, currency defense is strongly expected in democracies under speculative pressures.

Young Democracy

However, not all democracies are the same and, particularly, the commitment technologies are not readily available in young democracies precisely because of the little time that has elapsed from their transition. The limited experience of democracy implies that political leaders in young democracies have had little time to interact with their constituents through elections, which is essential for building the policy credibility. Accordingly, these leaders' promise of future compensation for defense-induced adjustments might not be as convincing to the public as their counterparts' in more established democracies are.

Not only does the lack of credibility of leaders in young democracies imply the difficulty of imposing adjustments on the general public who otherwise could have been supportive of currency defense. It also entails certain societal groups' acute protests against currency defense owing largely to the pervasive clientelism in young democracies. Either inherited from the

ancien régime (Hellman 1998) or (re)born with the transition (Schamis 1999; van de Walle 2009), young democracies are rife with 'distributional coalitions' that would not wither right away (Cameron 1988). Since the effort to garner support through policy promises targeting the general public is in vain, the leaders of young democracies often find it the only politically feasible choice to cater to these groups' particularistic interests to stay in power (Keefer 2007). The macroeconomic consequences of currency defense such as unemployment, tight revenue, and high domestic borrowing cost indicate increasing difficulty in securing pork barrels that would otherwise have been allocated toward these groups. Thus, distributional coalitions might find currency defense to be squarely at odds with their own interests and the leaders who are reliant on them would see the political cost of defense non-negligible.

In short, the lack of leaders' credibility renders the promises of compensation for adjustments relatively unappealing to the public in young democracies. It also breeds rampant clientelism that channels certain societal groups' anxiety about currency defense into politicians' reluctance to do so. This is not to suggest, however, that currency defense is more likely than devaluation in young democracies. The difficulty of adjustment and clientelistic politics notwithstanding, as long as there are regular elections, the prohibitively high symbolic cost of devaluation is present in young democracies as well as in established ones.[4] Thus, it is hard to predict *ex ante* whether it is defense or devaluation that is more likely in young democracies. However, this uncertainty is clearly contrasted with the certain preferability of defense in other regimes. On balance, therefore, it is expected that *the likelihood of currency defense is relatively*

[4] One could argue that the 'honey moon' of social actors and the new regime makes adjustment easier in young democracies. However, it is questionable how common and durable such honeymoon periods are among democratization episodes (Bernhard, Reenock, and Nordstrom 2003). More importantly, new leaders enjoying political momentum might rather be tempted to engage in blame-shifting and quickly devalue (Klein and Marion 1997).

higher in young democracies than in autocracies or established democracies under speculative attacks [Hypothesis 1].

The foregoing discussion assumes that the actual ability of all governments to defend their currency is constant to highlight how 'willingness' to defend varies across regimes. But in reality, governments' ability for currency defense varies. This is particularly important for young democracies as many of them emerge from economic disasters, thereby lacking the capability of defending their currencies. The leaders of these troubled regimes find defense even more costly because weaker economic conditions indicate even more painful adjustments and greater compromise on distributional coalitions' interests. Conversely, those with affluent financial resources might find defense almost costless since the magnitude of the expected adjustment and loss of pork barrel might be negligible. Therefore, one can expect that Hypothesis 1 is conditional on the amount of resources for defense young democracies enjoy. In other words, *young democracies are more likely than other regimes to devalue their currencies when they possess lower level of financial resources to defend their currencies* [Hypothesis 2]. On the contrary, when those resources are abundant, young democracies are not expected to be different from other regimes in the probability of defense.

Research Design

Variables and Samples

Dependent variable[5]

Given the multi-stage structure of exchange rate dynamics leading to currency devaluation—i.e. fixed exchange rate regimes, currency speculation, and currency devaluation, generating the

[5] The list of countries that experienced a speculative attack is provided in Table A1 of the online appendix.

dependent variable also has to go through three steps. First, since flexible exchange rate regimes are conceptually free from speculative attack, the sample should be comprised of observations with fixed exchange rate regimes. For this sample, monthly exchange rate observations between 1977 and 2006 from International Financial Statistics (IFS) and OECD statistics are utilized. Though recent studies emphasize the need for finer gradation between purely fixed and purely flexible (floating) regimes (Reinhart and Rogoff 2011; Levy-Yeyati and Sturzenegger 2005), a binary measure is necessary to generate a definite sample for the later stages. Following Leblang (2003, 2002), only those country-months whose 12-month moving average of nominal exchange rate changes over US dollar remains within the 2.5 percent band are included in the sample. The reason why this measure is chosen over other alternatives is to obtain as large number of observations as possible.[6] EMU III-euro countries are dropped from the sample as their monetary/exchange rate policies are coordinated with one another.

The second step involves identifying the observations with and without currency speculation. The measure of speculative attack is calculated from 'exchange market pressure' (EMP) which is measured as:

$$EMP_{it} = \Delta s_{it}/\sigma_{\Delta si} — \Delta r_{it}/\sigma_{ri}$$

where Δs_{ij} and Δr_{it} are the monthly change of nominal exchange rate and foreign reserves excluding gold for country i at month t, respectively. σ is within panel standard deviation of s (and r). Note that the original form of this measure also includes the interest rate differential between the country and US (Eichengreen, Rose, Wyplosz 1997). I follow Leblang (2003, 2002) and Block (2003) on dropping it from this measure since the data for interest rate are very

[6] Using Reinhart and Rogoff's (2011) measure actually strengthened the result.

limited and reducing about 60 percent of observations when included.[7] Speculative attack, then, is defined as:

$$\text{Speculative Attack}_{it} = 1 \text{ if } EMP_{it} > 2\sigma_{EMPi} + \mu_{EMP}$$

$$= 0 \text{ otherwise}$$

where σ_{EMPi} and μ_{EMPi} are the within-panel standard deviation and mean of EMP, respectively. This measure is designed to capture extraordinarily high values of EMP. Following Eichengreen, Rose, and Wyplozs (1997), a "three-month exclusion window" for the attacks happening four months in a row or more is applied to ward against double-counting one attack episode.

Based on these steps, the dependent variable constructed is a binary measure of 'defense' that is coded as 1 when the country still maintains currency peg at the current or the following month of speculative attack. Since the exclusion window is applied, I also recoded non-defense cases as defense when the country comes back to peg within three months from the attack to avoid coding error. This also enables us to take into account the possibility that a country repeatedly failed to defend its currency for two months and finally succeeded in the third month from the attack.[8]

Independent Variable

The central explanatory variable in this study is 'young democracy'. Conceptually, it identifies countries that have only recently democratized. I follow Remmer (1990) and Gasiorowski and Poptani (2006) by measuring "young democracy" as a dummy variable set equal to 1 for all country-years within a certain time span after democratization.

[7] I estimated the model using the conventional measure anyway, and found little difference.
[8] Using and not using this recoding scheme do not make any significant difference in the result of statistical analysis. Similarly, allowing cases where currency peg is resumed after a longer period of failing (up to 7 months) to be coded as defense such that the result can be comparable to others' such as Walter (2008) does not alter the end result systematically.

Specifically, I follow Rodrik and Wacziarg (2005) and Kapstein and Converse (2008) by defining "young democracy" as a democratic regime that has experienced democratic transition during the past five years. This choice is based on the reasoning that as democracies age, their institutions also become functional (Gerring, Thacker, and Moreno 2005) such that the commitment technologies are increasingly available. As such, the lack of credibility and prevalence of clientelism might be most pronounced only in the first few years following democratization.[9] The five year cut-off point is apparently arbitrary and, yet, using alternatives makes no significant differences.[10]

To identify the year of democratization—i.e. the first year of democracy, Cheibub, Ghandi, and Vreeland's (2009) dataset is used.[11] One problem of this coding decision is the discrepancy between monthly (dependent variable) and yearly (independent variable) observation. A measurement error, for instance, is possible when 'real' democratization occurred in, say, March but all twelve observations in the entire year are coded as those of young democracy. To test if this possibility influences the result, I recoded the entire first year (i.e. 12 months) of young democracy as missing (result shown in Table A8, online appendix). This coding rule change does decrease the significance of *Young Democracy* possibly because doing so loses some important information. Even then, however, it still hovers above the conventional 95% level (p=0.012), indicating that the concern about measurement error is unwarranted.

Conditioning Variables

[9] This is well reflected in Appendix Figure A1 of the online appendix, based on the model where an "age of democracy" variable replaces *Young Democracy*.
[10] The result is reported in Table A2 of the online appendix.
[11] As a sensitivity analysis for this choice, POLITY IV (Marshall, Jaggers, and Gurr 2010) was also used. The difference is negligible.

Two variables are used to capture the conditioning effect of governments' capacity to defend their currencies on the probability of currency defense postulated in Hypothesis 2. First, the foreign exchange **reserve holdings divided by money supply** is used following the traditional models of currency crises (Frankel and Rose 1996; Eicheengreen, Rose, and Wyplosz 1997). Larger reserve holdings indicate stronger capacity to fight speculative attacks. Since the changes in reserve are endogenous to attack, the reserve variable is lagged three months. As it is certainly possible that reserves exert direct influence on the probability of defense independently of regime types (Krugman 1979), this variable is included as a control variable in the non-interaction model. Another conditioning variable is **short-term real interest rate**. Lower interest rates imply stronger capacity for currency defense in the near future given that there exists bigger room for interest hikes that the government can exploit to defend the currency. This variable, however, is not used as a control variable in the non-interaction model as including it reduces the number of observations too drastically from 673 to 474.[12]

Control Variables

Various factors that can alternatively account for currency devaluation are included as control variables. First, since governments 'learn' about exchange rate policies over time (Simmons and Hainmueller 2004), the experience of interaction with market should strongly influence the government's decision to devalue. For this matter, **number of previous speculative attacks**, **number of previous currency defense**, and **the duration of non-attack period** are employed as control variables. In addition, since official proclamation of exchange rate policy would also affect the country's exchange rate movement (Guisinger and Singer 2010), a dummy variable

[12] When included, the p-value of Young Democracy stays below the conventional 95% level (p=0.039). The result is reported in Table A7 of the online appendix.

that is coded as 1 when a **de jure fixed rate regime** is observed for the given country-month, and 0 otherwise is included. For overall national macroeconomic performance, economic growth rate (GDP growth rate) and the level of development (logged GDP per capita) are also used as control variables. Additionally, drawing upon Walter (2008), the **severity of speculative attack** is used. This variable is measured by the difference between the within-panel standard deviation and mean values of EMP.

'**Veto player**' is also controlled for following Han (2008) and Keefer and Stasavage's (2002) findings that how much policymakers decisions are constrained affects their monetary policy choices. I use Henisz's (2000) 'political constraints' measure, which combines institutional constraints (legislatures, federal units and judiciaries) and partisan control of legislatures on a scale from zero (no constraints) to one (full constraints).[13]

Unless otherwise specified, all the economic explanatory variables are lagged one period (one month for monthly observed variables, and one year for yearly observed variables) to avoid endogeneity.[14] The descriptive statistics of these variables is reported in Table 1.

[Table 1 about here]

Models

Since the dependent variable is binary, the benchmark empirical model uses probit regressions. This choice is not entirely indisputable but careful consideration of alternative estimation strategies confirm that the use of simple binary probit model does not lead to any biased result.

[13] Both Han (2008) and Keefer and Stasavage (2002) use Dataset of Political Institution's measure of veto players. I chose Heinsz's '*polcon*' index over DPI simply because the former covers more countries. This choice does not affect the result of statistical analysis.

[14] For interest rates and foreign exchange reserves, simply temporarily lagging the variables might not be enough to avoid endoegeneity, given that these tools are often used pre-emptively, well in advance of speculative attacks (Lahiri and Vegh 2007.). Alternative measure used to make sure that the model does not suffer from endogeneity was country-mean values of these two variables and the difference between local and the US interest rates. The result using these new measure were, however, not different from using the original ones (result reported in Table A5 of the online appendix).

Specifically, one can argue that the apparent selection effect might be at work because speculative attacks happen only when the value of the currency in question is fixed and currency defense in turn occurs when there is a speculative attack. Thus, for example, it is possible that 'transparent' democracies generally adopt flexible exchange rate regimes (Broz 2002) such that many established democracies who otherwise could not afford defense have already been selected out from the sample. If this is the case, the result of binary probit models would be misleading. I have used alternative, mutil-stage models (e.g., Heckman 1979) accordingly, and yet, did not find any selection mechanism affecting the probability of young democracies' currency defense (result reported in Table A3, online appendix).

Similarly, one can also argue that neither simple binary probit nor Heckman censored probit models can account for the strategic nature of the interaction between the government and the market in determining the probability of speculative attacks and currency defenses. As Leblang (2003) demonstrates, the probability of speculative attack is endogenous to the 'expected' probability of currency defense, but the sequential structure of Heckman probit models cannot take this into consideration. I accordingly used Bas, Signorino, and Walker's (2007) Strategic Backward Induction as an alternative to the Heckman models. The result, again, comes extremely close to that of the benchmark binary probit model (result reported in Table A4, online appendix).

Empirical Analysis

[Table 2 about here]

The effect of young democracy

The result of the benchmark probit models is reported in Table 2. In the first column, the coefficient of *young democracy* is negatively significant supporting the Hypothesis 1 that young democracies are less likely to defend their currencies than are other regimes when speculative attack takes place. The substantive effect of this variable is illustrated in Figure 1.

[Figure 1 about here]

As expected, the probability of currency defense depicted in Figure 1 is generally high, highlighting the fact that devaluation is usually an unpopular choice. The graph, however, also clearly demonstrates that the probability of currency defense is significantly lower in young democracies (80.62%) than in other types of regime. Specifically, young democracies are about 10% less likely to maintain currency peg under speculative pressures than are autocracies. More importantly, they are about 17% less likely to defend their currencies than are their established counterparts. The fact that the probability of defense is lower in autocracies than established democracies is interesting. This could be attributed to the possibility that, unlike the theoretical framework put forward above, some organized social groups in some autocracies (such as populist parties) do oppose defense and affect monetary policies, although much less so than those in young democracies do.

While these probability differentials might seem small, interaction models show much more marked differences. The significant interaction terms in the second and third columns of Table 2 confirm that there are strong conditioning effects of foreign reserves and interest rates on the relationship between young democracy and currency defense. Again, this conditioning effect is graphically illustrated in Figure 2.

[Figure 2 about here]

Panel A of Figure 2 depicts the statistically significant difference between the expected probability of defense of young democracies and that of other regimes. Specifically, when the logged reserve/M1 falls lower than -6, which is roughly 1 standard deviation away from its mean value, young democracies are very unlikely to defend (or more likely to devalue) their currencies, the probability being almost 10 percent. Other regimes in a similar situation, however, are still likely to defend with about 60 percent of probability. In other words, when the resources necessary for currency defense dry up, young democracies are about 50% less likely than other regimes to defend their currencies. On the other hand, as expected, when there is enough foreign reserves to help them defend their currencies (the right-hand side of Panel A), young democracies do not appear to differ from other regime types in the chances of currency defense, supporting Hypothesis 2.

A similar pattern is observed in Panel B of Figure 2. When there is enough room for interest rates to move up (the left-hand side of Panel B), the probabilities of defense in young democracies and those in other regimes are indistinguishable. However, when the real interest rate is 6% or higher(the right-hand side of Panel B) such that there does not exist an enough room for interest rate hikes, young democracies are up to 25 percent less likely than others to defend their currencies, lending additional support to Hypothesis 2.

Sensitivity Analysis

[Table 3 about here]

Although potential concerns about possible measurement errors, inefficient estimation, and under-specification have been addressed throughout this paper, there are still needs for checking the robustness of the finding from the benchmark models in Table 2. For example, the result of probit models employed here could be biased since devaluation is rare, comprising only 5.6 per

cent of the entire sample. This necessitates the use of an alternative estimation method, namely Rare Event Logistic regression models (King and Zeng 2001). As the first row of Table 3 indicates, however, this alternative does not bring about any meaningful difference in terms of the effect of *Young Democracy* on the probability of currency defense.

It is also possible that what *Young Democracy* captures is not exactly the cost of currency defense unique to nascent democracies, but the fragility of new-born regimes in general. If this is true, *Young Autocracy*, an autocracy variable measured in a similar way as *Young Democracy*, should have a negatively significant effect on currency defense as well. However, as shown in Table 3, the coefficient of *Young Autocracy* is far from significant.

Although the pseudo-R^2 of the benchmark models is reasonably high, it is still possible that they are missing important independent variables. To ward off this concern, political variables such as dummies for Right-wing governments (Leblang 2003) and the years of election (Walter 2008) as well as economic fundamentals variables such as the percentage of external debts in GDP, inflation rate (GDP deflator), the volume of export as a percentage of GDP and region dummies (Frankel and Rose 1997) are included in the benchmark model.[15] In these possible specifications, the significance of Young Democracy is consistently above the conventional 95% level, as shown in Table 3, suggesting that the benchmark models do not suffer from an omitted variable bias.

Conclusion

As Gourevitch (1986, 221) points out, "[economic] crises express what is happening within … countries." In this paper, I show that currency crises is a critical juncture at which the lack of

[15] The data for the political and economic variables are derived from Beck et al. (2001) and World Bank (2011), respectively.

credibility and the prevalence of clientelism in young democracies occasionally leads to a rather surprising policy choice, currency devaluation. Further, I demonstrate that this is particularly true when the resources that these leaders can muster to fend off speculative attacks are scarce.

This finding provides a few important implications to the literature of international political economy as well as policymakers. First, the paper is the first attempt to directly subjecting the effect of young democracies on currency market dynamics to a rigorous empirical analysis. Despite its increasing importance in globalization, very little ink has been spilt over the linkage between democratization and financial market. This paper fills this lacuna by finding that young democracies respond to currency crises differently than other regimes do.

The paper also broadens the scope of the recent literature focusing on the effect of domestic political constraints on policymakers' decision of currency defense (Leblang 2003; Han 2008; Walter 2008). While the existing studies exclusively consider at least minimally democratic countries, this paper includes the global sample of countries encouraging the study on the linkage between political regime and currency crisis.

The paper also contributes to the currently growing political economy literature on democratization. Specifically, the findings presented in this paper are in line with those studies focusing on the effect of troublesome political environment of young democracies on their economic performance (Gasiorowski and Poptani 2006; Keefer 2007; Kapstein and Converse 2008; Bender and Drazen 2005). While much of this literature focuses on domestic allocation of economic resources, this paper extends its scope to international monetary policies.

Finally, the paper raises an interesting question about the fate of democratization. Since the relatively frequent decision of devaluation in young democracies is partly a product of clientelistic politics, the general public is likely to be resentful of the regime's economic

performance in the end. As the lack of democratic accountability in economic policies occasionally bring about autocratic reversal (Bernhard, Reenock and Nordstrom 2003; Houle 2009), the paper implies that the fragility of young democracies can be attributed to their affinity with clientelisim.

This by no means implies that regimes have to avoid democratization. Instead, the result of interaction models actually provides leaders of transitioning societies a valuable policy lesson: the ability to defend currencies can mitigate the negative impact of democratic transition on the probability of reluctant devaluation. The statistical result of this paper indicates that the leaders of young democracies who overreact to the anticipation of crisis by splurging foreign currency holdings and/or hoisting interest rates are likely to succumbing to speculative attacks.

References

Acemoglu, Daron, and James Robinson.2008. "Persistence of Power, Elites, and Institutions," *American Economic Review* 98: 267-293.

Acemoglu, Daron, and James Robinson. 2006. *Economic Origins of dictatorship and democracy. Cambridge.* MA: Cambridge University Press.

Alesina, Alberto, Roberto Perotti, and Jose Tavares. 1998. "The Political Economy of Fiscal Adjustment" *Brookings Papers on Economic Activity* 1: 197-266.

Alesina, Alberto and Allan Drazen. 1991. "Why Are Stabilizations Delayed?" *American Economic Review* 81: 1170-1188.

Bas, Muhammet Al, Curtis S. Signorino, and Robert W. Walker. 2007. "Statistical Backward Induction: A Simple Method for Estimating Recursive Strategic Models" *Political Analysis* 16(1): 21-40.

Beck, Thorsten, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh, 2001. "New tools in comparative political economy: The Database of Political Institutions" *World Bank Economic Review* 15(1): 165-176.

Bernhard, Michael, Christopher Reenock, and Timothy Nordstrom. 2003. "Economic Performance And Survival In New Democracies : Is There a Honeymoon Effect?" *Comparative Political Studies* 36: 404-431.

Blaazar, David.1999. "Devalued and Dejected Britons: the pound in public discourse in the Mid 1960s" *History Workshop Journal* 47: 121-140.

Block, Steven A. 2003. "Political Conditions and Currency Crises in Emerging Markets" *Emerging Markets Review* 4: 287-309.

Boix, Carles. 2012. "Democracy, Development, and International System" *American Political Science Review* 105: 809-828.

Broz J. Lawrence. 2002. "Political System Transparency and Monetary Commitment Regimes" *International Organization* 56 (4): 861-87.

Broz, J. Lawrence and Jeffry A. Frieden. 2001. "The Political Economy of International Monetary Relations" *Annual Review of Political Science* 4: 317-343.

Cameron, David R. 1988. "Distributional coalitions and other sources of economic stagnation: on Olson's *Rise and Decline of Nations*" *International Organization* 42: 561-603.

Cheibub, Jose Antonio, Jennifer Gandhi, and James Raymond Vreeland. 2009. "Democracy and Dictatorship Revisited," *Public Choice* 140(1): 1-35.

De Schweinitz, Karl, Jr. 1964. *Industrialization and Democracy: Economic Necessities and Political Possibilities.* Glenco: The Free Press.

Eichengreen, Barry and Andrew Rose. 2003. "Does it pay to defend speculative attacks?" in Michael P. Dooley and Jeffrey Frankel eds., *Managing Currency Crises in Emerging Markets*. Chicago: University of Chicago Press.

Eichengreen, Barry, Andrew Rose and Charles Wyplosz. 1997. "Contagious Currency Crises" NBER Working Paper 5681.

Eichengreen, Barry and Andrew Rose. 1995. "Exchange Market Mayhem: The Antecedents and Aftermath of Speculative Attacks" *Economic Policy* 10: 249-312.

Frankel. Jeffery. 2005. "Contractionary Currency Crashes in Developing Countries" NBER working paper 11508.

Frankel, Jeffry A. and Andrew Rose. 1996. "Currency Crises in emerging markets: an empirical treatment" *Journal of International Economics* 41(2): 351-366.

Frieden, Jeffery A. 1991. *Debt, Development, & Democracy: Modern Political Economy and Latin America 1965-1985*. Princeton: Princeton University Press.

Frieden, Jeffry, Piero Ghezzi, and Ernesto Stein. 2001. "Politics and Exchange Rates: A Cross-Country Approach to Latin America." In *The Currency Game: Exchange Rate Politics in Latin America,* edited by Jeffry Frieden and Ernesto Stein. Baltimore: Johns Hopkins University Press.

Gasiorowski, Mark J., and Zaheer Poptani. 2006. "The Macroeconomic Consequences of Democratic Transition: Learning Processes in the Third and Fourth Waves of Democratization," *Studies in Comparative International Development* 41(2): 33-61.

Gerring, John, Strom C. Thacker, and Carola Moreno. 2005. "Centripetal Democratic Governance: A theory and global inquiry" *American Political Science Review* 99: 567-581.

Gourevitch, Peter A. 1986. *Politics in Hard Times: Comparative Responses to International Economic Crises*. Ithaca: Cornell University Press.

Guisinger Alexandra and David Andrew Singer. 2010. "Exchange Rate Proclamation and Inflation-Fighting Credibility" *International Organization* 64: 313-37.

Haggard, Stephen and Robert Kaufman. 1995. *The Political Economy of Democratic Transitions*. Princeton: Princeton University Press.

Halac, Marina and Sergio L. Schmukler. 2004. "Distributional Effects of Crises the Financial Channel" *Economia* 5: 1-67.

Han, Kyung Joon. 2008. "Policy decisiveness and responses to speculative attacks in developed countries" *European Journal of Political Research* 48: 723-55.

Heckman, James J. 1979. "Sample Selection Bias as a Specification Error." *Econometrica* 47(1): 153-161.

Heiwison, Kevin. 2005. "Neoliberalism and Domestic Capital: The political outcomes of the economic crisis in Thailand" *Journal of Development Studies.* 41: 310-330.

Hellman, Joel S. 1998. "Winners Take All: The Politics of Partial Reform in Postcommunist Transitions" *World Politics* 50: 203-234.

Henisz, Witold. J. 2000. "The Institutional Environment for Economic Growth." *Economics and Politics* 12(1): 1-31.

Henisz, Witold. J. 2006. Polcon_2005 Codebook.

Herrendorf, Berthold. 1999. "Transparency, reputation, and credibility under floating and pegged exchange rates" *Journal of International Economics* 49: 31-50.

Houle, Christian. 2009. "Inequality and Democracy: Why Inequality Harms Democratic Consolidation But Does not Affect Consolidation" *World Politics* 61: 589-622.

Hungtington, Samuel. 1968. *Political Orders in Changing Societies*. New York: Yale University Press.

Kapstein, Ethan B. and Nathan Converse. 2008. *The Fate of Young Democracies.* New York: Cambridge University Press.

Kaufman, Robert and Barbara Stallings. 1989. "Debt and Democracy in the 1980s: The Latin American Experiences" in Barbara Stallings and Robert Kauffman eds., *Debt and Democracy in Latin America*. Boulder: West View: 201-223.

Keefer, Philip. 2007. "Clientelism, Credibility, and the Policy Choices of Young Democracies," *American Journal of Political Science*. 51(4): 804-821.

Keefer, Philip and David Stasavage. 2002. "Checks and Balances, Private Information, and the Credibility of Monetary Commitments" *International Organization* 26(4): 751-44.

King, Gary and Langche Zeng. 2001. "Logistic Regression in Rare Events Data" *Political Analysis* 9: 137-163.

Klein, Michael W. and Nancy P. Marion. 1997. "Explaining the Duration of Exchange Rate-Pegs" *Journal of Development Economics* 54: 387-404.

Krieckhaus, Jonathan. 2006. "Democracy and Economic Growth: How Regional Context Influences Regime Effects" *British Journal of Political Science* 36: 317-340.

Krugman, Paul. 1999. "Balance Sheets, the Transfer Problem, and Financial Crisis" *International Tax and Public Finance* 6: 459-472.

Krugman, Paul. 1979. "A Model of Balance-of-Payment Crises," *Journal of Money, Credit, and Banking* 11(3): 311-325.

Krugman, Paul and Lance Taylor. 1978. "Contractionary Effects of Devaluation" *Journal of International Economics* 8(3): 445-456.

Leblang, David. 2003. "To Devalue or Defend? The Political Economy of Exchange Rate Policy," *International Studies Quarterly* 47(4): 533-559.

Leblang, David. 2002. "The Political Economy of Speculative Attacks in Developing World" *International Studies Quarterly* 46: 69-91.

Levy-Yeyati, Eduardo and Ferderico Sturzenegger. 2005. "Classifying Exchange Rate Regimes" *European Economic Review* 49:1603-35.

Linz, Juan and Alfred Stepan. 1996. *Problems of democratic transition and consolidation*. Baltimore: Johns Hopkins University Press.

Marshall, Monty G., Keith Jaggers, and Tedd Robert Gurr. 2010. POLITY IV Project: dataset user's guide.

Morris, Stephen and Hyun Song Shin. 1998. "Unique Equilibrium in a Model of Self-fulfilling Currency Attacks" *American Economic Review* 88(3): 587-597.

Obstfeld, Maurice. 1986. "Rational and Self-fulfilling Balance-of-Payment crisis," *American Economic Review* 76(1): 72-81.

O'donnell, Guillermo. 1973. *Modernization and Bureaucratic-authoritarianism: Studies in South American Politics*. Berkeley: Institute of International Studies.

Przeworski, Adam.1991. *Democracy and the market.* New York: Cambridge.

Reinhart, Carmen M. and Kenneth S. Rogoff. 2011. "The Modern History of Exchange Rate Arrangements: A Reinterpretation" *Quarterly Journal of Economics* 119 (1): 1-48.

Remmer, Karen L. 1991. "Economic Crisis and Elections in Latin America, 1982-1990" *American Political Science Review* 85: 777-800.

Remmer, Karen L. 1990. "Democracy and Economic Crisis: The Latin American Experience," *World Politics*. 42(1): 315-335.

Rock, David. 1985. *Argentina 1516-1982: From Spanish Colonization to Falkland War*. Berkley: University of California Press.

Rodrik, Dani. 2006a. "Understanding Economic Policy Reform" *Journal of Economic Literature* 34(1): 9-41.

Rodrik, Dani. 2006b. "The Social Cost of Foreign Exchange Rate Reserves" *International Economic Journal* 20(3): 253-266.

Rodrik, Dani, and Romain Wacziarg. 2005. "Do Democratic Transitions Produce Bad Economic Outcomes?" *American Economic Review* 95(2): 50-55.

Schamis, Hector E. 1999. "Distributional Coalitions and the Politics of Economic Reform in Latin America" *World Politics* 51: 236-268.

Simmons, Beth and Jens Hainmueller. 2005. "Can Domestic Institutions Explain Exchange Rate Regime Choice? The political Economy of Monetary Institutions Reconsidered" unpublished manuscript.

Time Magazine. 1974. "Argentina: Isabel Begins" (July 22, 1974).

van de Walle. 2009. "The Democratization of Political Clientelism in Sub-Saharan Africa" the 3rd European Conference on African Studies, Leipzig, Germany.

Walter, Stefanie. 2008. "The limits and rewards of political opportunism; How electoral timing affects the outcome of currency crises" *European Journal of Political Science* 48: 367-96.

Walter, Stefanie and Thomas Willett. 2012. "Delaying the Inevitable? A Political Economy Model of Currency Defenses and Capitulation" *Review of International Political Economy* 12(1): 114-139.

World Bank. World Development Indicator. 2011.

Weymouth. Stephen. 2011. "Political Institutions and Property Rights: Foreign Exchange Commitments in 127 countries" *Comparative Political Studies* 44(2); 211-40.

Table 1. Descriptive Statistics

variable	mean	SD	min	max
currency defense	0.817236	0.38676	0	1
young democracy	0.056464	0.230986	0	1
log(reserve)/M1	-2.74291	4.918506	-17	24.8952
no attack duration	37.93165	50.80924	0	354
# of past attack	4.491828	3.095264	0	16
De jure fixed regime	0.426449	0.494929	0	1
GDP growth rate	1.036188	7.314147	-65.0247	26.9802
log(GDP)	8.607013	1.132148	5.88343	11.1971
Severity of Attack	1.315726	0.208455	0.62135	1.88158
# of past defense	3.793462	2.909419	0	15
veto player	0.386549	0.332324	0	0.895054

Number of observation = 673

Table 2. Democratization and Defense, Benchmark Models

	(1)	(2)	(3)
Young Democracy	-0.598**	3.113	0.0689
	(0.248)	(1.893)	(0.467)
log(reserve)(t-3)	0.282***	0.265***	0.551***
	(0.0787)	(0.0763)	(0.103)
Real interest rate (T-1)/M1			0.0139*
			(0.00815)
Young Democracy × reserve		0.736**	
		(0.342)	
Young Democracy × Real Interest Rate			-0.129***
			(0.0427)
Veto Players (T-1)	0.753	0.767	-0.294
	(0.480)	(0.495)	(0.596)
No Speculation Duration	-0.00180*	-0.00228**	-0.000336
	(0.00108)	(0.00110)	(0.00196)
Number of past Speculative attacks	-0.415***	-0.415***	-0.339***
	(0.0845)	(0.0833)	(0.102)
De jure fixed exchange rate regime(t-1)	0.112	0.109	0.0685
	(0.209)	(0.209)	(0.287)
GDP growth rate (T-1)	0.0204*	0.0181	0.0685***
	(0.0108)	(0.0111)	(0.0245)
Log(GDP)	0.266*	0.249*	0.145
	(0.147)	(0.145)	(0.156)
Severity of attack	-1.061	-0.923	0.394
	(0.826)	(0.805)	(0.782)
Number of past currency defense	0.538***	0.534***	0.609***
	(0.0931)	(0.0915)	(0.120)
Constant	1.426	1.308	1.468
	(1.308)	(1.297)	(1.569)
Observations	673	673	474
Pseudo R-squared	0.561	0.571	0.684

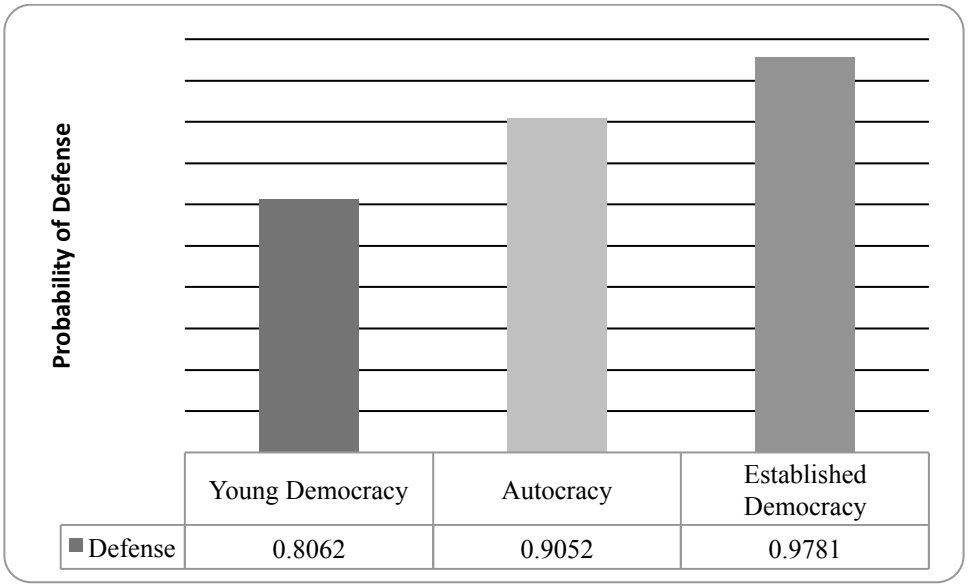
* significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are Probit estimates. Standard errors are clustered for country. Upper case t ('T') indicates the variable is lagged by year while lower case t ('t') indicates the variable is lagged by month.

Table 3. Sensitivity Analysis

Model	Coefficient/S. E. of *Young Democracy*	Observations	Pseudo-R^2
Rare event logistic model	-1.094***	673	0.561
	(0.389)		
Young Autocracy	-0.178[‡]	673	0.556
	(0.442)		
Right-wing government	-0.598**	673	0.561
	(0.248)		
Election Year Dummy	-0.723***	662	0.554
	(0.226)		
Region Dummy	-0.679***	664	0.588
	(0.236)		
External Debt/GDP	-0.599**	512	0.555
	(0.279)		
Inflation (GDP deflator)	-0.663***	647	0.565
	(0.234)		
Export/GDP	-0.623**	500	0.640
	(0.306)		

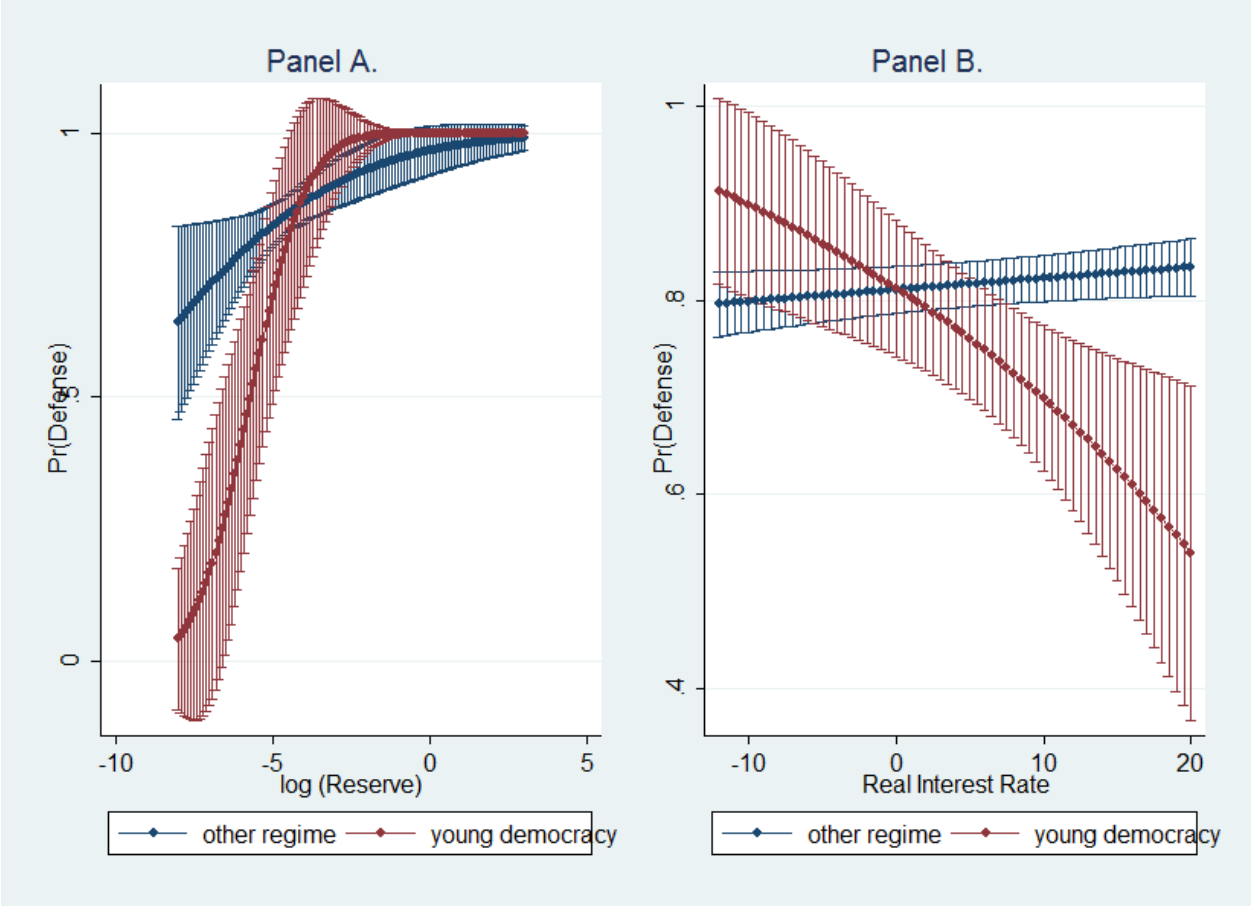
[‡] Coefficient/SE of *Young Autocracy*. * significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are Probit estimates. Standard errors are clustered for country. All the control variables from the benchmark models were included, but the result is not reported to save space.

Figure 1. Expected Probability of Currency Defense



Note: all other variables are set at their median.

Figure 2. Predicted Probability of Currency Defense with 95% Confidence intervals.



Note: all other variables are set at their median level.

Policy Choices in Tough Times:
The case of democratization and currency defense

ONLINE APPENDIX

https://sites.google.com/site/kalkas/publications

Table A1: Country List

Albania	Ghana	Norway
Algeria	Grenada	Oman
Angola	Guatemala	Paraguay
Argentina	Guinea	Peru
Armenia	Haiti	Philippines
Bangladesh	Honduras	Poland
Barbados	Hungary	Qatar
Benin	Iceland	Romania
Bolivia	India	Russia
Botswana	Indonesia	Rwanda
Brazil	Iran	Saudi Arabia
Bulgaria	Israel	Senegal
Burkina Faso	Jamaica	Singapore
Burundi	Japan	Slovak Rep.
Cambodia	Jordan	Slovenia
Cameroon	Kazakhstan	Korea
Canada	Kenya	Sudan
Cape Verde	Kuwait	Suriname
Central Africa	Kyrgyz Rep.	Sweden
Chad	Lao, P.D.R.	Switzerland
Colombia	Latvia	Tanzania
Congo, Demo. Rep.	Libya	Thailand
Congo, Republic of	Lithuania	Togo
Costa Rica	Madagascar	Trinidad & Tobago
Cote d'Ivoire	Malawi	Tunisia
Croatia	Malaysia	Turkey
Cyprus	Mali	Uganda
Czech Republic	Mauritius	Uruguay
Denmark	Mexico	Venezuela
Dominica	Moldova	Vietnam
Dominican Rep.	Mongolia	Zambia
Egypt	Morocco	
El Salvador	Mozambique	
Estonia	Namibia	
Fiji	Nepal	
Gabon	Nicaragua	
Gambia, The	Niger	
Georgia	Nigeria	

Table A2. Using Different Time Frames for Young Democracy

young democracy measure	t_0-t_1	t_0-t_2	t_0-t_3	t_0-t_4
stage3 (defense)	-0.610**	-0.501*	-0.677***	-0.598**
	(0.305)	(0.276)	(0.237)	(0.248)

young democracy measure	t_0-t_5	t_0-t_6	t_0-t_7	t_0-t_8	t_5-t_8
stage3 (defense)	-0.534**	-0.846***	-0.793***	-0.591**	-0.591**
	(0.260)	(0.201)	(0.299)	(0.284)	(0.284)

* significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are probit coefficient with standard errors in parentheses. Standard errors are clustered for country. A set of control variables same as the ones of the benchmark model were included in each model but the result is not reported to save space.

Table A3. Democratization and Defense, Censored probit estimates

	(1)	(2)	(3)	(4)	(5)	(6)
DV=currency defense (Stage 3)						
Young Democracy	-0.680	-0.677	2.714	2.711	54.153	53.715
	(0.326)**	(0.325)**	(1.603)*	(1.598)*	(8.831)***	(15.183)***
log(reserve)(t-3)/M1	0.208	0.208	0.172	0.171	0.451	0.449
	(0.049)***	(0.049)***	(0.045)***	(0.045)***	(0.094)***	(0.094)***
Young Democracy × reserve			0.668	0.667		
			(0.268)**	(0.267)**		
Real interest rate (T-1)					0.008	0.008
					(0.010)	(0.010)
Young Democracy × Real Interest Rate					-4.807	-4.748
					(0.765)***	(1.261)***
Veto Players (T-1)	0.757	0.759	0.692	0.692	-1.620	-1.609
	(0.653)	(0.651)	(0.650)	(0.649)	(1.128)	(1.120)
t-attack‡	-0.003	-0.003	-0.004	-0.004	-0.003	-0.003
	(0.001)**	(0.001)**	(0.001)***	(0.001)***	(0.003)	(0.003)
Number of past Speculative attacks	-0.141	-0.141	-0.124	-0.124	-0.029	-0.028
	(0.095)	(0.094)	(0.098)	(0.097)	(0.116)	(0.116)
De jure fixed exchange rate regime(t-1)	0.165	0.166	0.185	0.186	-0.340	-0.333
	(0.238)	(0.238)	(0.255)	(0.254)	(0.418)	(0.417)
GDP growth rate (T-1)	0.033	0.033	0.027	0.027	0.133	0.132
	(0.019)*	(0.019)*	(0.019)	(0.019)	(0.047)***	(0.047)***
Log (GDP) (T-1)	0.475	0.475	0.453	0.454	0.626	0.626
	(0.188)**	(0.188)**	(0.189)**	(0.189)**	(0.226)***	(0.225)***
Severity of attack	-1.759	-1.761	-1.474	-1.478	-0.415	-0.422
	(0.840)**	(0.836)**	(0.833)*	(0.831)*	(1.074)	(1.073)
Number of past currency defense	0.194	0.192	0.180	0.178	0.241	0.235
	(0.129)	(0.129)	(0.135)	(0.135)	(0.166)	(0.166)
Constant	0.061	0.041	-0.335	-0.354	-1.487	-1.517
	(1.612)	(1.605)	(1.575)	(1.569)	(1.754)	(1.745)
DV=speculative attack (Stage 2)						
Young Democracy	-0.028	-0.028	-0.028	-0.028	-0.007	-0.007
	(0.074)	(0.074)	(0.074)	(0.074)	(0.097)	(0.098)
Log (GDP)	0.042	0.040	0.042	0.040	0.030	0.028
	(0.028)	(0.028)	(0.028)	(0.028)	(0.040)	(0.040)
GDP growth rate (T-1)	-0.007	-0.007	-0.007	-0.007	-0.000	-0.000
	(0.004)*	(0.004)*	(0.004)*	(0.004)*	(0.005)	(0.005)
Veto Players (T-1)	0.088	0.087	0.088	0.087	0.307	0.308
	(0.097)	(0.097)	(0.097)	(0.097)	(0.130)**	(0.131)**
Rightist Government	-0.013	-0.013	-0.013	-0.014	-0.006	-0.007
	(0.051)	(0.051)	(0.051)	(0.051)	(0.053)	(0.053)
log(reserve)t-3/M1	-0.004	-0.005	-0.004	-0.005	-0.002	-0.003
	(0.005)	(0.005)	(0.005)	(0.005)	(0.009)	(0.009)
Contagious Speculation	0.076	0.076	0.076	0.076	0.071	0.071
	(0.004)***	(0.004)***	(0.004)***	(0.004)***	(0.004)***	(0.004)***
Number of past Speculative attacks	-0.017	-0.017	-0.017	-0.017	-0.007	-0.007
	(0.007)***	(0.007)**	(0.007)***	(0.007)**	(0.007)	(0.007)
De jure fixed exchange rate regime(t-1)	-0.050	-0.048	-0.050	-0.048	-0.115	-0.114
	(0.051)	(0.051)	(0.051)	(0.051)	(0.068)*	(0.068)*
t-attack‡	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
	(0.002)**	(0.002)**	(0.002)**	(0.002)**	(0.003)**	(0.003)**
US interet rate(T-1)	0.008	0.008	0.008	0.008	0.010	0.009
	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***	(0.001)***
Constant	-2.480	-2.444	-2.479	-2.443	-2.635	-2.608
	(0.241)***	(0.243)***	(0.241)***	(0.243)***	(0.346)***	(0.347)***
Rho (stage1→2)		-0.016		-0.016		-0.009
		(0.015)		(0.015)		(0.010)
Rho (stage2→3)	0.390	0.400	0.400	0.410	0.437	0.458
	(0.207)*	(0.206)*	(0.205)*	(0.205)**	(0.255)*	(0.259)*
N	19,867	19,865	19,867	19,865	19,733	19,731
Log-pseudolikelihod	-1,879.42	-1,877.56	-1,876.75	-1,874.89	-1,452.33	-1,451.22

* significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are Heckman probit coefficient with standard errors in parentheses. Standard errors are clustered for country. ǂ "t-attack" is the duration for none-speculation. Other components of cubic polinomial approximation, namely, t-attack^2 and t-attack^3 (Carter and Signorino 2010), are also included in the selection equation but the result is not reported to save space.

Table A4. SBI estimates

	Government			Market	
constant	defend	devalue	status quo	defend	devalue
		0.287		-1.534**	-1.649***
		(1.460)		(0.721)	(0.061)
veto	0.744				
	(0.484)				
severity	0.657				
	(1.005)				
young democracy	-1.070***		-0.204*		
	(0.400)		(0.118)		
reserve/M1	111.524***		-0.000		
	(26.562)		(0.000)		
past attacks	0.007		-0.021***		
	(0.061)		(0.007)		
de jure fixed	0.300		-0.119**		
	(0.302)		(0.052)		
GDP growth rate	0.011		-0.009*		
	(0.021)		(0.005)		
overvaluation	0.040		0.006**		
	(0.034)		(0.003)		
$t_{noattack}$	-0.002		-0.016***		
	(0.001)		(0.003)		
$t_{noattack}^2$			0.000***		
			(0.000)		
$t_{noattack}^3$			-0.000***		
			(0.000)		
log(GDPpc)			0.035***		
			(0.010)		
contagion			0.070***		
			(0.004)		
observations	537		11431		
loglilkelihood	-118.378		-2209.97		

* significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are maximum likelihood estimates with standard errors in parentheses.

Table A5. Democratization and Defense: Using Alternative conditioning variables

	(1)	(2)	(3)
Young Democracy	-0.998***	0.499	-0.738**
	(0.296)	(0.342)	(0.341)
Mean Reserve	0.000	0.000	
	(0.000)	(0.000)	
YoungDem*Mean Interest Rate		-0.112***	
		(0.0352)	
Mean Interest Rate		0.0218	
		(0.0182)	
YoungDem*Mean Reserve	6.311**		
	(2.544)		
Reserve			0.546***
			(0.105)
YoungDem*Differential			-0.136***
			(0.0523)
Interest Rate Differential			0.0173**
			(0.00865)
Veto	0.425	0.332	-0.338
	(0.369)	(0.374)	(0.611)
No speculation Duration	-0.00435***	-0.00497***	-0.000701
	(0.00105)	(0.00106)	(0.00189)
Past Speculation	-0.558***	-0.587***	-0.339***
	(0.0874)	(0.0907)	(0.102)
De jure fixed	0.200	0.104	0.0879
	(0.192)	(0.190)	(0.276)
GDP growth rate	0.0238***	0.0223**	0.0690***
	(0.00859)	(0.00881)	(0.0239)
GDP per capita	0.413***	0.441***	0.143
	(0.115)	(0.112)	(0.158)
Speculation severity	-1.675**	-1.993***	0.318
	(0.799)	(0.645)	(0.782)
Past defense	0.649***	0.663***	0.609***
	(0.0938)	(0.102)	(0.121)
Constant	-0.0676	0.162	1.643
	(1.055)	(0.998)	(1.589)
Observations	678	651	474
Pseudo R-squared	0.449	0.452	0.685

* significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are Probit estimates. Standard errors are clustered for country.

Table A6. Political Control Variables.

	(1)	(2)	(3)	(4)
Young Democracy	-0.679***	-0.598**		-0.723***
	(0.236)	(0.248)		(0.226)
log(reserve)(t-3)	0.311***	0.282***	0.278***	0.272***
	(0.0554)	(0.0787)	(0.0768)	(0.0828)
No Speculation Duration	-0.00124	-0.00180*	-0.00221**	-0.00180*
	(0.00110)	(0.00108)	(0.00111)	(0.00107)
# of past Speculative attacks	-0.422***	-0.415***	-0.404***	-0.408***
	(0.0949)	(0.0845)	(0.0795)	(0.0803)
De jure fixed regime(t-1)	0.331	0.112	0.101	0.166
	(0.213)	(0.209)	(0.213)	(0.201)
GDP growth rate (T-1)	0.0338***	0.0204*	0.0194	0.0236**
	(0.0108)	(0.0108)	(0.0127)	(0.0101)
Log(GDP)	-0.0503	0.266*	0.289**	0.213
	(0.153)	(0.147)	(0.146)	(0.141)
Severity of attack	-1.023	-1.061	-1.112	-1.098
	(0.710)	(0.826)	(0.820)	(0.813)
# of past currency defense	0.515***	0.538***	0.529***	0.521***
	(0.103)	(0.0931)	(0.0878)	(0.0904)
Veto Players (T-1)	1.126**	0.753	0.686	0.765
	(0.567)	(0.480)	(0.453)	(0.480)
Latin America	-0.0620			
	(0.375)			
Middle East / North Africa	1.202			
	(0.850)			
Sub-Saharan Africa	-0.545*			
	(0.322)			
East Asia	0.0134			
	(0.495)			
Southeast Asia	0.277			
	(0.426)			
Right wing		-0.441		
		(0.287)		
Young Autocracy			-0.178	
			(0.442)	
election				0.311
				(0.301)
Constant	3.952***	1.426	1.278	1.715
	(1.425)	(1.308)	(1.297)	(1.331)
Observations	664	673	673	662
Pseudo R-squared	0.588	0.561	0.556	0.554

* significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are Probit estimates. Standard errors are clustered for country.

Table A7. More economic control variables and re-event logit

	(1)	(2)	(3)	(4)	(5)
	More Economic Control Variables				Re-logit
Young Democracy	-0.599**	-0.663***	-0.623**	-0.846**	-1.094***
	(0.279)	(0.234)	(0.306)	(0.409)	(0.389)
log(reserve)(t-3)	0.354***	0.268***	0.480***	0.565***	0.459**
	(0.0594)	(0.0832)	(0.0917)	(0.101)	(0.179)
No Speculation Duration	-0.00215*	-0.00141	-0.00127	0.00126	-0.003*
	(0.00123)	(0.00113)	(0.00140)	(0.00253)	(0.002)
# of past attacks	-0.375***	-0.412***	-0.527***	-0.312***	-0.755***
	(0.0879)	(0.0843)	(0.125)	(0.107)	(0.184)
De jure fixed regime(t-1)	0.196	0.120	0.109	-0.0201	0.220
	(0.209)	(0.212)	(0.244)	(0.273)	(0.385)
GDP growth rate (T-1)	0.0233**	0.0329*	0.00893	0.0517**	0.041**
	(0.0105)	(0.0168)	(0.0125)	(0.0216)	(0.018)
Log(GDP)	-0.00374	0.250*	0.297*	0.138	-0.382
	(0.151)	(0.141)	(0.162)	(0.139)	(0.272)
Severity of attack	-1.245*	-1.072	-1.324	0.624	-2.01
	(0.731)	(0.835)	(0.909)	(0.740)	(1.782)
# of past currency defense	0.465***	0.557***	0.545***	0.525***	0.954***
	(0.101)	(0.0921)	(0.130)	(0.118)	(0.196)
Veto Players (T-1)	0.442	0.539	0.593	-0.232	1.276
	(0.447)	(0.456)	(0.485)	(0.520)	(0.956)
External debt (T-1)	0.000**				
	(0.000)				
Inflation (T-1)		-1.21e-05			
		(0.000113)			
Export/GDP (T-1)			-1.374***		
			(0.387)		
Real Interest Rate				0.0118***	
				(0.00456)	
Constant	3.957**	1.386	3.132*	1.419	3.067
	(1.591)	(1.290)	(1.637)	(1.527)	(2.389)
Observations	512	647	500	481	673
Pseudo R-squared	0.555	0.565	0.640	0.670	0.561

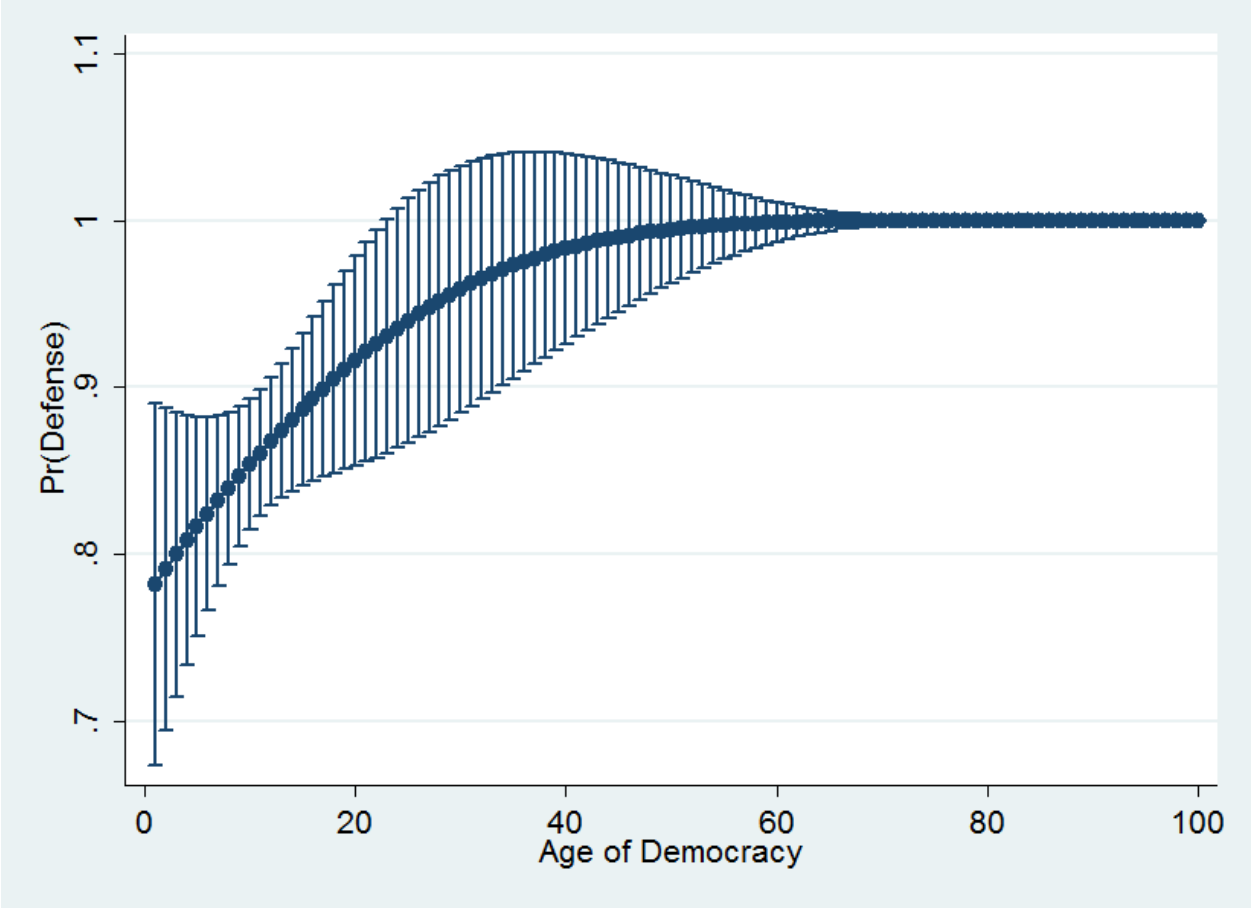
* significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are Probit estimates for Model (1) through (3). In Model (4) cell sentries are rare event logit (King and Zeng 2001) estimates. Standard errors are clustered for country.

Table A8. Dropping Democratization Year

Young Democracy	-0.690**
	(0.274)
log(reserve)(t-3)	0.274***
	(0.0831)
No Speculation Duration	-0.00161
	(0.00107)
# of past Speculative attacks	-0.401***
	(0.0828)
De jure fixed regime(t-1)	0.116
	(0.212)
GDP growth rate (T-1)	0.0250**
	(0.0102)
Log(GDP)	0.213
	(0.144)
Severity of attack	-1.092
	(0.814)
# of past currency defense	0.517***
	(0.0924)
Veto Players (T-1)	0.697
	(0.494)
Constant	1.759
	(1.340)
Observations	665
Pseudo R-squared	0.556

* significant at 10%; ** significant at 5%; *** significant at 1%. Cell entries are Probit estimates. Standard errors are clustered for country.

Figure A1. Predicted Probability of Currency Defense with 95% confidence interval



Note: The horizontal axis is "Age of Democracy" and the vertical axis is estimated probability of currency defense at a certain age of democracy. All other variables are set at their mean level.