

# Political instability and the interventions of IMF and the World Bank in non-democratic regimes

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## Abstract

We consider a potential effect of foreign aid on political instability in a dictatorial regime. Firstly, we make use of a theoretical model of a contested dictatorship receiving aid flows. We find that aid may increase political stability through its effect on the resources used by the insurgents and on those used by the elite. Aid may also undermine government's accountability by reducing its dependence on tax revenues (described by the decline of the tax rate). Secondly, we provide empirical evidence of an effect of aid on political instability using OLS fixed effects and GMM system. Aid flows might lead to a decrease of political instability in contested dictatorships and more particularly in anocracies. The results are robust to several econometric methods and to other measures of political instability. Furthermore, the empirical tests support our theoretical prediction that IMF intervention could have a counterproductive effect by increasing regime stability if the ruling elite is highly corrupt.

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# 1 Introduction

Foreign aid might be compared to "sovereign rents" as oil, but cautiously (Collier [2006]). As a non tax revenue, it might have a negative effect on government accountability (Knack [2009]). Morrison [2012] emphasizes the similarities between oil resource curse and foreign aid. He also points out that "natural resources and aid give dictators revenue to maintain power"<sup>1</sup>. Our analysis might provide an additional understanding of the mechanisms through which aid has an impact on political stability in dictatorial regimes.

Aid flows might lead to several problems already identified in the literature<sup>2</sup>: collective action and moral hazard problems, the strengthening of a "soft budget constraint" and of the "tragedy of commons" and the lack of incentives to reform and to be accountable in terms of taxpayers (if aid decreases the tax rate).

Political instability is a core concern in most of developing countries, especially in Africa. The negative impact of political instability on economic growth is usually established (Alesina et al. [1996] ; Devereux and Wen [1998] ; Pinto and Timmons [2005] ; Aisen and Veiga [2011]) but some authors have questioned the extent of this causality. Jong-A-Pin [2009] finds such an effect concerning the instability of the political regime but fails to estimate any impact of the other aspects of political instability (mass civil protest and regime instability). Campos and Nugent [2002] look at the long-run causal relationship and demonstrate that Sub-Saharan African countries influence the significance of the results. They finally question the potential harm of political instability on economic conditions. Butkiewicz and Yanikkaya [2005] also point out that the causality between economic growth and political instability is not obvious and that the measure of political instability can explain some differences in results.

Political instability has some other perverse effects. Devereux and Wen [1998] demonstrate theoretically and empirically (using averages for 1960-1985) that political instability increases the government's consumption (as a share of GDP).

Several authors have provided some evidence of an harmful effect of aid on corruption, rent-seeking activities and government spending. Svensson [2000] uses a game-theoretic rent-seeking model and he finds that, without a strong policy commitment, aid is associated with rent-seeking activities (even if aid is just expected) and with reduced productive public spending. Knack [2001] estimates that aid dependence deteriorates the quality of governance in recipient countries, as measured by corruption, rule of law and bureaucratic quality. Butkiewicz and Yanikkaya [2005] find that IMF intervention (when non neutral) may deteriorate economic growth, by limiting public and private investment. Annett [2000] argues that government consumption decreases political instability. Kosack and Tobin [2006] show that aid may contribute to undermine economic development in authoritarian countries where the level of human capital is relatively low, by reducing

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<sup>1</sup>Morrison [2007]

<sup>2</sup>Brautigam and Knack [2004] provide an interesting description of these mechanisms.

the government spending in human development. Using a model in a growing small open economy, [Economides et al. \[2008\]](#) estimate that aid may undermine economic growth by encouraging rent-seeking behaviors while it may improve economic conditions by financing infrastructures. They finally conclude that the growth-enhancing effect of aid is just mitigating by rent-seeking activities.

Despite a surge in the number of democratic transitions around the world and a decline over the last 30 years in the number of autocracies, at the same time, the number of anocracies have increased (CSP's Global Report 2011).<sup>3</sup> Furthermore, most of the least developed countries remain unstable.

There is no single definition of political instability. The first definition of political instability appears with [Lipset \[1960\]](#) in political science. A country is considered to be unstable if a certain type of political regime is persistent (if it lasts more than 25 years), whether democratic or dictatorial. This definition has its limitations since countries with significant changes in government can be considered stable if they remain either democratic (liberal democracy) or dictatorial. After that, [Sanders \[1981\]](#) considers that political instability can only be defined comparatively in time or in comparison with other countries. Thirdly, [Siermann \[1998\]](#) adds social tensions to the definition. Political instability can affect either the political system or the property rights of the citizens.

In the recent literature, two broad types of measures have emerged. Some authors consider political instability as a mere change of government, defined as regular or irregular changes ([Alesina et al. \[1996\]](#); [Miljkovic and Rimal \[2008\]](#)). This approach has some advantages (e.g. the data are consistent across nations) but it restricts the concept of political instability to one of its dimensions. Others scholars define political instability as social unrest. We define political instability as a sum of political events including assassinations, strikes, guerillas, governments crisis, purges, riots, anti government demonstrations and revolutions. We use the weighted conflict index provided by [Banks \[2011\]](#) in the Cross-National Time-Series Data Archive. We also integrate an other measure of political instability furnished by the World Bank to check the robustness of our results.

We examine the potential effect of foreign aid on political instability in developing countries and more particularly in dictatorship.

[Ronen \[2009\]](#) develops a theoretical model of economic growth and internal conflict and provides some evidence of a beneficial effect for the population of threats on the political stability of a dictatorial regime.

First, we make use of his model and we integrate the provision of aid flows. We find that foreign aid has an impact on political instability in a dictatorial regime if the elite is corrupt. Aid flows also undermine the efficiency of the fiscal system.

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<sup>3</sup>The report ([Marshall and Cole \[2011\]](#)) is available at <http://www.systemicpeace.org/GlobalReport2011.pdf>

Secondly, we estimate empirically the potential effect of aid on political instability, using OLS fixed effect and system GMM. We find evidence of a negative impact of IMF intervention on political instability in dictatorships.

Thirdly, we test our theoretical prediction that foreign aid might lead to a reinforcement of political stability in contested dictatorships if the ruling elite is highly corrupt. We find evidence of such an effect.

The remainder of this paper is organized as follows. In section 2, a literature review allows us to highlight the determinants of political instability. In section 3, we provide the theoretical model of [Ronen \[2009\]](#) and integrate aid flows. In section 4, we discuss empirically the potential impact of aid on political instability using OLS. In section 5, we check the robustness of our results using GMM system and other measures of political instability. We also empirically test whether corruption explains the counterproductive effect of foreign aid in contested dictatorships. Section 6 allows us to conclude.

## 2 Literature Review

This section provides a literature review on the political and economic causes of political instability. We also describe the past research on our variables of interest.

### 2.1 Political forces

The type of regime and political instability are closely related ([Auvinen \[1996\]](#); [Ellingsen \[2000\]](#)). Democracies are less unstable and violent changes of regime type are more prevalent in autocracies ([Huntington \[1968\]](#) ; [Londregan and Poole \[1990\]](#) ; [Ellingsen \[2000\]](#); [Miljkovic and Rimal \[2008\]](#)), because democracies are more prone to impulse policy changes by political turnovers. Democracy may also have the opposite effect on political stability, meaning that more democratic countries may also allow opposition groups to express their protests (theory of resource mobilization). [Dreher and Gassebner \[2012\]](#) find that more democratic countries are more likely to face major government crises making it easier for opposition parties to contest. [Miljkovic and Rimal \[2008\]](#) point out that the impact of democracy is nevertheless weak and disappears in some specifications. [Ellingsen \[2000\]](#) specifies that the effect of political regime on the domestic conflict is higher in semi-democracies, compared to autocracies. [Auvinen \[1996\]](#) argues that authoritarianism and political stability follow a U-shaped curve, whereby the more authoritarian countries are more politically unstable but this trend is reversed in the most repressive countries. [Blanco and Grier \[2009\]](#) emphasize a small negative effect of democracy on political instability. [Feng \[1997\]](#) finds that democracy promotes economic growth through its positive (negative) effect on regular<sup>4</sup> (irregular) government changes.

Regime type may also affect the effectiveness of foreign aid. Aid may promote human capital and the quality of life in democracies but it appears ineffective and possibly harmful to do so in

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<sup>4</sup>A regular government change (irregular) can be defined as a constitutional government change (unconstitutional).

autocracies ([Kosack \[2003\]](#); [Kosack and Tobin \[2006\]](#)).

The number of political parties (or the degree of political competition) as well as political polarization (party fractionalization) affect political instability ([Stone \[2004\]](#)). In return, political instability has an impact on the number of political parties.

Indeed, political instability may reflect an opposition which might create a political force to express their concerns.

Unstable neighboring countries may also threaten political stability ([Goldstone et al. \[2010\]](#)), due to a "contagion" effect: flood of refugees, the creation of a guerilla base, etc. [Blanco and Grier \[2009\]](#) find no evidence of such an effect.

The level of education improves political stability ([Alesina et al. \[1996\]](#)). However, education might lead to an increase in social protest: more educated citizens may have more information about their rights and may be more inclined to protest. [Annett \[2000\]](#), [Ellingsen \[2000\]](#), [Collier and Hoeffer \[2004\]](#) and [Dutt and Mitra \[2008\]](#) highlight that ethno-linguistic fragmentation has a significant and positive effect on political instability. [Ellingsen \[2000\]](#) specifies that ethnic diversity increases domestic conflicts but leads to lower large scale conflicts. [Blanco and Grier \[2009\]](#) find that countries ethnically more diverse are less unstable to a certain point from which multi-ethnicity creates tensions and deteriorates political instability. [Fearon and Laitin \[2003\]](#) find no evidence of an effect of ethnic fractionalization on civil war onset.

[Elbadawi and Sambanis \[2002\]](#) and [Fearon and Laitin \[2003\]](#) consider political instability as a dynamic process resulting from past conflicts. [Jong-A-Pin \[2009\]](#) observes that political instability is persistent.

Oil resources may induce conflicts on the distribution of ownership and may create civil discords by encouraging people from peripheral regions to struggle to establish a sovereign state ([Collier and Hoeffer \[2004\]](#)). While recognizing the effect of oil rents on corruption, ([Arezki and Brückner \[2011\]](#)) find no empirical evidence of an effect of these rents on state stability.

More urbanized citizens are more likely to protest ([Auvinen \[1996\]](#) ; [Annett \[2000\]](#)). Conversely, [Collier and Hoeffer \[2004\]](#) find that urbanization might decrease political instability by reinforcing the control by the military elite. [Blanco and Grier \[2009\]](#) highlight a non-linear relationship between urban growth and political instability: more urbanized countries are less unstable but urbanization may have a positive impact on instability if the urban growth rate exceeds 13.6 per cent.

## 2.2 Economic Determinants

Countries with low levels of trade openness are more likely to be politically unstable ([Goldstone et al. \[2010\]](#); [Blanco and Grier \[2009\]](#)). Political instability also affects the rate of trade openness. The government might implement direct and indirect trade barriers to restrict political and economic damages of political instability (weakness of domestic firms face foreign competition, trade imbalance).

Political instability and investment are negatively correlated: higher political conflicts discourage

investment and a higher level of accumulated capital might lead to an improvement of political stability by creating more favorable economic conditions. ([Feng \[2001\]](#)).

A country with high levels of inflation or a rising inflation is more vulnerable to political unrest, if the price increase is not accompanied by a similar increase in wages ([Auvinen \[1996\]](#)). Conversely, politically weak governments may resort to seigniorage, especially in developing countries ([Cukierman et al. \[1992\]](#)). [Aisen and Veiga \[2011\]](#) conclude that political instability increases the seigniorage.

The correlation between political instability and economic growth is still unclear. The authors have long considered that political instability has an impact on economic performance. A strong economic growth (or a high level of GDP per capita) immunizes against a political overthrow ([Auvinen \[1996\]](#); Przeworski, Alvarez, Cheibub and Limongi [2000] ; [Carmignani \[2009\]](#)). Economic growth undermines political instability ([Miljkovic and Rimal \[2008\]](#)). [Stone \[2004\]](#) argues that the primary determinant of coup attempts is poverty (low levels of GDP per capita). [Jong-A-Pin \[2009\]](#) notifies that economic growth undermines political violence but increases instability within the political regime. Economic Growth may indirectly affect political instability through investment ([Alesina et al. \[1996\]](#), [Donovan et al. \[2005\]](#)) or uncertainty. But, economic growth and political instability might be correlated. Some authors estimate that political instability undermines economic performance ([Barro \[1991\]](#)). [Dutt and Mitra \[2008\]](#) describe that political instability and economic growth will be treated as endogenous. On the opposite, the long-term effects of growth on political instability are weak and absent in some estimates ([Campos and Nugent \[2002\]](#)).

Economic development (measured by initial level of GDP) also plays an important role in determining political instability. [Miljkovic and Rimal \[2008\]](#) estimate that more developed nations are less prone to political violence, irregular changes or social tensions but that differences in regular government changes between nations are not influenced by economic development.

Income inequality is also an important source of political instability ([Acemoglu and Robinson \[2001\]](#); [Dutt and Mitra \[2008\]](#)). Regime-shift (from democracy to dictatorship and vice versa) and civil unrest are more likely to occur frequently in unequal countries. Economic inequality also leads to volatile trade and fiscal policies. [Carmignani \[2009\]](#) also points out that income inequality reduces the survival probability of a government. He adds that income inequality might be the result of bad institutions and that redistribution is an efficient policy to limit the risks of political instability. [Roe and Siegel \[2011\]](#) supports the view that a larger middle-class reduces the risks of political instability. They also finds that political instability undermines financial development (measured by private and bank credit).

### 2.3 Variables of interest

Some criticism has emerged regarding the lack of effect of IMF or World Bank intervention on economic growth ([Butkiewicz and Yanikkaya \[2005\]](#) ; [Dreher \[2005\]](#)). Two different interpretations have been recognized: International Financial institutions (IFIs) failed to improve economic growth

in developing countries because they failed to implement the conditions under which economic development is possible or because they did not support the necessary reforms.

[Stone \[2004\]](#) has already investigated the influence of IMF programs on political instability. He failed to find any empirical evidence of an effect of IMF intervention on coups attempts in Africa but he has estimated that IMF aid strongly influences the duration of governments. Governments of African countries receiving foreign aid tend to stay in power four to twelve months longer than those countries that are not in agreement with the IMF. The IMF itself may support political stability in order to make the reforms feasible.

Some authors have argued that IMF punishment are not efficient in reducing political instability and may contribute to enforce violent political changes if it has worsened economic performance (by the deterioration of investment or lower exchange rate).

[Haggard \[1985\]](#) concludes that these programs increase the number of strikes in each country. [Bienen and Gersovitz \[1985\]](#) argue that IMF, by providing financial resources, makes economic adjustments easier and thus reduces the risks of political instability.

A very interesting study on this topic has been conducted by [Dreher and Gassebner \[2012\]](#). They found that countries receiving IFI's programs are more likely to suffer from political crisis (as measured by major government crisis). Governments under an IFI's arrangement are subject to an increasing risk of crisis if they face improving economic conditions. [Dreher and Gassebner \[2012\]](#) recognize that IFI's interventions can generate a crisis by revealing government's incompetence. This conclusion is in line with the signaling model. They also estimate that inherited programs (from past governments) have no impact on the probability of a political crisis.

Political instability is clearly endogenous in our empirical specification. [Chauvet \[2003\]](#) finds that violent instability and changes in the elite in power lead to higher aid flows. On the opposite, social instability induces a lower amount of aid. As reported in [Collier \[2007\]](#), foreign aid might induce a higher risk of coups but has different impact depending on the type of instability.

### 3 The model of contested dictatorship

In order to understand the potential mechanisms thought which aid might affect political instability, we integrate foreign aid flows in [Ronen \[2009\]](#)'s model.

This model considers a contested dictatorship in which a ruling authority can be destabilized by insurgents. National income is produced using labor, which is normalized to unity, accumulated capital stock ( $G_t$ ) and period 1's public investment is  $g_t$ . We also have:  $B > 0$  and  $G_t$  is the period 1's inherited capital stock.

The ruler's utility at time t is described by:  $U_{R,t}(C_{R,t}, S_t, y_{t+1}) = \ln C_{R,t} + \beta \ln S_t + \beta \ln y_{t+1}$

In the first section, foreign aid can be directed towards public investment and transfers to the poor. In the second part, we consider that the ruler can be corrupt and can misappropriate part of the aid received.

### 3.1 Uncorrupt dictatorship

In the first section of our model, the donor strongly requests that the ruler allocates the aid flows to public investment or directly to the poor using transfers. Consequently, aid flows are subdivided into the expenditures on public investment and transfers. These assumptions are defined by:  $F_t = aY_t = T_t + g_t^{aid}$ . The ruler's utility at time  $t$  remains the same as in Ronen [2009]. The ruler maximizes:

$$U_{R,t} = \ln(\tau_t y_t - g_t - e_{r,t}) + \beta \ln((1 - \tau_t) P(BG_t^{v_1} g_t^{v_2})^\epsilon) + \beta \ln\left(\sqrt{\frac{e_{r,t}(1 - \tau_t)^{(1+2\Phi)} y_t (P(BG_t^{v_1} g_t^{v_2})^\epsilon)^\Phi}{AI}}\right)$$

$A_t$  is the aid flows received at time  $t$  and  $F_t = ay_t = T_t + g_t^{aid}$ . We assume that a share  $(1 - \zeta)A_t$  with  $\zeta \in [0, 1]$  is allocated to transfers to the poor while  $\zeta A_t$  is directed to public investment. Aid flows have the form of lump-sum transfers to the citizens ( $F_t$ ) and public investment. The ruler's budget constraint is described as follow:  $\tau_t Y_t + F_t = (\tau_t + a)Y_t = C_{R,t} + g_t + e_{r,t} + \zeta a Y_t + (1 - \zeta)a Y_t$ . So, the ruler's constraint remains  $C_{R,t} + g_t + e_{r,t} = \tau_t y_t$  as the donors require the recipient to use foreign aid for the intended purposes (transfers to the poor and public investment) and the dictator spends aid flows in accordance with the donor.

The first-order conditions with respect to  $g_t$ ,  $\tau_t$  and  $e_{r,t}$  are unchanged:

$$\tau_t = \frac{v - \beta(3 + 2\Phi)}{v}$$

$$g_t = \frac{\beta(2 + \Phi)\epsilon v_2 Y_t}{v}$$

$$e_{r,t} = \frac{\beta Y_t}{v}$$

$$\text{with } v = 2(1 + \beta(2 + \Phi)) + \epsilon v_2 \beta(2 + \Phi)$$

Aid flows have no impact on the level of tax rate, on public investment and on the resources used on repression.

The population's present consumption is:

$$c_{p,t} = \frac{\beta(3 + 2\Phi)}{v} Y_t + F_t = \left(\frac{\beta(3 + 2\Phi)}{v} + (1 - \zeta)a\right)Y_t$$

Lump-sum transfers of aid have a positive impact on population present's consumption.

Aid doesn't affect tax rate, public investment or resources used in repression by the ruler, neither the ruler's present consumption nor that of the population. Aid flows don't have any impact on the effort exerted by the insurgents. In a context of uncorrupt dictatorship, aid has no impact on political instability; but if we assume that the regime is corrupt, aid might have a negative

impact on political instability in dictatorships. Next section provides some evidence of this effect and highlights some of the mechanisms.

### 3.2 Corrupt dictatorship

One potential mechanism affecting aid effectiveness is corruption. In this section, we analyze the potential effect of corruption on political instability in a dictatorial country receiving aid.

In this section, we integrate a new assumption on governance. The donor can't force the dictator to carry out his obligations towards him and to use aid flows for the intended purposes. Corruption may also occur but it's not directly visible (at least, in the short term). The dictator uses a share of aid flows for personal purposes.  $\alpha$  designates the embezzlement rate. Aid flows don't provoke public scrutiny.

We define the ruler's revenues by:  $(\tau_t + a)y_t$

The ruler's utility at time  $t$  becomes:

$$U_{R,t} = \ln((\tau_t + a)y_t - g_t - e_{r,t} - \zeta a y_t - (1 - \zeta - \alpha) a y_t) + \beta \ln((1 - \tau_t) P(BG_t^{v_1} g_t^{v_2})^\epsilon) + \beta \ln(\sqrt{\frac{e_{r,t}(1 - \tau_t)^{(1+2\Phi)} y_t (P(BG_t^{v_1} g_t^{v_2})^\epsilon)^\Phi}{AI}})$$

The first-order conditions with respect to  $g_t$ ,  $\tau_t$  and  $e_{r,t}$  are:

$$\tau_t = \frac{v - \beta(3+2\Phi)(1+\alpha a)}{v}$$

$$g_t = \frac{\beta(1+\alpha a)(2+\Phi)\epsilon v_2 Y_t}{v}$$

$$e_{r,t} = \frac{\beta(1+a\alpha)Y_t}{v}$$

The period 1's public investment and the resources used in repression by the ruler increase with aid inflows while tax rate decreases.

The effect of aid flows on tax rate is described by:  $\frac{\partial \tau_t}{\partial a} = \frac{-\beta(3+2\Phi)\alpha}{v} < 0$ . Our predictions support the view expressed in [Knack \[2009\]](#). Aid flows can undermine government's accountability by reducing its dependence on tax revenues. Thus, foreign aid may diminish the incentives supporting an efficient fiscal system.

The effect of aid flows on public spending is:  $\frac{\partial g_t}{\partial a} = \frac{\beta\alpha(2+\Phi)\epsilon v_2 Y_t}{v} > 0$

The impact of aid flows on resources used in repression is:  $\frac{\partial e_{r,t}}{\partial a} = \frac{\beta\alpha Y_t}{v} > 0$

The population's present consumption is:  $c_{p,t} = (1 - \tau_t)Y_t + T_t = (\frac{\beta(3+2\Phi)(1+\alpha a)+(1-\alpha-\zeta)a v}{v})Y_t$ . Foreign aid increases the population's consumption when transfers are considered.

The ruler's present consumption is:  $c_{R,t} = \frac{2(1+\alpha a)}{v}Y_t$

Aid increases the ruler's consumption:  $\frac{\partial c_{R,t}}{\partial a} = \frac{2\alpha}{v}Y_t > 0$

The efforts exerted by the insurgents are:

$$e_{0,t}^* = \frac{-\beta(1+\alpha a)y_t}{v} + \sqrt{\frac{AI\beta}{v(\frac{\beta(3+2\Phi)}{v})^{(1+2\Phi)}(P(BG_t^{v_1}(\frac{\beta(2+\Phi)\epsilon v_2}{v})^{v_2})^\epsilon)^\Phi Y_t^{v_2\epsilon\Phi}(1+\alpha a)^{2\Phi+v_2\epsilon\Phi}}}$$

Aid decreases the resources of the insurgents:

$$\frac{\partial e_{0,t}^*}{\partial a} = \frac{-\beta\alpha}{v}Y_t - \frac{\alpha(2\Phi+v_2\epsilon\Phi)}{2}\sqrt{\frac{AI\beta}{v(\frac{\beta(3+2\Phi)}{v})^{(1+2\Phi)}(P(BG_t^{v_1}(\frac{\beta(2+\Phi)\epsilon v_2}{v})^{v_2})^\epsilon)^\Phi Y_t^{v_2\epsilon\Phi}(1+\alpha a)^{2\Phi+v_2\epsilon\Phi+2}}} < 0$$

Regime security is:

$$S_t = \frac{\beta(1+\alpha a)y_t}{v\sqrt{\frac{AI\beta}{v(\frac{\beta(3+2\Phi)}{v})^{(1+2\Phi)}(P(BG_t^{v_1}(\frac{\beta(2+\Phi)\epsilon v_2}{v})^{v_2})^\epsilon)^\Phi Y_t^{v_2\epsilon\Phi}(1+\alpha a)^{2\Phi+v_2\epsilon\Phi}}}}$$

Aid increases regime security:

$$\frac{\partial S_t}{\partial a} = \frac{\beta y_t}{v}\sqrt{\frac{AI\beta(1+\alpha a)^{2+2\Phi+v_2\epsilon\Phi}}{v(\frac{\beta(3+2\Phi)}{v})^{(1+2\Phi)}(P(BG_t^{v_1}(\frac{\beta(2+\Phi)\epsilon v_2}{v})^{v_2})^\epsilon)^\Phi Y_t^{v_2\epsilon\Phi}}} > 0$$

In highly corrupt countries, foreign aid may have a counterproductive effect by strengthening the power of the ruling elite and reducing the discontent among the population.

## 4 Econometric Specification and estimation

### 4.1 Econometric specification

We base our econometric estimation on this specification:

$$\begin{aligned} Pol.Instability_{it} = & \alpha + \lambda_i + \sigma_t + \beta_1 Pol.Instability_{i(t-1)}\beta_2 Eco.Growth_{it} + \beta_3 Dictatorship_{it} \\ & + \beta_4 EthnicFragmentation_{it} + \beta_5 CivilLiberties_{it} + \beta_6 Trade_{it} + \beta_7 PartyFragit \\ & + \beta_8 UrbanPop_{it} + \beta_9 FuelExports_{it} + \beta_{10} PersistencePolity_{it} + \beta_{11} IMFaid_{it} + \\ & \beta_{12} WBaid_{it} + \beta_{13} WBaid_{it} * Dictatorship_{it} + \beta_{14} IMFaids_{it} * Dictatorship_{it} + v_{ij} \end{aligned}$$

We use 164 countries (Appendix C provides the list of the countries included in the sample) from 1970 to 2006. The countries and time period covered vary greatly with the type of estimation. Our sample is unbalanced. As a first step, we make use of OLS with fixed effects. We also include time dummies to account for time fixed effects. Table 1 provides the results. In the next section, we apply a one step system GMM due to the presence of the lagged dependent variable on the right side. These estimations allow us to check the robustness of our first findings. Tables 2 and 3 present the results. We also test our theoretical prediction that foreign aid has a negative impact on political instability in corrupt countries (see table 4).

In this section, we describe the potential determinants of political instability and their impact on our dependent variable: a weighted conflict index, provided by Banks [2011]. Table 5 (in Appendix B) provides a description of the explanatory variables and the dependent variables. We make use

of World Development Indicators regarding trade, economic growth, fuel exports, IMF purchases, World Bank projects and political instability (our second dependent variable). Descriptive statistics are provided in Appendix A. Ethnic Fragmentation is provided by [Alesina et al. \[2003\]](#). Party Fractionalization is furnished in CNTS by [Banks \[2011\]](#). Freedom House computes an index of civil liberties. Polity IV project (Monty G. Marshall) provides scores on political regimes: dictatorship and democracy (polity index). We make use of this index and compute three different measures (as recommended by Polity IV) : dictatorship (used in tables 2 and 4) is a dummy variable taking the value of 0 if the score assigned to a country is greater than or equal to 5 and 1 otherwise; anocracy (used in tables 3 and 4) takes the value of 1 if the polity score is greater than or equal to -5 and lower than or equal to 5 and equal to -66, -77 or -88, 0 otherwise ; autocracy takes the value of 1 if polity score is lower than or equal to -6 and greater than or equal to -10 and 0 otherwise<sup>5</sup> . These distinctions allow us to understand the differences between the political structures of the countries. We also integrate an indicator of persistence of polity provided by polity IV which measures the changes in political scores.

## 4.2 Empirical testing

Table 1 provides our first results and supports the prediction of an effect of IMF intervention on political instability in dictatorial regimes. Economic Growth leads to a decrease of political instability. More developed nations face less risks of conflicts. The likelihood of conflicts is higher in least developed countries. We integrate past political instability and it appears to be a major determinant of present conflicts. R squared largely increases with the introduction of past conflicts (from 0.030 to 0.198).

In our sample, dictatorial regimes (measured by the polity IV index) are more likely to face political troubles. It might be due to the large inclusion of countries in this category (countries ranked from -10 to 5 are included).

Oil resources might create conflicts but we don't find any evidence of such an effect, except in Table 4 (next section).

The persistence of polity allows us to control for the regime duration (without any distinction between the regime). Democratic maturity strengthens the government's legitimacy and reduces political contests. Time duration of a dictatorial regime reinforces its power and leads to lower political protests. Potential insurgents or protestors are more stringently controlled or they also might have less resources.

The lack of civil liberties seems to increase political instability.

IMF supports seem to reduce political instability (column 4) and this effect remains if we control for IMF loans in dictatorial regimes (columns 12 and 13). These results support the view that aid might have a negative impact on political instability in dictatorships.

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<sup>5</sup>This classification is used for example by [Marshall and Jagers \[2009\]](#) or [Andersen and Aslaksen \[2013\]](#)

Table 1: Determinants of political instability, OLS fixed effects

VARIABLES	OLS, Fixed-effects (within) regression, Time Dummies included												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Growth (lagged)	-15.02*** (3.385)	-3.276 (3.085)	-3.157 (3.085)	-5.733 (3.836)	-8.193** (3.786)	-2.468 (2.982)	-2.063 (3.272)	-2.669 (3.198)	-3.338 (3.088)	2.745 (5.666)	-3.093 (3.333)	-5.726 (3.836)	-0.385 (10.36)
Past Instability (lagged)	0.393*** (0.0130)	0.391*** (0.0130)	0.386*** (0.0145)	0.315*** (0.0194)	0.433*** (0.0139)	0.388*** (0.0133)	0.390*** (0.0131)	0.393*** (0.0130)	0.398*** (0.0166)	0.413*** (0.0139)	0.389*** (0.0148)	0.343*** (0.0330)	0.343*** (0.0289)
IMF amount (lagged)				-0.0664* (0.0393)						-0.0237 (0.0444)		0.0237 (0.0543)	
WB amount (lagged)			0.137 (0.106)							0.191 (0.139)		-0.249 (0.189)	
Dictatorship (lagged)		130.6* (71.80)								175.0* (86.66)		546.6*** (198.9)	
Ethnic Fragmentation				9.894 (36.79)								24.10 (114.8)	
Lack of Civil liberties (lagged)					51.14** (22.15)						85.12 (81.26)		
Trade (lagged)						-0.425 (1.068)						-0.0334 (3.629)	
Party fragmentation (lagged)							0.0109 (0.0093)					-0.0866 (0.0266)	
Urban population (log <sub>e</sub> )								-53.89 (115.2)				87.80 (544.1)	
Fuel exports (lagged)									0.453 (2.553)			-7.280 (5.667)	
Persistence of polity (lagged)										-6.149** (2.746)		-8.183 (7.702)	
IMF amount*Dictatorship(lagged)											-0.219** (0.0978)		-0.397*** (0.106)
WB amount*Dictatorship (lagged)												-0.0732 (0.178)	
Observations	4,573	4,525	4,525	3,663	2,359	4,288	4,344	4,462	4,525	2,952	3,876	3,663	1,099
R-squared	0.030	0.198	0.198	0.196	0.139	0.223	0.194	0.194	0.198	0.195	0.226	0.198	0.165
Number of countries	162	162	162	128	157	160	155	162	162	151	137	128	102

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Constant terms, time dummies and country fixed effects are included but not reported. They are available upon request.

## 5 Robustness Checks

The first subsection provides empirical evidence that the effect of foreign aid on political instability occurs only in contested dictatorships, which we refer to as anocracies. In the second part, we test our theoretical prediction of this effect in corrupt and contested dictatorships.

### 5.1 Dictatorships, Anocracies vs Autocracies

In this section, we take into account the dynamic panel-data structure using one-step system GMM and we check the robustness of our results. We also make use of an other measure of political instability, provided by the World Bank: political stability and absence of violence (World Governance Indicator). This indicator has been rescaled such that a higher value indicates more unstable countries. To instrument the endogenous variables (IMF amount received and WB aid), we use two lags and one lag regarding the non strictly exogenous variables (Trade, Growth, Party fractionalization, Fuel Exports, Dictatorship, Economic Growth, Civil liberties, Past political instability and the interactive terms). These estimations are robust to the use of the other measure of political instability (WDI).

Table 2 provides the results using democracies as the reference group: dictatorships are analyzed. Table 3 considers anocracies and autocracies, as defined earlier. In columns 1 and 4, the interactive terms (IMF amount\*regime type) are considered as exogenous and are not instrumented. However, they are included with one lag. In columns 2, 5 and 6, we consider that the interactive terms are not strictly exogenous. In columns 3 and 6 we include time dummies. The structure of table 3 remains the same. Our results confirm that IMF intervention in non democratic countries decreases political instability. In table 2, IMF aid has a negative impact on political instability in dictatorships. Furthermore, we estimate our base specification using two sub types of dictatorial regimes (in table 3). We provide evidence that IMF intervention in anocracies has a negative impact on political instability. In conclusion, only contested dictatorships are affected by foreign aid. In this approach, we take "democratic countries" as a reference group. These results corroborate our theoretical predictions of an effect of foreign aid in contested dictatorship. Autocratic countries can be considered as uncontested dictatorships (as reported in Ronen [2009]) but are not included in our theoretical approach<sup>6</sup>. Anocracies correspond to our theoretical definition of a contested dictatorship<sup>7</sup>. Economic Growth appears to act as a bulwark against political instability (as reported in the last section). The lack of civil liberties may conduct to political activity if citizens can demand (or fight) for equality and freedom. Party fractionalization reduces political instability by providing a means of expression. Finally, past political instability is the most robust indicator of present political instability.

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<sup>6</sup>In Ronen [2009], an uncontested dictator is defined as "a self-serving dictator who does not face internal opposition and whose dynasty's incumbency is fully ensured."

<sup>7</sup>Ronen [2009] defines contested dictatorship as "a rich ruling elite family but with low per-capita income and no private capital markets or private investment".

Table 2: Determinants of political instability in dictatorships, System GMM

VARIABLES	Dynamic panel-data estimation, one-step system GMM					
	Weighted Conflict Index, Banks			Political Instability, WDI		
TIME PERIOD	1982-2005					
	(1)	(2)	(3)	(4)	(5)	(6)
Growth	-0.546** (0.262)	-0.568** (0.289)	-0.653*** (0.242)	-0.00832 (0.00791)	-0.00879 (0.00795)	-0.00803 (0.00879)
Trade	0.0720 (0.102)	0.0858 (0.107)	0.0123 (0.103)	0.00499 (0.00479)	0.00522 (0.00475)	0.00481 (0.00535)
Dictatorship	-5.547 (7.806)	-7.695 (7.033)	-6.595 (7.439)	0.155 (0.313)	0.212 (0.254)	0.184 (0.240)
IMF amount (lagged)	0.00176 (0.00230)	0.00189 (0.00231)	0.00150 (0.00211)	-4.57e-05 (5.50e-05)	-5.21e-05 (5.28e-05)	-4.20e-05 (4.84e-05)
WB amount (lagged)	0.0313 (0.0355)	0.0386 (0.0324)	0.0208 (0.0328)	-0.000700 (0.000868)	-0.000767 (0.000847)	-0.000692 (0.000806)
Ethnic fragmentation	-0.545 (0.806)	-0.524 (0.697)	-0.276 (0.688)	0.0265 (0.0271)	0.0305 (0.0249)	0.0262 (0.0237)
Party fractionalization	-0.000359 (0.000727)	-0.000241 (0.000786)	-0.000578 (0.000674)	4.98e-05 (5.89e-05)	5.68e-05 (4.71e-05)	5.24e-05 (4.26e-05)
Lack of Civil liberties	2.900 (2.810)	3.420 (2.809)	3.355 (2.636)	0.198 (0.148)	0.218 (0.134)	0.194 (0.145)
Fuel exports	-0.0354 (0.0993)	-0.0224 (0.0910)	-0.0511 (0.0973)	-0.00416 (0.00570)	-0.00526 (0.00491)	-0.00503 (0.00511)
Persistence of polity	-0.879 (0.628)	-0.950* (0.554)	-0.641 (0.500)	-0.0246 (0.0181)	-0.0255 (0.0175)	-0.0251 (0.0181)
Urban population (log)	-2.513 (4.720)	-2.360 (3.706)	-1.344 (4.308)	0.211 (0.164)	0.230 (0.149)	0.212 (0.136)
Dictatorship*IMF Amount (lagged)	-0.00955* (0.00564)	-0.00696 (0.00698)	-0.00820 (0.00539)	-0.00149 (0.00131)	-0.00203** (0.000911)	-0.00190** (0.000832)
Weighted conflict index (lagged)	-0.0141 (0.0285)	-0.0301 (0.0319)	-0.00842 (0.0266)	6.73e-05 (0.000512)	6.58e-05 (0.000530)	5.92e-05 (0.000477)
Weighted conflict index (lagged)	0.430*** (0.140)	0.416*** (0.127)	0.393*** (0.128)			
Political Instability, WDI (lagged)				0.750*** (0.124)	0.739*** (0.118)	0.757*** (0.113)
Observations	1,041	1,041	1,041	331	331	331
Number of countries	101	101	101	93	93	93
Time Fixed Effect	NO	NO	YES	NO	NO	YES
Arellano Bond test for autocorrelation (AR2)	0.51	0.66	0.29	0.68	0.63	0.55
P value	0.608	0.508	0.770	0.499	0.528	0.580
Sargan test for over-identifying restrictions	11.22	11.13	21.75	15.44	14.69	16.01
P value	0.340	0.518	0.016	0.117	0.259	0.191
Hansen test	14.72	17.72	15.03	18.88	18.13	18.65
P value	0.143	0.125	0.131	0.042	0.112	0.097
Wald Test	64.53	61.23	379.78	565.80	518.07	641.51
P value	0.000	0.000	0.000	0.000	0.000	0.000
Interactive term considered as	EXO	NOT EXO	EXO	EXO	NOT EXO	NOT EXO

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 3: Determinants of political instability in autocracies and anocracies, System GMM

VARIABLES TIME PERIOD	Dynamic panel-data estimation, one-step system GMM					
	Weighted Conflict Index, Banks 1982-2005			Political Instability, WDI 2003-2005		
	(1)	(2)	(3)	(4)	(5)	(6)
Growth	-0.492** (0.219)	-0.522** (0.221)	-0.579*** (0.216)	-0.00730 (0.00729)	-0.00832 (0.00723)	-0.00665 (0.00822)
Trade	0.0442 (0.0727)	0.0605 (0.0656)	-0.00900 (0.0801)	0.00470 (0.00468)	0.00346 (0.00419)	0.00442 (0.00460)
Anocracy	-0.639 (4.980)	-1.409 (4.824)	-1.757 (5.304)	-0.0591 (0.201)	-0.135 (0.177)	-0.161 (0.189)
Autocracy	-8.242 (9.185)	-11.88 (9.314)	-12.38 (9.399)	-0.193 (0.388)	-0.267 (0.316)	-0.273 (0.333)
IMF amount (lagged)	0.000822 (0.00177)	0.000768 (0.00177)	0.000839 (0.00165)	-3.94e-05 (3.88e-05)	-2.53e-05 (3.09e-05)	-2.81e-05 (3.14e-05)
WB amount (lagged)	0.0131 (0.0269)	0.00958 (0.0246)	0.0127 (0.0269)	-0.000671 (0.000620)	-0.000566 (0.000499)	-0.000595 (0.000528)
Ethnic Fragmentation	-0.0243 (0.605)	0.133 (0.547)	-0.0722 (0.613)	0.0192 (0.0169)	0.0107 (0.0139)	0.0102 (0.0148)
Party fractionalization	-0.000551 (0.000582)	-0.000487 (0.000570)	-0.000867 (0.000617)	3.43e-05 (5.46e-05)	1.98e-05 (4.23e-05)	2.67e-05 (4.33e-05)
Lack of Civil liberties	3.859 (2.504)	4.072 (2.615)	3.794 (2.367)	0.188* (0.111)	0.129 (0.0904)	0.119 (0.101)
Fuel exports	-0.0949 (0.0773)	-0.0925 (0.0719)	-0.0763 (0.0821)	-0.00174 (0.00389)	0.000302 (0.00315)	0.000439 (0.00328)
Persistence of polity	-0.530 (0.359)	-0.489 (0.337)	-0.409 (0.338)	-0.0219 (0.0165)	-0.0192 (0.0145)	-0.0224 (0.0158)
Urban population (log)	0.363 (3.584)	1.508 (2.662)	0.115 (3.758)	0.189* (0.106)	0.149* (0.0843)	0.159* (0.0875)
Autocracy*IMF Amount (lagged)	0.00946 (0.00633)	0.00720 (0.00639)	0.00958 (0.00656)	0.00251 (0.00304)	0.00236 (0.00305)	0.00199 (0.00331)
Anocracy*IMF Amount (lagged)	-0.00974** (0.00479)	-0.00765 (0.00498)	-0.00910* (0.00468)	-0.000942 (0.000687)	-0.00104* (0.000607)	-0.00111* (0.000592)
Autocracy*WB Amount (lagged)	-0.00913 (0.0218)	-0.00885 (0.0263)	-0.00882 (0.0204)	0.000161 (0.000611)	0.000313 (0.000510)	0.000392 (0.000533)
Anocracy*WB Amount (lagged)	0.00432 (0.0252)	-0.00315 (0.0261)	0.00407 (0.0248)	0.000445 (0.000471)	0.000343 (0.000420)	0.000360 (0.000442)
Weighted conflict index (lagged)	0.402*** (0.119)	0.373*** (0.106)	0.380*** (0.116)			
Political Instability, WDI (lagged)				0.744*** (0.102)	0.780*** (0.0862)	0.788*** (0.0901)
Observations	1,041	1,041	1,041	331	331	331
Number of countries	101	101	101	93	93	93
Time Fixed Effect	NO	NO	YES	NO	NO	YES
Arellano Bond test for autocorrelation (AR2)	0.40	0.44	0.30	0.64	0.49	0.46
P value	0.687	0.658	0.764	0.524	0.623	0.646
Sargan test for over-identifying restrictions	18.05	22.51	29.68	17.50	19.48	18.21
P value	0.080	0.095	0.003	0.094	0.193	0.252
Hansen test	19.36	22.63	21.91	17.74	18.64	16.60
P value	0.055	0.092	0.039	0.088	0.230	0.343
Wald Test	110.71	179.75	590.88	837.44	819.82	849.81
P value	0.000	0.000	0.000	0.000	0.000	0.000
Interactive term considered as	EXO	NOT EXO	EXO	EXO	NOT EXO	NOT EXO

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## 5.2 Low vs high corruption

In this section, we test our theoretical prediction regarding the level of corruption in the recipient countries. We use the base specification and test whether the negative impact of IFI's interventions is stronger in more corrupt countries. We divide our sample into two subsamples by separating the recipients scoring above and below the median value of the corruption variable provided by the World Bank (Worldwide Governance Indicator). This variable called "control of corruption" has been rescaled such that higher scores indicate higher perceived corruption. Countries above the median are considered as more corrupt for the relevant year and belong to the "high corruption" subsample.

Table 4 provides the results. The empirical tests consistently support the prediction that IMF programs in more corrupt countries lead to less political instability. In columns 1, 3, 5 and 7, the coefficients of the interactive terms "Regime\*IMF amount" are consistent and negative. IMF programs in dictatorial and corrupt countries have a negative impact on political instability. However, this effect is significant in anocracies or what is called in the theoretical section (section 3) "contested dictatorship".

We also provide empirical evidence of our theoretical prediction that IFI's interventions have no impact on political instability in low corrupt dictatorial regimes (in which donors strongly request that aid is used for intended purposes).

Past unstable countries and countries in which civil liberties are not guaranteed are also more likely to face political contests. Countries with higher economic growth rates are less unstable. We also find that oil exporters are less unstable if the ruling elite is less corrupt.

Table 4: Determinants of political instability regarding the level of corruption, System GMM

VARIABLES	Dynamic panel-data estimation, one-step system GMM								
	Weighted Conflict Index, Banks								
	High Corruption	Low Corruption	High Corruption	Low Corruption	High Corruption	Low Corruption	High Corruption	Low Corruption	(8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)			
Growth	-1.007** (0.479)	-0.573** (0.247)	-0.955** (0.438)	-0.650*** (0.235)	-0.779* (0.443)	-0.547** (0.227)	-0.755* (0.411)	-0.633*** (0.238)	
Trade	0.257 (0.192)	0.105 (0.203)	0.328 (0.244)	0.0629 (0.208)	0.171 (0.170)	0.133 (0.194)	0.225 (0.220)	0.0788 (0.178)	
Dictatorship	16.39 (10.24)	-1.670 (13.77)	14.55 (9.338)	-6.393 (15.22)					
IMF amount (lagged)	-0.00203 (0.00507)	-0.000415 (0.00283)	-0.00122 (0.00475)	-0.000396 (0.00303)	-0.00275 (0.00483)	-0.000309 (0.00217)	-0.00205 (0.00437)	-0.000296 (0.00234)	
WB amount (lagged)	0.0394 (0.0319)	-0.0210 (0.0377)	0.0335 (0.0282)	-0.0175 (0.0426)	0.0423 (0.0319)	-0.00825 (0.0348)	0.0382 (0.0285)	-0.00582 (0.0408)	
Ethnic Fragmentation	2.029 (2.347)	0.731 (0.850)	2.007 (2.417)	0.480 (0.772)	1.515 (1.531)	0.997 (0.916)	1.318 (1.746)	0.784 (0.803)	
Weighted conflict index (lagged)	0.600** (0.239)	0.199*** (0.0759)	0.600*** (0.212)	0.201*** (0.0775)	0.628** (0.249)	0.263** (0.109)	0.632*** (0.222)	0.259** (0.122)	
Party fractionalization	8.71e-05 (0.00160)	2.75e-05 (0.00174)	0.000481 (0.00165)	-0.000319 (0.000225)	0.000453 (0.00116)	-0.000259 (0.00138)	0.000785 (0.00129)	-0.000598 (0.00189)	
Lack of Civil liberties	6.010 (5.308)	6.780 (4.508)	4.586 (5.878)	6.012 (3.766)	5.111 (4.517)	7.875* (4.594)	2.414 (5.790)	6.987* (4.118)	
Fuel exports	-0.263 (0.170)	-0.226* (0.137)	-0.240 (0.179)	-0.234* (0.140)	-0.151 (0.146)	-0.323** (0.165)	-0.114 (0.168)	-0.329** (0.159)	
Persistence of polity	-2.042* (1.114)	-0.548 (0.504)	-2.093** (1.056)	-0.532 (0.516)	-1.544 (1.178)	-0.403 (0.431)	-1.727 (1.147)	-0.366 (0.468)	
Urban population (log)	3.052 (3.473)	5.670 (4.319)	4.070 (3.365)	4.815 (4.175)	1.072 (3.839)	5.108 (4.638)	1.797 (3.836)	4.274 (4.696)	
Dictatorship*IMF Amount (lagged)	-0.00953* (0.00493)	-0.00307 (0.00325)	-0.0108** (0.00460)	-0.00268 (0.00367)					
Dictatorship*WBAmount (lagged)	-0.0268 (0.0229)	0.0155 (0.0272)	-0.0206 (0.0215)	0.0143 (0.0306)					
Autocracy					6.471 (17.47)	8.985 (10.53)	6.927 (15.29)	4.849 (11.25)	
Anocracy					8.120 (10.75)	4.147 (5.714)	7.363 (9.299)	1.480 (7.055)	
Anocracy*IMF Amount (lagged)					-0.00958** (0.00464)	-0.00611 (0.00447)	-0.0108*** (0.00408)	-0.00550 (0.00408)	
Autocracy*IMF Amount (lagged)					0.00734 (0.0122)	0.00732 (0.00714)	0.00523 (0.0112)	0.00878 (0.00726)	
Anocracy*WB Amount (lagged)					-0.0229 (0.0226)	0.0174 (0.0210)	-0.0186 (0.0202)	0.0155 (0.0224)	
Autocracy*WB Amount (lagged)					-0.0250 (0.0281)	-0.00759 (0.0315)	-0.0164 (0.0268)	-0.00786 (0.0371)	
Observations	332	709	332	709	332	709	332	709	
Number of countries	72	100	72	100	72	100	72	100	
Time Fixed Effect	NO	NO	YES	YES	NO	NO	YES	YES	
Arellano Bond test for autocorrelation (AR2)	0.63	-0.30	0.59	-0.09	0.79	-0.99	0.75	-0.63	
P value	0.527	0.760	0.553	0.931	0.428	0.324	0.453	0.529	
Sargan test for over-identifying restrictions	11.99	14.06	13.02	16.74	9.27	22.07	9.95	26.09	
P value	0.286	0.170	0.222	0.080	0.597	0.024	0.535	0.006	
Hansen test	11.41	16.77	11.91	18.62	7.96	17.54	8.90	19.21	
P value	0.326	0.080	0.291	0.045	0.716	0.093	0.631	0.057	
Wald Test	37.19	32.34	56.24	381.39	274.77	91.67	344.71	459.60	
P value	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	

Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. "Low" and "high" corruption sub-samples are defined by the sample median value of the "Control of Corruption" indicator (rescaled) for the relevant year.

## 6 Conclusion

In the literature, aid effectiveness is largely explained by economic determinants in recipient countries but political constraints also affect the conditions under which aid is effective. Moreover, aid flows may affect political instability, governance or public choices.

In our study, we support the view that aid flows might lead to a decrease of political instability in corrupt and contested dictatorships. Firstly, we use the Ronen's model of a contested dictatorship receiving foreign aid. Foreign aid flows affect political forces in developing countries and this effect might be due to the weakening in government accountability (through its negative impact on the tax rate). Resources derived from foreign aid are used in repression by the ruling elite to strengthen regime security. Furthermore, foreign aid provides transfers to the poor and expands population's consumption. The discontent among the population can be reduced and the resources used by the insurgents fall. According to these mechanisms, aid can decrease political contests in contested dictatorships.

Corruption can explain the negative impact of aid in contested dictatorships. [Rock \[2009\]](#) reveals that a period of 10 to 12 years is needed to reach the point from which democracy and corruption are negatively related. Democratic maturity is needed to fight against corruption and dictatorships are more likely to be corrupt. Our theoretical model allows to conclude that foreign aid might consolidate political stability in contested dictatorships if the ruling elite is corrupt.

Secondly, we test empirically whether loans provided by IMF and the World Bank have an impact on political instability in dictatorships. We find strong evidence of such an effect regarding IMF supports. In contested dictatorial regimes, aid can reinforce political stability. Our results are robust to various specifications and measures of instability.

Thirdly, we test our theoretical prediction that foreign aid leads to a reinforcement of political stability in contested and corrupt dictatorships. Our empirical findings confirm that IMF intervention could have a counterproductive effect by increasing regime stability if the ruling elite is highly corrupt. In conclusion, aid should be more dependent upon governance efforts. Donors should ensure that support for governance policy reforms features prominently in their aid strategies.

In this study, we have analyzed the impact of foreign aid on political instability, assuming that aid failures in a dictatorial regime might be due to corruption. Others mechanisms might explain the indirect effect of aid on political instability.

- **foreign aid affecting reforms: liberalizations/deregulation**

Regarding economic and political reforms, aid might have the opposite effect to that expected. Some studies question aid effectiveness and demonstrate that recipient countries have no incentive to implement reforms improving the welfare of the poor if aid is not granted with strong conditionality and commitment. Concerning altruistic donors, even if they are committed to political reforms and if they try to attach conditionality to their aid, a credi-

bility problem necessarily arises. [Svensson \[2000\]](#) argues that tied projects and a delegation of a share of aid budget to a "neutral international organization"<sup>8</sup> should resolve part of the problem because of the greater credibility this agency would have.

[Kilby \[2005\]](#) uses a panel dataset of 71 recipient countries from 1970 to 1995 and finds that aid leads to a decrease of regulation.

- **foreign aid affecting political competition or democracy**

By supporting democratization in recipient countries, foreign aid potentially increases political instability (if democratic countries are more unstable). The effects of foreign aid on democratic transition remain complex. Some authors argue that countries receiving aid are more likely to acquire more democratic principles ([Smith \[2008\]](#); [Djankov et al. \[2008\]](#); [Morrison \[2009\]](#); [de Mesquita and Smith \[2010\]](#); [Kalyvitis and Vlachaki \[2012\]](#)). Others scholars have assessed that aid favors democratic transition ([Dunning \[2004\]](#); [Goldsmit \[2001\]](#)). [Dunning \[2004\]](#) focuses on foreign aid provided by western donors and channeled to 48 Sub-Saharan African countries from 1975 to 1997. He finds that aid has a positive impact on democracy during the post Cold War period. [Csordás and Ludwig \[2011\]](#) estimate that aid contributes to stabilize democratic capital (democratic rights and political freedom) but doesn't favor the acquisition of more democratic rules in countries where the institutions are not already sufficiently democratic. [Knack \[2004\]](#) finds no evidence of such an effect.

- **foreign aid affecting income distribution**

[Morrison \[2007\]](#) points out that aid may undermine income redistribution by reducing the acceptance by the poor of a positive tax rate if aid funds are relatively large. According to Morrison, an appropriate institutional environment is no longer a guarantee of a positive effect of aid on democratization. [Bjørnskov \[2010\]](#) finds that foreign aid in democratic countries is less effective in promoting income redistribution. Indeed, the share of income accruing to richest people increases while aid rises.

- **foreign aid affecting economic policy choices**

[Nooruddin and Simmons \[2006\]](#) highlight that IMF programs may encourage governments to reduce social expenditures. Aid leads to lower tax rate ([Remmer \[2004\]](#)). [Boone \[1996\]](#) finds that foreign aid increases the size of government (measured by government consumption).

Further research on these topics is needed in order to understand the impact and the effectiveness of aid in developing countries.

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<sup>8</sup>neutral in terms of poverty aversion

## References

- D. Acemoglu and J. A. Robinson. A theory of political transitions. *American Economic Review*, 91(4):938–963, 2001.
- A. Aisen and F. J. Veiga. How does political instability affect economic growth? (11/12), 2011.
- A. Alesina, S. Ozler, N. Roubini, and P. Swagel. Political instability and economic growth. *Journal of Economic Growth*, 1(2):189–211, 1996.
- A. Alesina, A. Devleeschauwer, W. Easterly, S. Kurlat, and R. Wacziarg. Fractionalization. *Journal of Economic Growth*, 8(2):155–194, 2003.
- J. Andersen and S. Aslaksen. Oil and political survival. *Journal of Development Economics*, 100(1):89–106, 2013.
- A. Annert. Social fractionalization, political instability, and the size of government. (82), 2000.
- R. Arezki and M. Brückner. Oil rents, corruption, and state stability: Evidence from panel data. *European Economic Review*, 55(7):955–963, 2011.
- J. Y. Auvinen. IMF intervention and political protest in the third world: a conventional wisdom refined. *Third World Quarterly*, 17(3):377–400, 1996.
- A. Banks. Cross-national time-series data archive, 2011. URL <http://www.databanksinternational.com/>.
- R. J. Barro. Economic growth in a cross-section of countries. *The Quarterly Journal of Economics*, 106(2):407–443, 1991.
- H. S. Bienen and M. Gersovitz. Economic stabilization, conditionality, and political stability. *International Organization*, 39(4):729–754, 1985.
- C. Bjørnskov. Do elites benefit from democracy and foreign aid in developing countries? *Journal of Development Economics*, 92(2):115–124, 2010.
- L. Blanco and R. Grier. Long live democracy: The determinants of political instability in latin america. *Journal of Development Studies*, 45(1):76–95, 2009.
- P. Boone. Politics and the effectiveness of foreign aid. *European Economic*, 40(2):289–329, 1996.
- D. A. Brautigam and S. Knack. Foreign aid, institutions and governance in sub-saharan africa. *Economic Development and Cultural Change*, 52(2):255–285, 2004.
- J. L. Butkiewicz and H. Yanikkaya. The impact of sociopolitical instability on economic growth : Analysis and implications. *Journal of Policy Modeling*, 27(5):629–645, 2005.

- N. F. Campos and J. B. Nugent. Who is afraid of political instability? *Journal of Development Economics*, 67(1):157–172, 2002.
- F. Carmignani. The distributive effects of institutional quality when government stability is endogenous. *European Journal of Political Economy*, 25(4):409–421, 2009.
- L. Chauvet. Socio-political instability and the allocation of international aid by donors. *European Journal of Political Economy*, 19(1):33–59, 2003.
- P. Collier. Is aid oil? an analysis of whether africa can absorb more aid. *World Development*, 34 (9):1482–1497, 2006.
- P. Collier. *The Bottom Billion*. 2007.
- P. Collier and A. Hoefferl. Aid, policy and growth in post-conflict societies. *European Economic Review*, 48(5):1125–1145, 2004.
- S. Csordás and M. Ludwig. An empirical investigation of the determinants of democracy : Trade, aid and the neighbor effect. *Economics Letters*, 110(3):235–237, 2011.
- A. Cukierman, S. Edwards, and G. Tabellini. Seigniorage and political instability. *American Economic Review*, 82(3):537–555, 1992.
- B. B. de Mesquita and A. Smith. Leader survival, revolutions, and the nature of government finance. *American Journal of Political Science*, 54(4):936–950, 2010.
- M. B. Devereux and J.-F. Wen. Political instability, capital taxation, and growth. *European Economic Review*, 42(9):1635–1651, 1998.
- S. Djankov, J. G. Montalvo, and M. Reynal-Querol. The curse of aid. *Journal of Economic Growth*, 13(3):169–194, 2008.
- N. Donovan, M. Smart, M. Moreno-Torres, J. Ole Kiso, and G. Zachariah. Countries at risk of instability: risk factors and dynamics of instability. *Prime Minister's Strategy Unit Background Paper*, 2005.
- A. Dreher. Does the IMF influence fiscal and monetary policy? *Journal of Policy Reform*, 8(3): 225–238, 2005.
- A. Dreher and M. Gassebner. Do IMF and world bank programs induce government crises? an empirical analysis. *International Organization*, 66(2):329–358, 2012.
- T. Dunning. Conditioning the effects of aid: Cold war politics, donor credibility, and democracy in africa. *International Organization*, 58(2):409–423, 2004.

- P. Dutt and D. Mitra. Inequality and the instability of polity and policy. *The Economic Journal*, 118(531):1285–1314, 2008.
- G. Economides, S. Kalyvitis, and A. Philippopoulos. Does foreign aid distort incentives and hurt growth? theory and evidence from 75 aid-recipient countries. *Public choice*, 134(3-4):463–488, 2008.
- I. Elbadawi and N. Sambanis. How much war will we see? *Journal of Conflict Resolution*, 46(3): 307–344, 2002.
- T. Ellingsen. Colorful community or ethnic witches' brew? multiethnicity and domestic conflict during and after the cold war. *Journal of Conflict Resolution*, 44(2):228–249, 2000.
- J. D. Fearon and D. D. Laitin. Ethnicity, insurgency, and civil war. *American Political Science Review*, 97(1):75–90, 2003.
- Y. Feng. Democracy, political stability and economic growth. *British Journal of Political Science*, 27(3):391–418, 1997.
- Y. Feng. Political freedom, political instability and policy uncertainty: A study of political institutions and private investment in developing countries. *International Studies Quarterly*, 45(2): 271–294, 2001.
- A. Goldsmith. Foreign aid and statehood in africa. *International Organization*, 55(1):123–148, 2001.
- J. A. Goldstone, R. H. Bates, D. L. Epstein, T. R. Gurr, M. B. Lustik, M. G. Marshall, J. Ulfelder, and M. Woodward. A global model for forecasting political instability. *American Journal of Political Science*, 54(1):190–208, 2010.
- S. Haggard. The politics of adjustment: Lessons from the IMF's extended fund facility. *International Organization*, 39(3):505?534, 1985.
- S. Huntington. *Political order in changing societies*. Yale University Press, 1968.
- R. Jong-A-Pin. On the measurement of political instability : and its impact on economic growth. *European Journal of Political Economy*, 25(1):15–29, 2009.
- S. Kalyvitis and I. Vlachaki. When does more aid imply less democracy ? an empirical examination. *European Journal of Political Economy*, 28(1):132–146, 2012.
- C. Kilby. Aid and regulation. *The Quarterly Review of Economics and Finance*, 45(2):325–345, 2005.
- S. Knack. Aid dependence and the quality of governance: A cross country empirical test. *Southern Economic Journal*, 68(310-329):2, 2001.

- S. Knack. Does foreign aid promote democracy? *International Studies Quarterly*, 48(1):251–266, 2004.
- S. Knack. Sovereign rents and quality of tax policy and administration. *Journal of Comparative Economics*, 37(3):359–371, 2009.
- S. Kosack. Effective aid: How democracy allows development aid to improve the quality of life. *World Development*, 31(1):1–22, 2003.
- S. Kosack and J. Tobin. Funding self-sustaining development: The role of aid, fdi, and government in economic success. *International Organization*, 60(1):205–243, 2006.
- S. M. Lipset. *Political man: the social bases of politics*. 1960.
- J. B. Londregan and K. T. Poole. Poverty, the coup trap, and the seizure of executive power. *World Politic*, 42(2):151–183, 1990.
- M. Marshall and B. Cole. Conflict, governance and state fragility, 2011. URL <http://www.systemicpeace.org/GlobalReport2011.pdf>.
- M. Marshall and K. Jagers. Polity iv project. political regime characteristics and transitions, 1800-2010, 2009. URL <http://www.systemicpeace.org/polity/polity4.htm>.
- D. Miljkovic and A. Rimal. The impact of socio-economic factors on political instability: A cross-country analysis. *The Journal of Socio-Economics*, 37(6):2454–2463, 2008.
- K. M. Morrison. Natural resources, aid, and democratization: A best-case scenario. *Public Choice*, 131(3):365–386, 2007.
- K. M. Morrison. Oil, non tax revenue, and the redistributive foundations of regime stability. *International Organization*, 63(1):107–138, 2009.
- K. M. Morrison. What can we learn about the "resource curse" from foreign aid? *The World Bank Research Observer*, 27(1):52–73, 2012.
- I. Nooruddin and J. W. Simmons. The politics of hard choices: IMF programs and government spending. *International Organization*, 60(4):1001–1033, 2006.
- P. M. Pinto and J. F. Timmons. The political determinants of economic performance: political competition and the sources of growth. *Comparative Political Studies*, 38(1):26–50, 2005.
- K. L. Remmer. Does foreign aid promote the expansion of government? *American Journal of Political Science*, 48(1):77–92, 2004.
- M. T. Rock. Corruption and democracy. *Journal of Development Studies*, 45(1):55–75, 2009.

- M. J. Roe and J. I. Siegel. Political instability: Effects on financial development, roots in the severity of economic inequality. *Journal of Comparative Economics*, 39(3):279–309, 2011.
- B.-E. Ronen. Dictators, development, and the virtue of political instability. *Public Choice*, 138(1):29–44, 2009.
- D. Sanders. *Patterns of Political Instability*. The MacMillan Press, London, UK., 1981.
- C. L. Siermann. *Politics, institutions, and the economic performance of nations*. Edward Elgar Pub, 1998.
- A. Smith. The perils of unearned income. *Journal of Politics*, 70(3):780–793, 2008.
- R. W. Stone. Political economy of IMF lending in africa. *American Political Science Review*, 98(4):577–591, 2004.
- J. Svensson. Foreign aid and rent-seeking. *Journal of International Economics*, 51(2):437–461, 2000.

# Appendices

## A Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Growth	5390	1.838257	6.633414	-50.29035	92.58597
Trade	5168	80.05566	47.4646	0	460.4711
Fuel Exports	3630	19.00967	31.86732	0	359.2561
IMF amount	4637	81.71042	621.2487	0	17670
WB amount	6355	111.5679	356.5306	0	6380
Urban population (log)	6681	14.15894	2.191271	7.385489	20.21358
Political Instability (WDI)	1927	.2679177	.9654516	-1.544366	3.320775
Ethnic Fragmentation	2494	.5759597	1.170738	0	21.4174
PArt Fractionalization	5203	3168.874	3217.999	0	9983
Lack of Civil Liberties	5554	4.17717	1.769016	1	7
Dictatorship	6879	.453845	.4979014	0	1
Autocracy	6724	.3500892	.4770331	0	1
Anocracy	6724	.1142177	.3180992	0	1
Persistence of polity	4623	16.80402	16.60154	0	99
Weighted conflict index (Banks)	5360	919.8989	2001.162	0	51625
IMF amount*Dictatorship	4637	25.83681	272.6245	0	13290
IMF amount*Autocracy	4637	11.75693	107.7667	0	5772
IMF amount*Anocracy	4637	14.07988	251.0808	0	13290
WB amount*Dictatorship	6355	46.17343	193.1605	0	3400
WB amount*Anocracy	6355	16.16026	119.7083	0	3340
IMF amount*Autocracy	6355	30.01317	154.7614	0	3400

## B Description of explanatory variables

The next table describes all explanatory variables used in the analysis and their sources.

Table 5: Description of variables and sources

Variables	Description	Sources
Defined by the World Bank, World Development Indicator (WDI)		
Growth	Annual % growth rate of GDP per capita based on constant local currency. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added plus any product taxes and minus any subsidies not included in the value of the products.	WDI
Trade (% GDP)	Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.	WDI
Fuel Exports	Fuel exports (% of merchandise exports), Fuels comprise SITC section 3 (mineral fuels)	WDI
IMF Amount	IMF purchases are total drawings on the General Resources Account of the IMF during the year specified, excluding drawings in the reserve tranche. Data are in current U.S. dollars (in billion)	WDI
Urban Population (log)	Urban population refers to people living in urban areas as defined by national statistical offices. We use the log of this variables.	WDI
Political instability	Political stability and absence of violence measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. This index is rescaled to have higher values indicate greater instability. We use the following formula: $PoliticalInstability = (polstability * -1)$	Worldwide governance indicators
Corruption	Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. This index has been rescaled such that higher scores designate more corrupt countries	Worldwide governance indicators
WB amount	Lending Project Cost in US Million	WB Projects Portfolio
Ethnic Fragmentation	Average value of five different indices of ethnolinguistic fractionalization. Its value ranges from 0 to 1. The five component indices are: (1) index of ethnolinguistic fractionalization in 1960, which measures the probability that two randomly selected people from a given country will not belong to the same ethnolinguistic group. (2) probability of two randomly selected individuals speaking different languages (3) probability of two randomly selected individuals do not speak the same language (4) % of population not speaking the official language (5)% of the population not speaking the most widely used language.	Alesina, De Vleeschauwer, Easterly, Kurlat and Wacziarg (2003)
Party Fractionalization	Party Fractionalization Index = $\frac{1}{\sum t_i^2}$ where $t_i$ is the proportion of members associated with the $i^{th}$ party in the lower house of the legislature	CNTS, Banks
Lack of Civil Liberties	It measures freedom of expression and belief, associational and organizational rights, the rule of law, and personal autonomy and individual rights. The score ranges from 1 (most free) to 7 (lest free)	Freedom House (2012)
Defined by Polity IV		
Polity	It is computed using the following components: competitiveness of political participation, competitiveness of executive recruitment, openness of executive recruitment and constraints on the chief executive. It ranges from -10 (full autocracy) to 10 (full democracy)	Polity project
Dictatorship	Polity scores < 5	Own calculation
Autocracy	Polity scores < 5	Own calculation
Anocracy	Polity scores $\leq 5$ and $\geq -5$ and = -66, -77, -88	Own calculation
Persistence of polity	Polity Persistence: The (rounded) number of years the polity has persisted without a recorded change in values on any of the six Polity component variables	Polity project
Variables of interest. Defined by Cross National Time Series, Banks		
Weighted conflict index	$(24 * assassinations + 43 * Strikes + 46 * Guerrillas + 48 * GovCrisis + 86 * Purges + 102 * Riots + 148 * Revolutions + 200 * antigovdemonstrations)/9$ . We also have divided the index by 100. The resulting index is expressed in hundreds of conflicts.	CNTS, Banks

## C List of countries used in the sample

Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Azerbaijan, Bahamas. The, Bahrain, Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, Brunei Darussalam, Bulgaria, Burkina Faso, Burundi, Cambodia, Cameroon, Cape Verde, Central African Republic, Chad, Chile, China, Colombia, Comoros, Congo. Dem. Rep., Congo. Rep., Costa Rica, Cote d'Ivoire, Croatia, Cuba, Cyprus, Czech Republic, Djibouti, Dominica, Dominican Republic, Ecuador, Egypt. Arab Rep., El Salvador, Equatorial Guinea, Eritrea, Estonia, Ethiopia, Fiji, Gabon, Gambia. The, Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran. Islamic Rep., Iraq, Israel, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Korea. Dem. Rep., Kuwait, Kyrgyz Republic, Lao PDR, Latvia, Lebanon, Lesotho, Liberia, Libya, Lithuania, Macedonia. FYR, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Marshall Islands, Mauritania, Mauritius, Mexico, Micronesia. Fed. Sts., Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Niger, Nigeria, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Qatar, Romania, Russian Federation, Rwanda, Samoa, San Marino, Sao Tome and Principe, Saudi Arabia, Senegal, Serbia, Seychelles, Sierra Leone, Singapore, Slovak Republic, Slovenia, Solomon Islands, Somalia, South Africa, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Sudan, Suriname, Swaziland, Syrian Arab Republic, Tajikistan, Tanzania, Thailand, Timor-Leste, Togo, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Tuvalu, Uganda, Ukraine, Uruguay, Uzbekistan, Vanuatu, Venezuela. RB, Vietnam, West Bank and Gaza, Yemen. Rep., Zambia, Zimbabwe

## D Literature on political instability/stability

Authors	Description of the dependent variables	Method Used	Effect on political instability (significant variables only)
Dreher and Gassebner (2012)	Major government crises	Conditional fixed effects logit and GMM	IFT's (IMF/WB):+; Democracies:+, Demonstrations:+, Purges: +, Growth per cap (t-1):-
Arezki and Brückner (2011)	Civil conflict onset and incidence	Logit FE, GMM	Civil liberties and political rights:-; No effect of oil rents
Campos and Nugent (2002)	PCA and 2 SPI indices; "severe" and "upper bound" SPI: assassinations, revolutions, successful coups d'état; "moderate" and "lower": competitiveness and regulation of political participation	IV, first-differences, 5-year averages	Economic growth:-
Blanco and Grier (2009)	SPI (PCA on 9 components) assassinations, coups, government, crises, anti-government demonstrations, riots, strikes, purges, guerrilla activity and revolutions	OLS with White robust standard errors	Democracy and openness to trade:-; Fractionalized political systems:+; non linear effect of urban growth, income inequality and ethnic fractionalization
Miljkovic and Rimal (2008)	Irregular and regular government changes	Negative binomial	Democracy and economic growth: ; initial level of GDP (economic development):- (except regular government changes)
Jong A Pin (2009)	Exploratory Factor Analysis: politically motivated violence mass civil protest, instability within the political regime and instability of the political regime.	Dynamic GMM	Strong effect of past instability
Cukierman et al. (1992)	Dummy: regular or irregular government change	Probit, Country Fixed Effects	Democracy:+; Repression, attempts, executive adjustment: +; Majoritarian governments: -
De Ree and Nillesen (2009)	Civil conflict dummy (continuation and onset)	OLS/ IV (first differences)	ODA:- (continuation); GDP growth:-; GDP per cap.:+ or + (civil conflict in level)
Fearon and Laitin (2003)	Civil war onset	Logit	Prior War and per cap. income:-; Population, Mountains :+; Oil exports and being a new state :+
Goldstone et al. (2010)	large-scale violent conflicts, democratic reversals, genocides, and state collapse.		Infant mortality:+; instability in neighborhood:+; discrimination against minorities:+
Roe and Siegel (2011)	SPI (from Alesina and Perotti, 1996), IMD (International Institute of Managerial Development) of World Competitiveness Yearbook, World Economic Forum Instability	OLS	Size of middle class:-; Mean temperature above 32 degrees Celsius:+; Rice export on total agricultural exports in 1975 and Cocoa bean+cocoa powder exports on total agricultural exports in 1975:+; Coffee export/total agricultural exports in 1975
Alesina and Perotti (1996)	SPI, PCA on 5 components: Assassinations, Coups successful or attempted, Deaths, Regime type	2SLS/3SLS	Size of middle class:-; primary school enrollment:-
Svensson (1998)	Probability of major government change	3SLS with investment	Urbanization and political polarization, Latin America and Africa:+
Elbadawi and Sambanis (2002)	Civil War onset and prevalence	Dynamic pooled probit ; GEE Probit; Two stage and Instrumented Probit Model	Real GDP:-; Population size(in log):+; ethnic heterogeneity:+; Democracy:-; Lagged War (dependent variable):+