REPRESSION AND FOREIGN AID IN AUTOCRACIES: EXPLOITING DEBT RELIEF NEGOTIATIONS IN POST-COLD WAR AFRICA

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Repression and Foreign Aid in Autocracies:
Exploiting Debt Relief Negotiations in Post-Cold War Africa

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October 28, 2015

Abstract

Does dependence on development aid from Western sources constrain the use of repression among autocrats? To answer this question, I employ a novel dataset of Africa’s post-Cold War autocracies in which the unit of analysis is the country-day rather than the country-year. This day-level dataset enables me to address three potential sources of bias that obscure the relationship between Western aid dependence and repression. The evidence suggests that, when the threat of financial sanction is credible, Western donors have reduced the daily odds of repression in Africa’s post-Cold War autocracies by a factor of 10. Western aid dependence is constraining even during election seasons, when rates of protest and repression are high relative to other times of year. Most broadly, these results suggest that modern autocrats who rely on Western donors for financial support lack the easy recourse to repression enjoyed by their Cold War era predecessors.

Word Count: 11,401

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If we could just get 1,000 people in the streets, [President Denis Sassou Nguesso] could never open fire on them all. He is too reliant on the West.

– An anonymous opposition activist in the Republic of Congo

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1 Introduction

The Republic of Congo has been ruled by President Denis Sassou Nguesso for all but five years since 1979. After ruling as a military dictator throughout the 1980s, he was swept up in the “Third Wave of Democracy” that hit Africa as the Berlin Wall fell. He seized power again following a brutal civil war in 1997 and soon claimed victory in two fraudulent presidential elections. Amidst rising oil prices, Sassou Nguesso acquired a reputation as among the world’s most venal autocrats. As 2014 came to a close, he contemplated a constitutional revision that would abolish presidential term limits, enabling him to retain power beyond 2016 with a veneer of legitimacy. As he did so, he watched a revolution in Burkina Faso. Facing the same decision as Sassou Nguesso, President Blaise Compaoré announced his intention to amend Burkina Faso’s constitution, which would enable him to extend his 27 years in office. As protesters flooded the streets of Ouagadougou, it became clear that Compaoré’s security services would have to massacre thousands of citizens for the aging autocrat to retain power. Among the world’s poorest countries, Burkina Faso relies on Western donors to feed its growing population. Indeed, it was unclear whether Compaoré could long survive Western sanctions for gross human rights violations. Compaoré chose gilded exile instead, financed by his extraordinary graft.

Compaoré’s resignation gave Congo’s opposition reason for optimism, as it did to pro-democracy activists across Africa. It affirmed their belief that Western donors so constrained Africa’s autocrats that anti-third term protests might blossom into an “African Spring.” And there is mounting evidence that Western donors curtail foreign aid when recipient governments violate their citizens’ human rights. These financial sanctions can have devastating consequences. Although Western donors may fund public good interventions, Bueno de Mesquita et al. (2003) observe that money is fungible. As a result, when donors provide critical public goods, autocrats can channel scarce revenue to their internal security apparatus, longtime political allies, and opposition rivals. For these reasons, Bueno de Mesquita et al. (2003) argue, Western aid sustains autocrats.

This financial sustenance, however, gives Western donors leverage over recipient governments, as Congo’s pro-democracy activists recognize. Is the prospect of punishment by Western creditors sufficient to deter Africa’s autocrats from repressing their citizens?

1 Interview with the author, 13 April 2012.
3 Personal correspondence with several pro-democracy activists in Congo, November 2014.
4 Nielsen (2013). Note, however, that Stone (2004) and Lebovic and Voeten (2009) find that enforcement by bilateral donors and multilateral institutions can be subjected to domestic political calculations.
5 See also Bueno de Mesquita and Smith (2009a, 2011).
Scholars have long found reason for pessimism. While some scholars argue that foreign aid has little impact on political liberalization, others attribute to it a range of pernicious effects. Foreign aid is thought to foster bureaucratic inefficiency, diminish government responsiveness to citizens, and strengthen the state’s repressive apparatus. Some scholars even compare foreign aid to oil receipts, which, as a source of unearned income, may increase the value of holding power and undercut the “social contract” that fosters accountability through taxation. More recently, scholars have found evidence that foreign aid may prolong ongoing civil wars. By 2009, foreign aid was so maligned that Dambisa Moyo, among the most vocal opponents of foreign aid to Africa, was named one of *Time*’s most 100 influential people.

Recently, however, scholars have offered modest grounds for optimism. Focusing on Africa, Dunning (2004) finds that foreign aid has been associated with democratization only since the end of the Cold War. More modestly, employing a global sample, Bermeo (2015) finds that foreign aid may have inhibited democratization during the Cold War, but not since. These conflicting findings may turn on whether threats of Western aid reductions are both credible and substantial. Indeed, Kersting and Kelly (2014) argue that, by rewarding democratic reforms with increased aid, Western donors have incentivized liberalization, as Brown (2005) suggested. Focusing exclusively on economic reforms, Bearce and Tirone (2010) report similar findings. Wright (2009) shows that aid is particularly effective in fostering liberalization when its recipients expect to remain in power afterwards. At the very least, these scholars find, since the end of the Cold War – when financial sanctions have been most credible – foreign aid has not inhibited liberalization. At best, when donors have clearly conditioned aid on “good governance” reforms, there is some evidence that donor governments can extract democratic concessions.

This paper advances existing literature by focusing on a single outcome: repression. I do so partly because, by using relatively blunt measures of political change, such as Polity scores, it is difficult to determine precisely what outcomes aid conditionality affects. As a result, it is also unclear through what channel aid conditionality might ultimately generate political liberalization. It is possible, for instance, that aid conditionality compels autocrats to build more genuinely democratic institutions. But it is equally possible that the threat of aid reductions compels autocrats to

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6 Knack (2004) and Regan (1995). Some find that foreign aid was driven as much by the domestic political calculations of donors than the needs of recipients; see Alesina and Dollar (2000).


9 Bueno de Mesquita and Smith (2009a, b), Brautigam and Knack (2004), Kono and Montinola (2009), and Ahmed (2013).

10 Morrison (2009), Djankov, Montalvo and Reynal-Querol (2008), Smith (2008), and Ahmed (2012). Note, however, that Altincokic and Bearce (2014) argue that aid is less fungible than oil revenue, and so shouldn’t be a perfect substitute. Bermeo (2013) makes a similar argument.

11 Note that Dietrich and Wright (2014), using a longer time-series, report less robust results, indicating that the effect in Dunning (2004) may be driven by the Third Wave in the early 1990s.

12 See also Bermeo (2011).
employ less repression, and hence renders them more vulnerable to popular protests. In focusing exclusively on repression, I confront three potential sources of bias that may obscure the true effects of foreign aid. First, since repression occurs at the day level, it should be studied at the day level: aggregating day-level events into arbitrary temporal units, I explain below, may introduce ecological bias. Second, since citizen protests are strategic, autocrats who are most constrained by donors may have the greatest need for repression. Conversely, autocrats who are least constrained may never actually repress, because their citizens dare not protest. I refer to this as “protest selection bias.” Finally, scholars who find that aid fosters democratization have long struggled with “donor selection bias”: the possibility that donors, driven by ethical concerns, allocate scarce aid to governments who are committed to liberalization or least likely to repress. This potential source of bias has proven particularly difficult to overcome, and it remains possible that existing literature overstates the democratizing effects of foreign aid. To the best of my knowledge, this is the first paper that identifies these three sources of bias and proposes a strategy to overcome them.

To address ecological bias and “protest selection bias,” I employ a novel day-level dataset of protest and repression in Africa’s autocracies. I restrict attention to Africa’s autocracies because of data limitations and theoretical interest: to Africa, because day-level records of protest and repression exist, and to its autocracies, because repression is regarded as a key instrument of survival. I account for “protest selection bias” by restricting attention to country-days immediately after protest events. In so doing, I ask how reliance on Western donors impacts an autocrat’s response to protests once they emerge.

To account for “donor selection bias,” I employ a “differences in differences” identification strategy. By employing day-level data, I isolate temporal periods when the international community’s attention to human rights violations in Africa is focused and punishment, if human rights violations occur, is credible. In particular, I focus on debt relief negotiations with the International Monetary Fund (IMF) and World Bank that occurred as part of the Heavily Indebted Poor Country (HIPC) program. I exploit two features of the HIPC debt relief program. First, notwithstanding their rhetoric, the Bretton Woods institutions initiated debt relief negotiations with little regard for the recipient government’s record of corruption and human rights abuses. Since 1996, of the 34 African countries that are sufficiently indebted and impoverished to qualify, the Bretton Woods institutions have granted full, irrevocable debt relief to 30 and are in negotiations with one other, yielding a negotiation rate of nearly 92%. The list includes many of Africa’s most venal autocrats.

\[14\] Indeed, leaders who are most committed to liberalization may be most likely to accept aid with political conditions. Notably, two related works attempt to overcome this with different identification strategies. \(\text{Abouharb and Cingranelli (2008)}\) employ a Heckman selection model to control for the probability that countries accept structural adjustment programs. Using an Instrumental Variables strategy, \(\text{Aronow, Carnegie and Marinov (2012)}\) find that increases in aid from the European Union are associated with more respect for human rights in recipient countries since the Cold War, though only in the short term.

\[15\] In so doing, this paper joins the growing body of scholarship that eschews country-years as units of analysis in favor of more appropriate temporal units; see, for instance, \(\text{Bhasin and Gandhi (2013), Goemans and Marinov (2014), and Hafner-Burton, Hyde and Jablonski (2014)}\).
whose human rights violations are routinely decried by activists. Second, virtually all autocrats who were granted irrevocable debt relief were in power long before HIPC negotiations began and remained long after they reached fruition. Consequently, in the lexicon of causal inference, each autocrat constitutes his own counterfactual: how the autocrat would have behaved in the absence of credible sanctions from Western donors.

These two features of the HIPC debt relief program enable a “differences in differences” estimation strategy. Controlling for a range of day- and year-level features, I find that during the most intense, sensitive period of debt relief negotiations, Africa’s autocrats are less likely to employ repression in response to domestic protests by a factor of 10. This effects obtains even during election seasons, when protests are far more likely and repression far more useful. When “protest selection bias” is unaccounted for – that is, when I do not condition on protests on day $t−1$ – the effect remains, but appears much weaker. This is important, for it suggests that by not accounting for “protest selection bias,” the estimated effect of Western aid dependence on repression is attenuated to 0. In short, when the threat of punishment is credible, Western donors have indeed constrained repression among Africa’s autocrats.

This paper advances our understanding of politics in modern autocracies by identifying new constraints on the instruments of survival. Drawing on the Cold War, scholars often view the chief threats to an autocrat’s survival as emanating from disgruntled elites, who can engineer military coups. To facilitate credible revenue sharing agreements with their elites, scholars contend, autocrats construct political institutions, often single parties. When necessary, autocrats employ violence to suppress popular revolts. This article joins a new wave of scholarship that suggests that modern autocrats confront new threats to their survival, and must meet those threats with new constraints. Since the end of the Cold War, Western creditors have virtually required nominally democratic institutions in exchange for development aid and debt relief. As a result, the institutional environment confronting modern autocrats is relatively fixed, particularly in Africa, where autocrats are most vulnerable to Western pressure. These nominally democratic institutions, moreover, often imperil autocrats. For the regular elections occasioned by nominally democratic institutions constitute focal moments for popular unrest: they enable frustrated citizens to coordinate protests and hence overcome collective action problems. With Western creditors pressing

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17 I show below that the daily rate of repression spikes during election seasons, a result that is consistent with Hafner-Burton, Hyde and Jablonski (2014) and Robinson and Torvik (2009).
18 Wood (2008), for instance, finds that US and UN sanctions are associated with higher rates of state repression between 1976 and 2001. Because his estimating equations are not well identified, it may be the case that citizens are more inclined to protest when their rulers are weakened by financial sanctions. If so, the net effect of sanctions may indeed be to undermine autocrats.
22 Bratton and van de Walle (1997) and van de Walle (2001).
newly ascendant military dictators to quickly organize democratic elections, the rate of coups in aid dependent countries has declined as well.\textsuperscript{24} For both these reasons, threats from the street are now more salient than ever before. This paper finds that Africa’s modern autocrats must confront these threats without the easy recourse to repression enjoyed by their predecessors. Increasingly, to understand autocratic survival, scholars must look beyond the tools of formal political institutions and repression.

More broadly, this paper has important implications for public policy. Scholars and activists routinely advocate robust foreign aid and investment programs to foster a “big push” towards sustainable economic growth.\textsuperscript{25} Evidence for this is mixed at best.\textsuperscript{26} Indeed, scholars increasingly agree that recent reduction in poverty rates throughout Africa have relatively little to do with foreign aid.\textsuperscript{27} This paper suggests an alternative rationale for robust foreign aid programs. By providing nontrivial financial incentives coupled with credible threats of sanction, Western donors possess more leverage over recipient governments than they believe. This leverage may have important political implications. Drawing on post-Cold War Africa, Aidt and Leon (2015) find that riots are associated with increases in Polity scores.\textsuperscript{28} With recourse to repression constrained, these popular movements may be particularly potent catalysts in aid dependent autocracies. This paper thus provides grounds for optimism that Western leverage, coupled with credible financial sanctions, can foster democratic change.

This article proceeds as follows. Section\textsuperscript{2} illustrates the central causal mechanism with qualitative evidence from the Republic of Congo. Section \textsuperscript{3} introduces the day-level dataset and presents the results of the baseline statistical models, which account for both ecological bias and “protest selection bias.” To address “donor selection bias,” Section \textsuperscript{4} presents evidence that, during the most intense period of debt relief negotiations, Africa’s autocrats curtailed repression dramatically. Section \textsuperscript{5} concludes with suggestions for future research.

2 Qualitative Evidence: The Republic of Congo

This paper’s central hypothesis is that reliance on Western donors constrains repression among Africa’s post-Cold War autocrats. The Republic of Congo clearly illustrates the causal mechanism. When Sassou Nguesso seized power following the 1997 civil war, he inherited one of the world’s most heavily indebted countries per capita. To facilitate post-conflict reconstruction and to forgive the country’s massive debt, Sassou Nguesso required the support of Western creditors. To earn

\textsuperscript{24} Goemans and Marinov (2014).
\textsuperscript{25} Sachs (2005).
\textsuperscript{26} Easterly (2006) and Acemoglu and Robinson (2012).
\textsuperscript{27} Sala-i-Martin and Pinkovskiy (2010).
\textsuperscript{28} These papers thus support the core theoretical mechanisms in the accounts of democratic transitions in Acemoglu and Robinson (2005) and Boix (2003).
it, he had to appear to be a democrat. These concerns, I show below, shaped Sassou Nguesso’s political strategy ahead of the 2009 presidential elections and, ultimately, persuaded opposition leaders that he would not violently suppress protests.

In 2010 Sassou Nguesso’s position vis-à-vis Western creditors suddenly changed. Immediately after he secured debt relief as part of the Heavily Indebted Poor Countries (HIPC) initiative, Sassou Nguesso turned to China. By then, China’s commitment to non-interference was well established among Africa’s autocrats. China couches its policy of non-interference as a principled respect for state sovereignty. “We don’t believe that human rights should stand above sovereignty,” declared the Director of African Studies at the Chinese Academy of Social Sciences. “African countries share our view.” Following the third China-Africa Summit in 2006, Beijing and all but five African countries articulated the principles underlying their cooperation:

We urge that . . . all countries of the world, big or small, rich or poor, strong or weak, should respect each other, treat each other as equals and live in peace and amity with each other.

As the Chinese ambassador to Eritrea – perhaps the African government with the worst human rights record – put it, “there are no rogue states.”

Figure 1 captures this discontinuity. Following debt relief in 2010, Sassou Nguesso virtually terminated his relationship with Western donors in favor of Chinese aid, which reached unprecedented levels. Sassou Nguesso demonstrated such little interest in the IMF that its senior officials virtually closed the country office, opting to manage its few country activities from Kinshasa. This discontinuity makes Congo a uniquely appropriate case study, for the strategic environment that Sassou Nguesso confronted immediately prior to 2010 was virtually identical to the one he confronted afterwards. Sassou Nguesso’s response to his new autonomy from Western donors forced opposition activists to question their earlier confidence.

2.1 Before Debt Forgiveness

When Sassou Nguesso seized power in 1997, Congo’s debt to GDP ratio was roughly 260%. Sassou Nguesso required financial support from Western donors, and so he had little choice but to abide the nominally democratic institutions created during the National Conference of 1991. Although he managed to increase presidential terms from five years to seven, Congo’s political institutions otherwise changed very little. Clark (2008) and Clark and Carter (2014). Unable to replace nominally democratic institutions with single party regimes, these sorts of marginal changes are exceedingly common in Sub-Saharan Africa, as Levitsky and Way (2010) make clear. For an excellent account of these changes in Paul Biya’s Cameroon, see Albaugh (2011).
Sassou Nguesso faced severe financial constraints. Since the war was fought almost entirely in Brazzaville, the capital, Sassou Nguesso had to rebuild the city’s infrastructure, as well as the transportation routes that linked it with Pointe-Noire, home to the oil industry. Debt service obligations to the IMF and other public creditors reached some 25% of total export value. And though he controlled Brazzaville, the city’s western and southern edges were virtually surrounded by loyalists of deposed president Pascal Lissouba. Accordingly, Sassou Nguesso was forced to prepare for another war. In addition to remaking the military in the image of his militia, Sassou Nguesso constructed a modern airport outside Oyo, his native village. With a population of but 10,000, it was an economically inefficient choice for the country’s third international airport. But it served a crucial strategic purpose. In the event Sassou Nguesso lost control of Brazzaville, the

\[35\] Clark and Carter [2014].
\[36\] Tassoua [N.d.].

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Figure 1: Development aid to Congo from Western donors and the Chinese government, expressed in per capita terms. Data for Western aid is drawn from the World Bank’s World Development Indicators; data for Chinese aid is drawn from the AidData project. Congo received HIPC debt relief in 2010.
airport would provide a rear base for arms shipments. The airport ultimately cost a reported $116m.

Sassou Nguesso financed these expenses in two ways. First, he overhauled Congo’s oil industry. Whereas previous governments entrusted marketing to foreign companies, Sassou Nguesso decided that the government would henceforth market a share of its own oil. This, he hoped, would increase the fraction of profits it received. Second, Sassou Nguesso courted Western donors. As part of his campaign to increase development assistance and secure debt relief, Sassou Nguesso hired a team of lobbyists to persuade them of his commitment to “good governance.” The campaign ultimately succeeded. In addition to financing a series of demobilization programs for ex-combatants, Western donors rehabilitated Congo’s road network.

Sassou Nguesso’s political strategy reflected his reliance on Western donors. Constrained to at least appear democratic, Sassou Nguesso attempted to avoid violent repression at all costs. To do so, he sought to prevent mass protests from emerging in the first place. Election seasons, scholars increasingly find, are dangerous for autocrats. By fostering common knowledge among citizens about shared frustrations and providing a single event around which to coordinate, regular elections facilitate popular protests. Sassou Nguesso sought to counter these effects by forming electoral alliances with opposition leaders. Although these alliances served no electoral purpose – Sassou Nguesso could guarantee electoral victory with fraud – they rendered popular collective action far more difficult. Without opposition leaders mobilizing citizens, Sassou Nguesso reasoned, mass protests would be less likely and, therefore, repression unnecessary. Second, rather than policing the hostile southern regions with northern soldiers, Sassou Nguesso recruited southerners to do so. For even though he regarded northern soldiers as more loyal, Sassou Nguesso recognized that they were also more likely to prey upon the southern population: to engage in economic extortion and commit a range of human rights abuses. In so doing, northern soldiers would provoke the sorts of popular grievances that foster mass uprisings, which Sassou Nguesso desperately needed to avoid.

As the 2009 presidential elections approached, proof of high level corruption circulated in Brazzaville. In response, the regime assassinated journalist Bruno Ossébi, who many suspected of disseminating the incriminating documentation; the regime also briefly suspended two independent

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37 Moutsila (2009).
38 Previous governments, including his own government in the 1980s, employed pre-financing contracts with European oil companies; see Le Floch-Prigent (2001).
39 For more on the politics and economics of this decision, see Cooke (2005) and Hariprashad-Charles (2007).
40 Narayanswamy (2009).
42 Interviews with opposition leaders and civil society officials in Congo, August 2009. For more on the role of political entrepreneurs in fostering collective action, see Olson (1977) and Medina (2007).
43 Interviews with residents of Congo’s southern regions, May 2013. For a similar argument in the context of Kenya, see Hassan (2014).
44 Committee to Protect Journalists (2009a).
media outlets that publicized the evidence⁴⁵. Apart from these two incidents, however, outright repression was limited. Sassou Nguesso claimed some 80% of the vote in the July elections. Although the government declared a turnout rate of some 60%, the diplomatic community put it at closer to 10%⁴⁶. When the results were announced on July 15, residents of Brazzaville’s southern quarters poured into the streets. With the protests covered by several French media outlets, the government was careful not to use excessive force; security forces employed tear gas instead. And aware that visual evidence of protests would damage Sassou Nguesso’s international reputation more than news articles, the National Police attempted to confiscate television cameras⁴⁷.

### 2.2 After Debt Forgiveness

After a series of “good governance” concessions and an intense public relations campaign, Sassou Nguesso finally secured debt relief from the Bretton Woods institutions in 2010. The country’s debt stock plunged to just over $2b, from a high of nearly $7b in 2004. As Figure 1 makes clear, Sassou Nguesso quickly consolidated his alliance with China, which by then had earned a reputation for granting development aid and low interest loans with no political conditions. Western development assistance reached near record lows by 2013, just as Chinese assistance began its exponential growth. Sassou Nguesso contracted with Chinese firms to revitalize Congo’s agro-industrial sector and to finish the rehabilitation projects that Western donors started.

Sassou Nguesso formulated a new political strategy in response to this autonomy. Although he still sought to prevent mass protests from emerging in the first place, Sassou Nguesso signaled his willingness to employ repression in four ways. The costliness of these signals underscored the credibility of Sassou Nguesso’s threats. First, he was much quicker to suppress journalists, even those active in Western media and widely known throughout the sub-region. Elie Smith was the director of the television station operated by Sassou Nguesso’s elder brother, Maurice Nguesso. A native Cameroonian, Smith had been recruited from a prominent Paris television station years earlier. After publicly questioning whether a constitutional revision to permit Sassou Nguesso a third term was consistent with “democracy,” the regime dispatched its security forces to his house in September 2014. They ransacked the house and brutalized Smith and his family. A week later Smith was forcibly expelled from the country⁴⁸. These human rights violations were reported by Sadio Morel Kanté, a prominent Reuters journalist who was born in Brazzaville – and hence a Congolese citizen – to West African parents. After receiving a series of death threats, Kanté too was forcibly expelled, despite her citizenship⁴⁹.

Second, in addition to more openly repressing journalists, since 2010 the regime has been

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⁴⁵ Committee to Protect Journalists (2009b).
⁴⁶ Interview with Western diplomatic official, August 2009.
⁴⁷ Mampouya (2009).
⁴⁸ Committee to Protect Journalists (2014b).
⁴⁹ Committee to Protect Journalists (2014a).
quicker to suspend offending news organs. In September 2012 the regime suspended *Le Glaive* for six months and *La Voix du Peuple* for nine months. Just nine months later, in June 2013, the government suspended *L’Observateur*, *Talassa*, and *Le Trottoir* for four months, and *Le Glaive* for an additional two months. In November 2013, the government issued nine month suspensions for *Sel-Piment*, *Le Glaive*, and *La Voix du Peuple*. By this point, *Talassa* had ceased publication, nearly bankrupted by its earlier suspensions. “There is no more press freedom here,” the editor and publisher of one of these newspapers told me.


Third, since 2010 the government has proven quicker to use force against political opponents. On March 4, 2012, explosions at a munitions depot rocked Brazzaville, destroying several neighborhoods and leaving several hundred dead. The Sassou Nguesso regime responded by arresting its most outspoken critics. The most noteworthy target was Colonel Marcel Ntsourou, second in command of the Conseil Nationale de Sécurité and key lieutenant during the 1997 civil war. Incarcerated in April 2012, Ntsourou was sentenced to five years’ hard labor in September 2013 and released the same month; Ntsourou was reportedly tortured in custody. Ntsourou began a media campaign upon his release. In a series of interviews with Radio France International (RFI) and independent newspapers in Brazzaville, Ntsourou accused Sassou Nguesso of gross corruption. On the morning of December 16, 2013, Ntsourou’s Brazzaville home was raided by the Republican Guard, reinforced by an armored tank division. Four hours later nearly 40 of Ntsourou’s bodyguards had been killed and 55 arrested, including Ntsourou himself.

Finally, just three months later, in April 2013, the government launched a police operation that deported as many as 250,000 citizens of the Democratic Republic of Congo (DRC) over four months, often brutally. Dubbed Operation “Smack of the Elders,” the government justified the operation with appeals to the crime rate. But the political opposition interpreted the violent campaign as a “show of force,” which was intended to highlight the government’s capacity for violence. Prior to 2010 the government was extremely sensitive to its reputation in Western capitals. This time, the Sassou Nguesso government appeared unconcerned with international condemnation. One senior United Nations official in Kinshasa said in May:

> I heard stories of children drowning in the river during their forced crossing. I saw a man injured by bullets and mothers who had given birth alone on the shore of the Congo River. All this has to stop. . . . We have received reports alleging that sexual violence is

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50 Committee to Protect Journalists (2013a).
51 Committee to Protect Journalists (2013b).
52 Interview, March 2014.
53 Interview with opposition activist, July 2013. The deportations also harmed local consumers, especially the poor. Food prices in Brazzaville skyrocketed, since the country imports foodstuffs from Kinshasa, as did the cost of cheap construction; see Klion (2014).
being committed before and during the expulsion exercise, and this is unacceptable.\textsuperscript{54}

In response, Sassou Nguesso’s spokesman said simply: “The Republic of Congo is surprised by these rude comments.”\textsuperscript{55}

2.3 Taking Stock

The Congolese experience provides cause for optimism that pressure from Western donors can constrain repression in autocracies. Prior to 2010, Sassou Nguesso sought to obviate the need for repression by discouraging popular protests. He allied with the opposition leaders who possessed the greatest capacity to mobilize citizens, the better to remove the most potent “political entrepreneurs.” He policed the hostile southern regions with security officers drawn from among the local population, the better to ensure that southerners would not be assaulted and extorted by northerners, who fought against them during the civil war. When the government deemed some repression absolutely necessary, its use was circumscribed. The government attempted to limit its international exposure.

After debt forgiveness and the pivot towards China – a sharp discontinuity captured in Figure \textsuperscript{1} – Sassou Nguesso revised his political strategy. The strategic environment that Sassou Nguesso confronted immediately prior to 2010 was virtually identical to the one afterwards, save for his reliance on Western donors. Newly unconstrained, Sassou Nguesso employed repression more freely: against local and foreign journalists, his domestic political opponents, and some 250,000 immigrants from Kinshasa, despite the UN’s warnings. So sharp was Sassou Nguesso’s turn towards repression that Congo’s political opposition is now less confident in the ultimate success of a mass uprising than it once was.\textsuperscript{56}

3 Baseline Estimation

3.1 Ecological Bias and Protest Selection Bias

To probe the relationship between Western aid dependence and repression more systematically, I combine day-level records of protest and repression with a range of day, year, and election season-level characteristics. I employ day-level data to account for both ecological bias and “protest selection bias.”

Ecological bias arises from aggregating day-level events into larger temporal units, such as the month or year.\textsuperscript{57} Ecological bias may be particularly salient when studying the relationship between foreign aid and repression. For instance, if foreign aid rises during election years – either because

\footnotesize\textsuperscript{54}UN News Centre (2014).
\textsuperscript{55}Chitera (2014).
\textsuperscript{56}Interview with anonymous opposition activist, April 2015.
\textsuperscript{57}For more on ecological inference problems, see King (1997).
donors provide more electoral support— and if autocrats are more likely to employ violence during election seasons— then an apparent relationship between foreign aid and repression could be a result of aggregating day-level record of repression into an annual indicator. If so, the apparent relationship between foreign aid and repression could be driven by ecological bias. By treating the country-day as the unit of analysis, I control for day-level characteristics that may vary across years and increase the probability of repression: elections, election seasons, weather patterns that favor popular protest, and others.

Determining the relationship between Western aid and repression is further complicated by the fact that both protest and repression are strategic. If, for instance, an autocrat does not engage in repression, it may be because he is constrained by the prospect of punishment by Western creditors. But an autocrat could also forgo repression because he has no need for it: because his citizens, knowing that he would repress their protests, choose not to protest in the first place. Having no need for repression, the autocrat forgoes it, and hence avoids whatever costs— either from forgone financial aid or a besmirched reputation— it would entail. In the lexicon of game theory, repression would be “off the equilibrium path.” I refer to this as “protest selection bias.”

“Protest selection bias” is readily apparent in modern Africa. Teodoro Obiang Nguema has ruled Equatorial Guinea since ousting his uncle in a 1979 coup. A leading oil producer, Equatorial Guinea is among Africa’s least aid dependent autocracies. Few citizens doubt that Obiang would meet protest with brutal repression, and so few risk it. When an intrepid citizen chooses to risk repression by protesting Obiang’s rule, the population’s expectations are quickly justified. With the next presidential elections scheduled for 2016, on March 17, 2015, the Obiang government arrested opposition leader Guillermo Nguema and forced him onto a plane to Mongomo, a small village far from the capital of Malabo, and told never to return. One citizen dared protest the abduction, and only by distributing leaflets in the streets of Malabo. Days later, he too was forcibly abducted to Mongomo and instructed to remain indefinitely. The absence of blatant, widespread repression in Equatorial Guinea implies not that Obiang is constrained, but that he is unconstrained, and that his citizens know it. To account for “protest selection bias,” I focus on an autocrat’s behavior on the day after a protest. In so doing, I ask how reliance on Western donors impacts an autocrat’s response to protests once they emerge.

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58 Gearan (2014).
59 Jablonski (2013).
60 This may be either because elections facilitate protests or because repression has electoral benefits.
3.2 Data and Descriptive Statistics

In constructing the day-level dataset, I build on the work of others. Svolik (2012) provides a roster of the world’s autocrats between 1960 and 2007; it includes the dates of their entry and exit, as well as the means by which they did so.\(^{62}\) I draw data on state repression and popular protests from the Social Conflict on Africa Database (SCAD), introduced by Salehyan et al. (2012). SCAD records the daily number of repression and protest events throughout the African continent since 1989. Based on an exhaustive search of the Lexis Nexis archive, Salehyan et al. (2012) employed a research team to hand code details about each repression and protest event. The result is the most detailed and complete record yet assembled. Although employing SCAD restricts attention to Africa’s post-Cold War autocracies, I argue that the gains from day-level precision outweigh the costs in geographic scope, particularly since nearly half of the world’s current autocracies are located in Africa.

I draw data on Western aid from the AidData project, introduced by Tierney et al. (2011). The AidData project records project level commitments and disbursements by year from a range of donors to a range of countries. The AidData project defines aid commitments as the amount promised to a country in a calendar year, whereas aid disbursements reflect the amount donors actually transferred. Since the commitment measure more faithfully represents the anticipated subsidies an autocrat stands to lose if aid is revoked, I employ it. I define “Western” donors as the United States, all European countries and Anglo-Saxon offshoots, Japan, the Bretton Woods institutions, multilateral development banks, United Nations, and private organizations such as the Gates Foundation.\(^{63}\) Following Goemans and Marinov (2014), I measure dependence on Western aid by standardizing aid commitments by GDP, which I draw from the Penn World Tables, Version 8, developed by Feenstra, Inklaar and Timmer (2013):

\[
\text{Western Aid Dependence}_{is} = \frac{\text{Total Western Aid}_{is}}{\text{GDP}_{is}}
\]

where \(i\) indexes country and \(s\) indexes year. Since Western Aid Dependence\(_{is}\) is subject to considerable skew, I employ its natural logarithm.

Definitions and descriptive statistics for all variables appear in Table 4 in the Appendix. According to AidData records, of the 112 autocrats in the dataset, Joseph Kabila of the Democratic Republic of Congo (DRC) is Africa’s most Western aid dependent.\(^{64}\) Other relatively aid dependent

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\(^{62}\) I employ Svolik (2012)’s roster of autocrats both to build on existing literature and because repression is thought to be central to autocratic survival. However, future research might consider how the effect of Western aid dependence on repression varies in hybrid or competitive authoritarian regimes, as defined by Levitsky and Way (2010).

\(^{63}\) The overwhelming share of aid to African countries is provided by the United States, European Union, the Bretton Woods institutions, multilateral development banks, and the United Nations. As a result, none of the results below are sensitive to the inclusion or exclusion of particular countries or multilateral institutions.

\(^{64}\) The magnitude of aid to the DRC – particularly juxtaposed against the country’s persistent instability – has generated skepticism about the effectiveness of the peacekeeping and stabilization enterprise more broadly; see Autesserre (2010).
autocrats include Kenya’s Daniel Arap Moi, Zambia’s Kenneth Kaunda, Cote d’Ivoire’s Laurent Gbagbo, and Burkina Faso’s Blaise Compaoré, all of whom acquired reputations for ruling with a relatively light fist. Many of Africa’s least aid dependent autocrats are also among its most violent. Figure 4 displays the number of days on which a repressive event occurred by country. Zimbabwe’s Robert Mugabe ranks as the continent’s most violent. According to SCAD, Zimbabwe’s citizens have experienced more than 950 days of repression since 1989. As Robinson and Torvik (2009) and Hafner-Burton, Hyde and Jablonski (2014) make clear, Mugabe routinely employs repression to discourage opposition voters, which decreases the amount of fraud he requires to claim electoral victory. Liberia’s Samuel Doe, Sudan’s Omar al-Bashir, and Angola’s José Eduardo dos Santos also acquired similar reputations for repression in the absence of Western aid. In all, the dataset includes a total of 312,518 country-days in Africa since 1989. Of these, SCAD records a repression event on 2,277 days, or just less than 1% of total country-days.

Virtually all of Africa’s post-Cold War autocrats govern with nominally democratic political institutions: presidential term limits, multiparty legislatures, and regular elections. They have little choice. As many scholars have observed, Western donors have virtually required nominally democratic institutions in exchange for development aid and debt relief. These regular elections, scholars increasingly find, constitute “focal moments” for popular protest. Since elections can help citizens coordinate otherwise dangerous anti-regime behavior, protests are far more likely during election seasons than otherwise. I draw data on elections from the National Elections Across Democracy and Autocracy (NELDA) dataset. Introduced by Hyde and Marinov (2012), the NELDA dataset records the dates of every election around the world between 1960 and 2010. The days and weeks surrounding elections are also periods of heightened tension. Campaign activities often begin several months prior to an election, results are announced a week or two later, and inaugurations often occur a month afterwards. To accommodate these extended periods of tension, I control for whether day $t$ in country $i$ falls within the 30 days before and after election day. I refer to this 60 day period as an election season.

I control for a variety of other day-level events that could plausibly be associated with both repression and Western aid dependence. Since weather conditions may be correlated with protests and donor commitment, I control for the amount of precipitation in the country’s most politically prominent city, as well as its average recorded daily temperature. I draw these data from the National Oceanic and Atmospheric Administration (NOAA); the list of politically prominent cities by country appears as Figure 5 in the Appendix. Since I condition on protests having occurred on day $t - 1$, all country-days are subject to some degree of political instability. To accommodate other forms of instability that might render repression more attractive, I control for whether a...
A rebel group engaged in a violent offensive as part of an ongoing civil war on day $t$, as well as whether the government engaged in a violent offensive on day $t$. I draw this information from the Uppsala Conflict Data Program’s (UCDP) Georeferenced Event Dataset, introduced by Sundberg and Melander (2013). Importantly, this dataset includes day-level conflict events that occurred as part of inactive conflicts: those that did not exceed the 25 battle death annual threshold.

To accommodate structural features that might generate popular grievances or render political power more attractive to the incumbent, I control for a variety of other factors at the country-year level. Poor economic conditions may render country $i$ a more attractive target for Western aid, and may dispose its citizenry towards protest. In response, the autocrat may be more likely to employ repression as well. To accommodate this, I control for both the employment rate and real GDP from expenditure during year $s$. Both measures comes from the Penn World Tables, and provide a better indication of living standards in country $i$ during year $s$ than simple measures of GDP per capita. Substantial oil reserves may have a similar effect, particularly if natural resource wealth both discourages Western creditors and increases the value of holding power to an autocrat.

3.3 Model Specification

The baseline statistical model estimates the probability of repression in country $i$ on day $t$ as a function of Western aid dependence in year $s$:

$$
\text{logit} \left[ \Pr \left( \text{Repression}_{it} = 1 \bigg| \text{Protest}_{it-1} = 1 \right) \right] = \alpha \ln \left( \text{Western Aid Dependence}_{is} \right) + \beta X_{is} + \kappa Z_{it} + \gamma_j + \epsilon
$$

(1)

where $i$ indexes country, $j$ indexes autocrat, $s$ indexes year, and $t$ indexes day. The vector $X$ gives a set of country-year level covariates, while the vector $Z$ gives a set of country-day level covariates. The estimating equation in (1) makes clear that the baseline model restricts attention to country-days where a protest emerged the day before. In so doing, I account for “protest selection bias”: the possibility that repression is simply unnecessary in the least constrained autocracies because the population never dares to protest. To confirm that “protest selection bias” biases the estimated relationship to 0, I also estimate a variant of (1) that does not restrict attention to days on which a protest occurred on day $t - 1$.

A range of unobserved factors may condition both Western aid dependence and the day-level probability of repression in Africa’s autocracies. To account for these features, I employ a full set of autocrat-level random effects, represented by the parameters $\gamma_j$ in (1). Since no autocrat presided over two countries, these autocrat-level effects render country-level effects redundant. This is important, for country $i$ could be particularly well represented in the SCAD dataset because of unobserved factors that render its affairs of greater interest to Western readers.\(^{67}\) The autocrat...
level effects $\gamma_j$ accommodate this.

Random effects estimators depart from standard fixed effects specifications in several important respects. Like fixed effects estimators, random effects estimators let intercepts vary by unit: in this case, individual autocrats. Unlike fixed effects estimators, however, random effects estimators assume that unit intercepts arise from a normal distribution with finite variance. Because these unit intercepts are estimated directly from the data, random effects models can also estimate the effect of variables that are set at the unit level, such as Western aid dependence. Indeed, because the equation in (1) estimates the day-level probability of repression as a function of day- and year-level factors – in this case, aid dependence – moving to a random effects estimator is imperative to avoid overstating confidence in the estimated results. Estimating (1) with a standard fixed effects estimator would impose an independence assumption across observations. For day-level variables, this may be appropriate. Weather conditions on day $t$ may be independent from those on day $t-1^{68}$ for instance, as is whether day $t$ constitutes part of an election season. But because Western aid allocations are set annually, observations within country-years on the explanatory variable of interest are heavily correlated. Ignoring this dependence, as standard fixed effects estimators do, yields standard errors that are considerably smaller than they should be. The random effects estimator employed in (1) incorporates this dependence among observations and, as a result, yields more conservative standard errors.$^{69}$

3.4 Results

The results appear in Table 1. Model 2 corresponds to the baseline estimating equation in (1). Model 1 is identical to equation (1), but does not restrict attention to days following mass protests. By comparing the two models, we can identify the effects of “protest selection bias.”

In both models, autocrats who are more dependent on Western aid are also less likely to employ repression on any given day $t$. The effect is substantively meaningful, as the odds ratios at the bottom of Table 1 make clear. In Model 1, a one percent increase in Western aid dependence implies that, on any given day, the odds of repression are but 43% as great as otherwise. In Model 2, one percent increase in Western aid dependence implies that the odds of repression are only 23% as great as otherwise. Owing to the large sample sizes in both models, these effects are precisely estimated.

The difference between Models 1 and 2 underscores the importance of accounting for protest selection bias. Western Aid Dependence$^{70}$ has a much larger effect in Model 2 because Model 1 includes daily observations from such countries as Eritrea and Equatorial Guinea, where Presidents Isaias Afeworki and Obiang Nguema, respectively, have less need for outright repression because their citizens dare not protest. By not accounting for “protest selection bias,” Model 1 understates

$^{68}$ Note, of course, that it may not be, as many countries in Africa experience extended rainy or dry seasons.

$^{69}$ For an introduction to random effects models, see Gelman and Hill (2006).
Table 1: Repression and Western Aid Dependence: Baseline Results

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full Sample</td>
<td>Protest Response</td>
</tr>
<tr>
<td></td>
<td>Logit</td>
<td>Logit</td>
</tr>
<tr>
<td>ln Western Aid Dependence, $it$</td>
<td>-0.856**</td>
<td>-1.474**</td>
</tr>
<tr>
<td></td>
<td>(0.050)</td>
<td>(0.118)</td>
</tr>
<tr>
<td>Election Season, $it$</td>
<td>2.070**</td>
<td>2.771**</td>
</tr>
<tr>
<td></td>
<td>(0.072)</td>
<td>(0.176)</td>
</tr>
<tr>
<td>Election Day, $it$</td>
<td>0.829*</td>
<td>2.065**</td>
</tr>
<tr>
<td></td>
<td>(0.330)</td>
<td>(0.536)</td>
</tr>
<tr>
<td>Civil Conflict Event: Non-State, $it$</td>
<td>0.054</td>
<td>0.156</td>
</tr>
<tr>
<td></td>
<td>(0.073)</td>
<td>(0.128)</td>
</tr>
<tr>
<td>Civil Conflict Event: State, $it$</td>
<td>0.089</td>
<td>0.265</td>
</tr>
<tr>
<td></td>
<td>(0.084)</td>
<td>(0.276)</td>
</tr>
<tr>
<td>Temperature, $it$</td>
<td>-0.011**</td>
<td>-0.019**</td>
</tr>
<tr>
<td></td>
<td>(0.004)</td>
<td>(0.007)</td>
</tr>
<tr>
<td>Rainfall, $it$</td>
<td>-0.001</td>
<td>0.004*</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>ln Real GDP Expenditure Side, $it$</td>
<td>-0.413*</td>
<td>4.995**</td>
</tr>
<tr>
<td></td>
<td>(0.162)</td>
<td>(0.578)</td>
</tr>
<tr>
<td>Oil Supply, $is$</td>
<td>0.111*</td>
<td>0.942**</td>
</tr>
<tr>
<td></td>
<td>(0.044)</td>
<td>(0.188)</td>
</tr>
<tr>
<td>Employment Rate, $is$</td>
<td>3.418**</td>
<td>4.230**</td>
</tr>
<tr>
<td></td>
<td>(0.696)</td>
<td>(1.546)</td>
</tr>
<tr>
<td>Autocrat Effects</td>
<td>Fixed</td>
<td>Fixed</td>
</tr>
<tr>
<td>$N$</td>
<td>192,390</td>
<td>18,020</td>
</tr>
</tbody>
</table>

Significance levels: †: 10% *: 5% **: 1%

<table>
<thead>
<tr>
<th>Odds Ratios</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ln Western Aid Dependence, $it$</td>
<td>0.425</td>
</tr>
<tr>
<td>[0.392, 0.461]</td>
<td>0.229</td>
</tr>
<tr>
<td>[0.189, 0.278]</td>
<td></td>
</tr>
</tbody>
</table>
the relationship between Western aid dependence and repression. By conditioning only on days when citizens are willing to protest – indeed, on days when citizens protested the day before – and then asking how autocrats respond to protests the day after they occur, Model 2 shows that the relationship between Western aid dependence and repression is much stronger.

In Africa’s post-Cold War autocracies, Western aid dependence is associated with substantially lower daily levels of state repression. However, this effect should not be interpreted as causal. Indeed, it could be driven by two factors. First, as the Congolese opposition believes, Africa’s aid dependent autocrats may be more constrained than their counterparts. They may be far less likely to employ violence against protesters because of the threat of Western punishment. Alternatively, however, these results could be the result of “donor selection bias.” Driven by ethical concerns, Western donors may direct development aid to those autocrats who are least likely to employ violence: who exhibit stronger commitments to their citizens’ human rights. The results in Table 1 are consistent with both interpretations.

4 Exploiting HIPC Debt Relief: Donor Selection Bias

To account for “donor selection bias,” I employ a “differences in differences” identification strategy that conceptualizes the most intense periods of HIPC debt relief negotiations as a temporal shock that rendered repression particularly costly for Africa’s autocrats. During these negotiation periods, Africa’s autocrats clearly relied on the approval of Western donors, and their use of repression should have been constrained as a result. Two features of the HIPC debt relief program make it particularly attractive for a “differences in differences” strategy. I discuss these in turn.

4.1 Lenient Selection Criteria

In 1996, the IMF and World Bank launched the Highly Indebted Poor Country Initiative (HIPC) Initiative, which seeks to “[ensure] that no poor country faces a debt burden it cannot manage.” In principle, the program grants debt relief to “[free] up resources for social spending.” The HIPC Initiative targets the world’s poorest, most heavily indebted countries. According to the IMF, countries under consideration for debt relief are required to meet stringent criteria, which ostensibly ensure that, after debt relief, governments direct money that would have been earmarked for debt service to poverty reduction.

The debt relief process begins with a “decision point.” Qualification for this first stage is generally straightforward. Governments must have an ongoing relationship with the IMF and World Bank, as well as a Poverty Reduction Strategy Paper (PRSP). The “decision point” document signals the applicant government’s entry into the second, final phase of the debt relief process, known as the “completion point” phase. The “decision point” document identifies a set of conditions that must be satisfied for debt relief. These conditions identify the “good governance” reforms typically...
required by Western creditors. Once governments satisfy these conditions, they reach the “completion point,” when debt relief is full and irrevocable. As of September 2014, 30 African countries had qualified for debt relief under the HIPC Initiative, one country was on the verge of doing so, and another three had been identified as eligible – based on their indebtedness and GDP levels – to begin the approval process. The HIPC Initiative has provided debt-service relief worth greater than $75 billion, or an average of roughly $2 billion per country. Relative to GDP, this is a non-trivial sum. When Congo’s debt was forgiven in 2010, for instance, its GDP was roughly $10 billion. For countries that received relief, debt service payments declined by just under 2 percentage points of GDP between 2001 and 2013.[70]

The years between the “decision point” and the “completion point” determine whether a government is granted debt relief.[71] Accordingly, there is abundant evidence that Africa’s autocrats modify their behavior during these years to persuade the IMF and World Bank of their commitment to “good governance” and their citizens’ human rights. The IMF’s experience in the Republic of Congo is particularly instructive. Since seizing power in 1997, President Sassou Nguesso has acquired a reputation for gross corruption, siphoning as much as $300 million per year from the state treasury.[72] Still, the Congolese government reached the “decision point” on January 31, 2006, at which point it entered the “completion point” phase. The IMF and World Bank identified two central conditions for debt relief: that the government permit quarterly financial audits of the state oil company and that Sassou Nguesso’s son, Denis Christel, be removed from his position atop its marketing branch. Sassou Nguesso conceded to both, and, according to IMF officials, the proportion of oil revenue accounted for in the national budget increased from roughly 60% prior to the “decision point” to 80% afterwards.[73] After the Sassou Nguesso government reached the “completion point” – after debt relief – the government reverted to its previous form. The quarterly financial audits ceased, Denis Christel was named second in charge of the state oil company, and the proportion of oil revenue accounted for in the national budget plummeted. But since Congo’s debt had been forgiven, the IMF and World Bank had no leverage to intervene.

Even if the “good governance” reforms mandated by HIPC debt relief negotiations do not outlive debt relief itself, they do appear to compel behavior changes during the most intense periods of negotiations. By focusing the international community’s attention, HIPC debt relief negotiations increase the expected costs to Africa’s autocrats of corruption and repression. Accordingly, I construct the variable HIPC Negotiations, which assumes value 1 if day t in country i occurred between the publication of its “decision point” document and its “completion point” document. If Africa’s autocrats are indeed constrained by Western aid, then they should be far less likely to employ repression during HIPC debt relief negotiations. The dataset includes nearly 20,000

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[70] International Monetary Fund (2014).
[71] Interview with senior IMF official, December 2012.
[73] Interviews with senior IMF official in December 2012.
country-days for which HIPC Negotiations\textsubscript{it} assumes value 1, encompassing 16 different autocrats from 15 countries. The dataset assumes value 0 for nearly 290,000 country-days, encompassing 110 different autocrats from 50 countries. For some countries, debt relief negotiations concluded very quickly, with only 71 days elapsing between the “decision point” document and the “completion point” document. For others, negotiations required nearly 10 years to complete.

Like development aid, HIPC debt relief is assigned by Western creditors, and hence potentially subject to the same “donor selection bias” discussed in Section 3. In practice, however, this is not a concern, as scholars and human rights activists have observed.\(^\text{74}\) Of the 34 African countries that qualify for HIPC status, only four have not yet received debt relief. As a result, the list of autocrats who have received debt relief is startling. It includes, among many others, Blaise Compaoré of Burkina Faso, Paul Biya of Cameroon, Denis Sassou Nguesso of Congo, and Yoweri Museveni of Uganda, who have collectively ruled their impoverished countries for 130 years, and whose human rights violations are regularly decried by activists.\(^\text{75}\) It also includes Pierre Nkurunziza of Burundi and Paul Kagame of Rwanda, whose human rights violations were overlooked in the years following the Rwandan genocide but increasingly generate international outrage.\(^\text{76}\) Even Gambia’s Yahya Jammeh was granted debt relief. In power since a 1994 coup, in 2011 Jammeh announced that he would rule for “one billion years, God willing.” His secret police and virulent homophobia have earned him frequent condemnation from the international community. In May 2015 he declared to his citizens:

I will slit your throat. . . . If you are a man and want to marry another man in this country and we catch you, no one will ever set eyes on you again, and no white person can do anything about it.\(^\text{77}\)

The only qualifying countries not currently being considered for debt relief are Eritrea, Somalia, and Sudan. Put simply, of the 34 countries that meet the economic conditions for HIPC debt relief, only 3 were excluded for political reasons. Somalia has not had an American embassy since 1991; Sudan is regarded as a state sponsor of terror and its president, Omar al-Bashir, is subject to an arrest warrant from the International Criminal Court (ICC); and President Isaias Afeworki of Eritrea uses his country’s compulsory, indefinite military service requirement to create a pool of

\(^{76}\)For Burundi, see Human Rights Watch (2006a, 2009c, 2010c, 2011a). For Rwanda, see Reporters Without Borders (2010). In the 2015 Reporters Without Borders Press Freedom Index, Rwanda was ranked 161 out of 180 countries, ahead of only five other countries in Africa. To burnish his flagging image among American policymakers, Kagame recently hired the same public relations firm once employed by deposed Libyan President Moammar Gaddafi; see York (2012).
slave labor, which the government uses for mining. In short, the IMF and World Bank have initiated debt relief negotiations with virtually all of Africa’s venal, corrupt autocrats. “Donor selection bias” is not a concern.

If the Bretton Woods institutions ultimately extended debt relief to virtually all of Africa’s autocrats, was the threat of sanction really credible? The answer, clearly, is yes. Africa’s autocrats were eager to finalize debt relief negotiations, the better to escape the scrutiny of the international community. The Bretton Woods institutions knew this, and so used the duration of negotiations strategically. As a result, Africa’s most venal, abusive autocrats were subjected to the longest negotiation periods. In Guinea-Bissau negotiations lasted nearly 10 years, in Burundi four years, in Cameroon six years, in Congo five years, in DRC seven years, and in Gambia seven years. By contrast, a Western darling during the early stage of his rule, Uganda’s Museveni was granted debt relief after two months of negotiations in early 2000. Virtually all of Africa’s autocrats may have received debt relief, but the duration of negotiations – and hence international scrutiny – varied dramatically according to the incumbent autocrat’s economic and human rights record. To secure debt relief quickly, the qualitative evidence suggests, Africa’s autocrats often conceded to major reforms.

4.2 Substantial Human Rights Records

Virtually all autocrats who were granted irrevocable debt relief were in power long before HIPC negotiations began and remained long after they concluded. This constitutes the second feature of the HIPC debt relief program that favors “differences in differences” estimation. Because each autocrat accumulated a substantial human rights record both before and after debt relief, in the lexicon of causal inference, each autocrat constitutes his own counterfactual. As a result, the “differences in differences” estimator controls for any unobserved, autocrat-level characteristics that might be correlated with both HIPC debt relief negotiations and repression. Conditional on the range of day- and year-level control variables described above, there is no reason to expect that, during HIPC debt relief negotiations, an individual autocrat would have modified his rate of repression for any reason but financial pressure from Western donors.

4.3 Model Specification

Visual inspection of the data makes clear that autocrats engaged in far less repression during HIPC debt relief negotiations than otherwise. Figure 2 gives the percentage of country-days on which Africa’s autocrats employed repression for the three samples along the x-axis. In the full sample, with HIPC and non-HIPC days aggregated, repression occurred on roughly 0.73% of country-days. The center and right bars give the rates of repression when the full sample is divided into non-HIPC days and HIPC days, respectively. The difference, as the t-statistics for a difference in means

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Figure 2: Daily rates of repression in Africa’s autocracies since 1989. The y-axis measures the percentage of country-days on which repression occurred for the three samples along the x-axis. Outside HIPC negotiations, a repression event occurred on 0.8% of country-days. During the most intense period of HIPC negotiations, a repression event occurred on roughly 0.1% of country-days. The difference in means for the two samples is significant at the 0.001% level.

suggests, is striking. During the most intense period of HIPC debt relief negotiations, the rate of repression among Africa’s autocrats plummeted, to roughly 0.1%. Outside HIPC negotiations, the rate of repression recovered to nearly 0.8%.

The baseline estimating equation is

$$\text{logit } \left[ \Pr (\text{Repression}_{it} = 1|\text{Protest}_{it−1} = 1) \right] = \alpha (\text{HIPC Negotiations}_{it}) + \beta X_{it} + \kappa Z_{it} + \gamma_j + \epsilon$$ (2)

where $X_{it}$ gives the vector of day-level control variables from equation (1), $Z_{it}$ the vector of year-level control variables, and $\gamma_j$ a full set of autocrat level fixed effects. Again, by comparing autocrat $j$’s record of repression during HIPC negotiations with his record both before and after – that is,
by focusing exclusively on within-autocrat variation – this fixed effects model ensures that the \( \alpha \) estimate is not a function of donor selection bias. In so doing, equation (2) identifies the causal effect of HIPC Negotiations\(_{jt}\) by using autocrat \( j \) as his own counterfactual. To study the effect of Western pressure, I compare the records of repression that autocrats accumulated during HIPC debt relief negotiations with the record they accumulated before and after debt relief was granted. As long as the days of debt relief negotiations are, on average, identical in all salient respects to those on which HIPC negotiations did not occur, the estimated effect will have a causal interpretation.

This identification strategy features a major advantage: It focuses on the beliefs of Africa’s autocrats about what would happen if they engaged in repression. As a result, whether Western creditors are actually more likely to punish or overlook human rights abuses during these temporal shocks is immaterial. The salient point is that Africa’s autocrats modify their repression strategies based on their beliefs about the likelihood of Western punishment, and hence about the costs and benefits of repression.

### 4.4 Estimation Results

The results appear in Table 2. As a baseline, Model 1 includes only HIPC Negotiations\(_{jt}\) and the two election season variables. Model 2 adds the day-level variables that capture prevailing political instability, while Model 3 adds daily weather records. The full model appears in Model 4, and it includes structural control variables as well. As a robustness check, Model 5 reestimates the full model with a random effects estimator and Model 6 with a rare events logit estimator.

The coefficient estimate on HIPC Negotiations\(_{jt}\) is virtually constant across models. In each, autocrats curtail repression dramatically during the most intense periods of HIPC negotiations. The effect holds regardless of prevailing political instability, the proximity of day \( t \) to an election, and the range of economic conditions that might induce popular grievances or render power more attractive to the autocrat. The associated odds ratios appear at the bottom of Table 2, along with 95% confidence intervals. They suggest that, during HIPC negotiations, the daily odds of repression are only 10% as great as otherwise. Owing to the large sample size and the magnitude of the effect, these estimates are relatively precise. Indeed, the magnitude of the effect is similar to the descriptive statistics in Figure 2.

To capture the effect of “protest selection bias,” in Table 3 I reestimate Models 1 through 6 without conditioning on protests on day \( t - 1 \). As in Model 1 in Table 1, the coefficients across models in Table 3 are now roughly half of what they are in Table 2. The associated odds ratios suggest that, during HIPC negotiations, the daily odds of repression are roughly 20% as great as otherwise. The difference in the coefficients clearly reveals the importance of accounting for protest selection bias. Citizens are strategic. They refrain from protesting if they expect to be repressed when they do. As a result, failing to account for “protest selection bias” systematically understates the effect of Western donor dependence on repression.
The coefficients on the control variables are substantively similar to those in Table 1 and equally instructive. Again, the rate of repression spikes during election seasons – the 30 days before and after election days – and on election day itself. The effect is similar in magnitude to HIPC negotiations: Whereas HIPC negotiations reduced the daily odds of repression by a factor of 10, election seasons increase the daily odds of repression by a factor of 10. This too is strikingly consistent with existing research. Students of autocratic politics increasingly find that the regular elections occasioned by nominally democratic institutions constitute “focal moments” for collective action, and hence prove destabilizing. During election seasons citizens are more engaged in politics and more aware of their neighbors’ discontent. Opposition leaders have strong incentives to coordinate mass protests and alert citizens to electoral fraud. As a result, scholars find, the rate of popular protest is significantly greater during election seasons than at any other time of year. The results in Table 2 reflect this. The daily odds of repression increase dramatically during election seasons.

This suggests an important question: Is reliance on Western donors so constraining that it circumscribes repression even during election seasons? To answer this question, I let the effect of HIPC debt relief negotiations on repression vary according to whether day t occurs during an election season. The estimating question is

$$\text{logit} \left[ \Pr (\text{Repression}_{it} = 1 | \text{Protest}_{it-1} = 1) \right] = \alpha (\text{HIPC Negotiations}_{it}) $$

$$\psi (\text{HIPC Negotiations}_{it} \times \text{Election Season}_{it}) $$

$$+ \beta X_{it} + \kappa Z_{it} + \gamma_j + \epsilon \quad (3)$$

The results appear in Model 7 in Tables 2 and 3.

Even though repression is far more common during election seasons, Western leverage is no less constraining. In the “protest selection bias” sample, the (HIPC Negotiations$_{it}$ × Election Season$_{it}$) interaction term is indistinguishable from 0. In the full sample, however, the interaction term is strongly negative, suggesting that, during HIPC negotiations, the daily odds of repression are even lower around elections than they are otherwise. This too accords with the notion that Western pressure constrains repression: Since the international spotlight is often brightest during election seasons, African autocrats who are particularly sensitive to donor scrutiny – as they are during HIPC debt relief negotiations – have the strongest incentive to avoid repression. In short, although repression is more useful during election seasons, Western donor dependence proves constraining nonetheless.

---


81 For more on the international spotlight during election seasons, see Kelley (2012).
Table 2: Repression and HIPC Debt Relief Negotiations, Conditional on $Protests_{t-1} = 1$

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
<th>Model 7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Election Season$_t$</strong></td>
<td>2.017**</td>
<td>2.030**</td>
<td>1.980**</td>
<td>2.587**</td>
<td>2.574**</td>
<td>2.515**</td>
<td>2.598**</td>
</tr>
<tr>
<td><strong>Election Day$_t$</strong></td>
<td>2.176**</td>
<td>2.182**</td>
<td>2.153**</td>
<td>2.160**</td>
<td>2.156**</td>
<td>2.181**</td>
<td>2.179**</td>
</tr>
<tr>
<td><strong>Civil Conflict Event: Non-State$_t$</strong></td>
<td>-0.016</td>
<td>0.024</td>
<td>0.213†</td>
<td>0.238*</td>
<td>0.193</td>
<td>0.212†</td>
<td></td>
</tr>
<tr>
<td><strong>Civil Conflict Event: State$_t$</strong></td>
<td>-0.204</td>
<td>-0.093</td>
<td>-0.106</td>
<td>-0.151</td>
<td>-0.084</td>
<td>-0.134</td>
<td></td>
</tr>
<tr>
<td><strong>Temperature$_t$</strong></td>
<td>-0.017**</td>
<td>-0.031**</td>
<td>-0.031**</td>
<td>-0.030**</td>
<td>-0.031**</td>
<td>-0.031**</td>
<td></td>
</tr>
<tr>
<td><strong>Rainfall$_t$</strong></td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td><strong>ln Real GDP Expenditure Side$_s$</strong></td>
<td>7.618**</td>
<td>7.572**</td>
<td>6.965**</td>
<td>7.624**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oil Supply$_s$</strong></td>
<td>1.131**</td>
<td>1.125**</td>
<td>0.874**</td>
<td>1.134**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Employment Rate$_s$</strong></td>
<td>5.480**</td>
<td>5.428</td>
<td>4.609</td>
<td>5.488**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HIPC Negotiations$_t$ × Election Season$_t$</strong></td>
<td>-0.591</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Autocrat Effects</strong></td>
<td>Fixed</td>
<td>Fixed</td>
<td>Fixed</td>
<td>Fixed</td>
<td>Fixed</td>
<td>Random</td>
<td>Fixed</td>
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<tr>
<td><strong>N</strong></td>
<td>26,101</td>
<td>26,101</td>
<td>20,009</td>
<td>18,020</td>
<td>18,020</td>
<td>18,020</td>
<td>18,020</td>
</tr>
</tbody>
</table>

Significance levels: †: 10% *: 5% **: 1%

Odds Ratios

[95% Confidence Intervals]

| **HIPC Negotiations$_t$** | 0.069       | 0.073       | 0.076       | 0.1061      | 0.117       | 0.093       |
|                           | [0.026, 0.184] | [0.027, 0.197] | [0.028, 0.206] | [0.037, 0.307] | [0.041, 0.336] | [0.032, 0.269] |
Table 3: Repression and HIPC Debt Relief Negotiations, Full Sample

<table>
<thead>
<tr>
<th></th>
<th>Model 1 Logit</th>
<th>Model 2 Logit</th>
<th>Model 3 Logit</th>
<th>Model 4 Logit</th>
<th>Model 5 Rare Events Logit</th>
<th>Model 6 Logit</th>
<th>Model 7 Logit</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIPC Negotiations(t)</td>
<td>-1.486**</td>
<td>-1.641**</td>
<td>-1.807**</td>
<td>-1.798**</td>
<td>-1.776**</td>
<td>-1.789**</td>
<td>-1.409**</td>
</tr>
<tr>
<td></td>
<td>(0.235)</td>
<td>(2.389)</td>
<td>(0.264)</td>
<td>(0.278)</td>
<td>(0.278)</td>
<td>(0.278)</td>
<td>(0.290)</td>
</tr>
<tr>
<td>Election Season(t)</td>
<td>1.938**</td>
<td>1.959**</td>
<td>1.990**</td>
<td>2.050**</td>
<td>2.048**</td>
<td>2.048**</td>
<td>2.074**</td>
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<tr>
<td></td>
<td>(0.062)</td>
<td>(0.063)</td>
<td>(0.070)</td>
<td>(0.072)</td>
<td>(0.072)</td>
<td>(0.072)</td>
<td>(0.072)</td>
</tr>
<tr>
<td>Election Day(t)</td>
<td>0.923**</td>
<td>0.745*</td>
<td>0.803*</td>
<td>0.794*</td>
<td>0.811**</td>
<td>0.795*</td>
<td>0.813**</td>
</tr>
<tr>
<td></td>
<td>(0.308)</td>
<td>(0.310)</td>
<td>(0.329)</td>
<td>(0.333)</td>
<td>(0.333)</td>
<td>(0.332)</td>
<td>(0.336)</td>
</tr>
<tr>
<td>Civil Conflict Event: Non-State(t)</td>
<td>-0.091</td>
<td>0.000</td>
<td>0.034</td>
<td>0.041</td>
<td>0.018</td>
<td>0.034</td>
<td></td>
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<tr>
<td></td>
<td>(0.077)</td>
<td>(0.076)</td>
<td>(0.076)</td>
<td>(0.076)</td>
<td>(0.073)</td>
<td>(0.076)</td>
<td>(0.076)</td>
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<tr>
<td>Civil Conflict Event: State(t)</td>
<td>-0.194**</td>
<td>-0.099</td>
<td>-0.033</td>
<td>0.013</td>
<td>0.010**</td>
<td>-0.009</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.072)</td>
<td>(0.088)</td>
<td>(0.088)</td>
<td>(0.088)</td>
<td>(0.088)</td>
<td>(0.088)</td>
<td>(0.089)</td>
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<tr>
<td>Temperature(t)</td>
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<td>-0.013**</td>
<td>-0.013**</td>
<td>-0.013**</td>
<td>-0.013**</td>
<td>-0.013**</td>
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<tr>
<td></td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
<td>(0.004)</td>
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<tr>
<td>Rainfall(t)</td>
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<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
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<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
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<tr>
<td>ln Real GDP Expenditure Side(s)</td>
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<td></td>
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<td>(0.168)</td>
<td>(0.142)</td>
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<td>Oil Supply(s)</td>
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<td></td>
<td>(0.043)</td>
<td>(0.043)</td>
<td>(0.039)</td>
<td>(0.042)</td>
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<td>Employment Rate(s)</td>
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<td></td>
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<td>(0.623)</td>
<td>(0.629)</td>
<td>(0.626)</td>
<td>(0.630)</td>
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<tr>
<td>HIPC Negotiations(t) × Election Season(t)</td>
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Significance levels: †: 10% *: 5% **: 1%

Odds Ratios

<table>
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<tr>
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<th>Model 1 Odds Ratio</th>
<th>Model 2 Odds Ratio</th>
<th>Model 3 Odds Ratio</th>
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<th>Model 5 Odds Ratio</th>
<th>Model 6 Odds Ratio</th>
<th>Model 7 Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIPC Negotiations(t)</td>
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<td>0.166</td>
<td>0.169</td>
<td>0.167</td>
<td>0.167</td>
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</tbody>
</table>

[95% Confidence Intervals]

|                      | [0.154, 0.333] | [0.131, 0.287] | [0.106, 0.254] | [0.105, 0.262] | [0.107, 0.267] | [0.106, 0.264] | Figure 3 |

<table>
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<tr>
<th></th>
<th>0.167</th>
<th>0.167</th>
<th>0.167</th>
<th>0.167</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>[0.154, 0.333]</td>
<td>[0.131, 0.287]</td>
<td>[0.106, 0.254]</td>
<td>[0.105, 0.262]</td>
<td>[0.107, 0.267]</td>
<td>[0.106, 0.264]</td>
<td>Figure 3</td>
</tr>
</tbody>
</table>
5 Conclusion

Modern autocrats confront new challenges. Unable to leverage Great Power rivalries for their benefit, autocrats must increasingly abide the nominally democratic institutions insisted upon by Western creditors. This threatens their survival in two ways. First, they lack the advantages of single party regimes, which create incentives for elite loyalty despite temporary political and economic shocks to the regime. Second, the regular elections occasioned by nominally democratic institutions constitute “focal moments” for popular protest: periods when citizens more easily overcome their collective action problems. Autocrats confront the threat of popular protests, this paper shows, with new constraints. Although repression is often regarded as a central feature of authoritarian regimes, dependence on Western donors has limited recourse to repression among Africa’s autocrats.

Methodologically, this paper identified three sources of bias that may obscure the empirical relationship between repression and foreign aid: ecological bias, “protest election bias,” and “donor
selection bias.” Shifting the unit of analysis from the country-year to the country-day, I argue, provides one way to overcome them. By conditioning on protests on day \( t - 1 \) – that is, by asking how autocrats respond to protests once they occur – I exclude country-day observations where the autocrat had no need for repression because the citizenry, certain that their protests would be met with repression, was too scared to protest in the first place. In short, by conditioning on protests on day \( t - 1 \), I exclude days where repression is “off the equilibrium path.” Failing to account for “protest selection bias,” I show, consistently understates the estimated relationship between aid dependence and repression. To account for “donor selection bias,” this paper exploits two features of the HIPC debt relief program. First, the Bretton Woods institutions have entered into debt relief negotiations with virtually all of Africa’s autocrats. Second, these autocrats accumulated substantial records of repression both prior to and after debt relief. Using a “differences in differences” estimator and controlling for a range of day- and year-level features, this paper found that Africa’s autocrats dramatically curtailed repression during the most intense period of debt relief negotiations. In short, confronted with the possibility of punishment, Africa’s autocrats act with restraint.

Though striking, the evidence above remains a function of the international environment that generated it. Among the salient features of the post-Cold War international order is that Africa’s autocrats expect financial sanctions for human rights violations. This expectation has endured for some 25 years. But as China courts African allies with low interest loans and no political conditions, Africa’s autocrats increasingly forgo Western development aid in favor of Chinese support. In the competition to provide development aid – which, after all, is the only raison d’être for many bilateral government agencies and multilateral institutions – Western sources are increasingly losing. In the medium term, this may force Western donors to abandon their political and human rights conditions. If so, or if China continues its generous engagement, then the constraining effects of Western aid dependence may prove a unique feature of the immediate post-Cold War international order.

This paper suggests at least two important directions for future research. First, although focusing on HIPC debt relief negotiations enables estimation of a plausibly causal effect of Western donor pressure, it comes at a cost. When employing repression, autocrats confront a tradeoff. Although repression may increase an autocrat’s probability of survival – even if, \textit{ex ante}, the magnitude of this marginal effect is extremely difficult for an autocrat to anticipate – repression also risks Western support that may be vital to fund a government, purchase political support, or pay the salaries of the internal security apparatus. For the world’s autocrats, in short, there is surely some marginal rate of substitution between repression and sanctions from Western donors. This paper makes clear that Western donor pressure has constrained repression among Africa’s autocracies, but it does not show \textit{how much} leverage is required to purchase an additional unit of restraint. Indeed, this marginal rate of substitution likely depends on a range of strategic factors.

\footnote{For more on China’s engagement with Africa, see Taylor (2006), Brautigam (2008, 2009), McBride (2008), Rotberg (2008), Michel and Beuret (2009), and Power, Mohan and Tan-Mullins (2012).}
which future research could elucidate.

Second, scholars have long found that autocrats ensure their survival by employing a range of political tools: patronage, repression, and formal political institutions that create incentives for elite compliance. Reliant on Western donors, Africa’s autocrats lost the ability to make wholesale institutional changes following the end of the Cold War. This paper shows that many of Africa’s autocrats have also lost the easy recourse to repression that their predecessors enjoyed. Even with two of the traditional tools of survival gone, however, Africa’s autocrats are learning to survive. Between 1986 and 2000, the number of autocracies in Africa fell dramatically, from 45 to 30. Since 2000, however, Africa’s autocrats have proven more resilient. Indeed, the rate of democratic transitions has so stagnated that scholars now debate the magnitude of the “democratic recession.”[^33] Most broadly, this paper suggests that scholars should expand their search for the tools of autocratic survival in the modern world beyond wholesale repression and institutional changes.

References


[^33]: See, for instance, the contributions in the *Journal of Democracy*, 26(1).


6 Appendix

Figure 4: The number of country-days per African autocracy on which repression occurred. According to the SCAD data, among Africa’s autocracies, Zimbabwe’s citizens have suffered the most repressive events, followed by Egypt, Mauritania, and Morocco. The governments of Angola, Central African Republic, Kenya, and Nigeria have also engaged in considerable repression.
Figure 5: The number of country-days per African autocracy on which protest occurred. According to the SCAD data, Egypt and Zimbabwe have witnessed the highest levels of protest of all African autocracies, followed by DRC, Nigeria, and the Central African Republic. Countries in white either suffered few days under autocratic rule or, if they were governed by autocrats, witnessed few protests. This category includes, for instance, both Senegal and Equatorial Guinea.
Table 4: Variable Definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Range</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country-day level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repression on day $t$.</td>
<td>${0, 1}$</td>
<td>0.008</td>
<td>0.085</td>
<td>Assumes value 1 if autocrat $j$ in country $i$ employed repression on day $t$.</td>
</tr>
<tr>
<td>HIPC Negotiations$_{it}$</td>
<td>${0, 1}$</td>
<td>0.058</td>
<td>0.235</td>
<td>Assumes value 1 if day $t$ in country $i$ occurred between the release of the “Decision Point” document but before the “Completion Point” document.</td>
</tr>
<tr>
<td>Protest$_{it-1}$</td>
<td>${0, 1}$</td>
<td>0.084</td>
<td>0.277</td>
<td>Assumes value 1 if there were popular protests in country $i$ on day $t - 1$.</td>
</tr>
<tr>
<td>Civil Conflict Event: Non-State$_{it}$</td>
<td>${0, 1}$</td>
<td>0.133</td>
<td>0.813</td>
<td>Assumes value 1 if a non-state armed group engaged in an episode of civil conflict in country $i$ on day $t$.</td>
</tr>
<tr>
<td>Civil Conflict Event: State$_{it}$</td>
<td>${0, 1}$</td>
<td>0.152</td>
<td>0.667</td>
<td>Assumes value 1 if a state or state-affiliated armed group engaged in an episode of civil conflict in country $i$ on day $t$.</td>
</tr>
<tr>
<td>Election Day$_{it}$</td>
<td>${0, 1}$</td>
<td>0.001</td>
<td>0.029</td>
<td>Assumes value 1 if an election occurred on day $t$ in country $i$.</td>
</tr>
<tr>
<td>Election Season$_{it}$</td>
<td>${0, 1}$</td>
<td>0.119</td>
<td>0.324</td>
<td>Assumes value 1 if day $t$ in country $i$ fell within the 90 days prior to an election or within 90 days following an election.</td>
</tr>
<tr>
<td>Independence Day$_{it}$</td>
<td>${0, 1}$</td>
<td>0.003</td>
<td>0.051</td>
<td>Assumes value 1 if day $t$ is country $i$’s Independence Day celebration.</td>
</tr>
<tr>
<td>Temperature$_{is}$</td>
<td>[0.34, 1.07]</td>
<td>0.750</td>
<td>0.093</td>
<td>Average temperature on day $t$ in country $i$’s primary political city, expressed in hundreds.</td>
</tr>
<tr>
<td>Rainfall$_{is}$</td>
<td>[0.0, 19.02]</td>
<td>0.085</td>
<td>0.439</td>
<td>Inches of rain on day $t$ in country $i$’s primary political city.</td>
</tr>
<tr>
<td><strong>Country-year level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western Aid Dependence$_{is}$</td>
<td>[0.0, 17.29]</td>
<td>0.887</td>
<td>2.085</td>
<td>The amount of aid received by country $i$ in year $s$ from Western donors, standardized by its per capita GDP during the same year and expressed in millions.</td>
</tr>
<tr>
<td>Real GDP Expenditure Side$_{is}$</td>
<td>[0.0, 3.99]</td>
<td>0.273</td>
<td>0.504</td>
<td>Country $i$’s real GDP in expenditure terms in year $s$, expressed in hundreds of thousands.</td>
</tr>
<tr>
<td>Employment Rate$_{is}$</td>
<td>[0.22, 0.58]</td>
<td>0.392</td>
<td>0.074</td>
<td>Country $i$’s employment rate in year $s$.</td>
</tr>
<tr>
<td>Oil Supply$_{is}$</td>
<td>[−1.46, 2.16]</td>
<td>0.192</td>
<td>0.458</td>
<td>Country $i$’s number of barrels of crude oil produced per day in year $s$, expressed in millions.</td>
</tr>
</tbody>
</table>
Table 5: Politically Salient Cities by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Salient City</th>
<th>Country</th>
<th>Salient City</th>
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