With a Little Help from Our (Autocratic) Friends

The Aid-Democratization Nexus and Chinese Development Assistance

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Abstract

Does foreign aid from authoritarian donors stabilize autocracy? Extant research has explored how aid from western democracies affects democratization. However, due to data collection problems there has not been much attention to the effect of foreign aid from nonwestern, nondemocratic states. Rising regional powers such as China increasingly are seeking to exert their influence globally, yet these states cannot be expected to use their development assistance like the west, for democracy promotion. The literature suggests that foreign aid is likely to have a stabilizing effect rather than a democratizing effect, unless aid is conditional on democratization. The theory presented here represents a first take at the motivations of authoritarian donors, including their expectations of the outcome of providing aid to different types of regimes and the decision calculus authoritarian donors use to select targets. To test this new explanation of persistent authoritarianism, I utilize a unique research design that incorporates a new dataset of Chinese foreign aid to over forty African states from 2000 to 2010 and Bayesian modeling that is sensitive to the limitations and quality of that data. I find that Chinese development assistance has a substantively small and surprisingly negative effect on regime duration. Trade dependence with China has a larger positive effect on authoritarian persistence in Africa, however.

1 Introduction

The sweeping liberalizations throughout the international system which accompanied what Huntington (1991) identified as the "third wave" of democratization appear to have slowed or stalled in recent years. Some political scientists see this phenomenon as a "democratic rollback" (Diamond 2002), casting doubt on the prospects of further widespread liberalization and democratic consolidation. Recent contributions to the literature on the international factors which impact democratization have suggested that this rollback might be related to the rise of authoritarian regimes– Russia, China, Venezuela, Iran, and Saudi Arabia– which have the power and desire to prevent democratization through influence in the domestic politics in other regimes (Ambrosio 2010, Bader, Grävingholt and Kästner 2010, Burnell and Schlumberger 2010).

Looking at trends of democratization over the past one hundred years, it becomes clear that Africa and the Middle East are far behind global averages. Figure 1 reveals the contrast between Africa and the Middle East and the rest of the world in one measure of democracy, aggregate POLITY scores, from 1912 to 2012. The gap between Africa and the rest of

Figure 1: Democratization Trends, 1912 – 2012
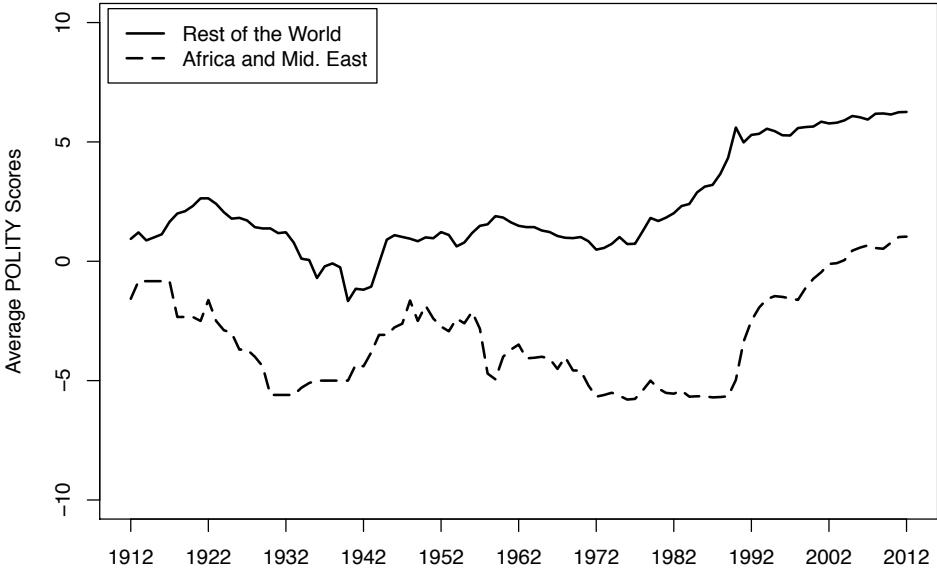
the world that remains despite a strong uptick in average democracy in the early 1990s suggests that there might be systematic reasons behind the relative lack of democracy among these states. However, the typical explanation regarding the Cold War environment, where the geopolitical concerns of competing superpowers led to military and financial support of dictators, can no longer explain why authoritarianism persists so strongly in Africa and the Middle East.

The comparative democratization literature has offered different accounts of what might be preventing democracy from gaining a foothold in these regions. Such explanations include: the increase in regime capacity and stability due natural resource rents (Ross 2001, Schwarz 2008, Haber and Menaldo 2011, Andersen and Ross 2014), the institutional legacies of colonial heritage (Abderrezak 2004, Acemoglu, Johnson and Robinson 2001, Bernhard, Reenock and Nordstrom 2004), or the resistance to modernization and democratization among less secular, more traditional cultures (Inglehart and Baker 2000, Inglehart and Welzel 2005). Additionally, international factors have been considered, such as autocratic diffusion (Ambrosio 2010, von Soest 2015) as well as the effects of western foreign aid (Knack 2004, Djankov, Montalvo and Reynal-Querol 2008, Wright 2009). The literature cited here contains conflicting accounts of each explanation, suggesting that there is room for theoretical and empirical improvement in the comparative democratization literature, particularly pertaining to those persistent authoritarian stronghold states and regions such as Africa and the Middle East.

Setting aside the conflicting accounts of how foreign aid affects democracy for the moment, extant analyses suggest that foreign aid from western democracies can be an important factor in explanations of comparative democratization. However, in large part due to unavailability of reliable data, there has not been much attention to the effect of foreign aid from nonwestern, nondemocratic states. Rising regional powers such as China, Russia, and Saudi Arabia increasingly are seeking to exert their influence globally. These states cannot be expected to use their development assistance grants in the same way as the west: conditional on democratization. Additionally, one school of thought in the extant literature

has advanced the idea that foreign aid to autocracies has a stabilizing effect rather than a democratizing effect, even if aid is supposed to be conditional on strengthening democratic institutions or holding elections. Taken together, the increase of authoritarian regional powers as donors and the argument that aid stabilizes regimes reveals a need to examine the following question: does foreign aid from authoritarian donors promote entrenched autocracy?

This study seeks to advance the extant literature on international influences on comparative democratization in three ways. First, the theory presented here represents a generalizable view of the motivations of authoritarian donors, including their expectations of the outcome of providing aid to different types of regimes and the decision calculus authoritarian donors use to select targets. Second, I advance a relatively new explanation for persistent authoritarianism that has not been thoroughly examined in the extant literature on comparative democratization. Third, I utilize a unique research design that incorporates a new dataset of Chinese foreign aid to over forty African regimes from 2000 to 2010 and Bayesian modeling that is sensitive to the limitations and quality of that data.

In the next section, I review the literature on foreign aid and democratization, paying close attention to the the argument that foreign aid stabilizes regimes. In the third section, I use this segment of the literature as a starting point and outline my theory of how authoritarian donors seek to promote autocratic stability. In the fourth section, I outline my research design including data and methodology. In the fifth section I present the empirical findings of my design, and conclude with a final section which discusses the findings and suggests future improvements.

2 Literature Review

Early accounts of how foreign aid works to promote democracy focus on general economic development as a mechanism. This is illustrated by the two-gap model (Chenery and Strout

1966), which considers foreign aid as the bridge for gap between the investment and savings levels in a target's economy so that self-sustaining economic growth can be achieved. Consistent with modernization theory, the two-gap approach asserts that once the target's economy grows large enough to breach the income threshold necessary to sustain democracy, the target will transition to democracy without intervention (Lipset 1959, Przeworski et al. 2000, Epstein et al. 2006, Knack 2001, 2004).

The two-gap model makes two assumptions: one is that the relationship between investment and growth is fixed; the second is that the aid revenue will actually finance extra investment rather than extra consumption in target states. Both assumptions, however, are theoretically and empirically problematic (Easterly 2003).[1] Despite its problems, this view is popular among some liberal theorists and the western policy community since the economic and political development of the target is the nominal goal of most aid projects.

The consensus view among economists and development scholars is that aid in general is not directly effective in promoting economic development, and so aid often does not promote democratization (Riddell 2007, Lancaster 2008). There is less agreement on why this is the case, with two main opposing schools of thought. One view attributes the failures of foreign aid to underfunding by the donors (Sachs 2005). This view asserts that there would be development success if the donors are willing to fund at the appropriate level. The other view attributes aid failures to the management of aid and focuses on either the limited administrative capacity of the targets (Easterly 2006, 2003), or the macro-economic fiscal, monetary, and trade policies of the target (Burnside and Dollar 2000).

Some scholars have argued that aid conditionality is necessary for the democratization effect to hold (Collier 2006, Kono and Montinola 2009). However, as is readily apparent from many examples of World Bank and International Monetary Fund development aid packages, there is a moral hazard problem when targets agree to make changes in exchange for aid disbursement (Bader and Faust 2014). Even when aid is contingent on liberalization,

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[1](Easterly 2003, p. 33) did an empirical test of assumptions, in the context of a critique of Burnside and Dollar (2000), and found that it holds for only one out the 88 countries tested: Tunisia.

monitoring costs and the nature of foreign aid transfers (usually to the regime) do little to prevent political capture of what remains a highly fungible resource stream for target regimes (Jones 2005, Kosack and Tobin 2006). This leads Gibson, Hoffman and Jablonski (2015) to consider the nature of some development assistance policies: technical assistance grants. Such grants are intended to be used to train policy advisors and spread technological innovations to regime elites. This type of aid, Gibson, Hoffman and Jablonski (2015) argue, allows for more oversight and helps keep the conditionality of aid intact by reducing the fungibility of development assistance.

Besides the two-gap modernization approach and its detractors, there is another theory of foreign aid and democratization in the literature. The selectorate theory (Bueno de Mesquita et al. 2003), argues that foreign aid is a means by which donors buy policy concessions from recipients. Large coalition systems (democracies) tend to value such policy concessions and thus tend to be aid donors. The policy concessions demanded are usually unpopular domestically. For example, the use of military bases to operate drone strikes in counter-terror operations in exchange for foreign aid is typically unpopular with the host population. Since small coalitions systems (autocracies) tend to be institutionally equipped to handle the political fallout of such concessions, they tend to be the corresponding recipients of aid.[2] This view is distinguished from the previous two in that it does not assume altruism on the part of donors. From this perspective, it should not be surprising that foreign aid has failed to alleviate human suffering or to promote economic development; such aims were not the primary objective of the donors in the first place (Bueno de Mesquita and Smith 2007).

When democratic donors provide to aid to autocratic recipients, the autocratic leader can use the aid revenue to buy political support (Bueno de Mesquita and Smith 2009, 2007) or to improve their coercive capabilities (Djankov, Montalvo and Reynal-Querol 2008, Lai and Morey 2006). This increased capacity for patronage and repression not only retards

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[2]Autocratic leaders can respond to popular discontent by direct repression, an option that is relatively costly to democratic leaders.

democratization, it may end up promoting autocratization. The selectorate framework is employed in the democratization literature (Tan N.d., Licht 2010, Kono and Montinola 2009, Wright 2009), to argue that under a specific set of conditions,[3] foreign aid can still be effective in democracy promotion. However, the democratization literature generally makes it clear that donor pressure to democratize is generally more effective on democratic rather than on autocratic targets. Since it is autocracies that policy-makers are interested in democratizing it is hard not to conclude that for "donors interested in the democratization and political progress of democratizing or autocratic regimes, aid may be an inappropriate policy tool" (Licht 2010, p. 88).

If the donor is interested in promoting the stability of a nondemocratic state, aid might just be the correct tool. For authoritarian great power states such as China who are attempting to exercise political strength in the international arena, aid targeting weak authoritarian states could provide for the reconsolidation of that regime. Since new democracies will likely align with other democracies, China could try to buy more friends with targeted aid, just as the U.S. tries to convert more friends by urging democratization. It is this perspective that I use as a theoretical starting point.

3 Theory

The preceding review of the foreign aid literature, especially the selectorate explanation of the role of aid in democratization, reveals that there are some conditions under which western donors might be successful in using foreign aid to promote democracy. Overall, using foreign aid to induce democratization in authoritarian regimes is not likely to work. Even if western donors calculate that conditional aid can democratize and improve human rights in target states, autocracies cannot be expected to set these goals when choosing to allocate aid.

There has been some recent preliminary work on the nature of authoritarian-driven

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[3]The conditions are a long time horizon of analysis for Kono and Montinola (2009), before the institutionalization of the support base for Licht (2010), high prospects of survival post liberalization for the dictator for Wright (2009), and a recipient that has little trade or strategic value for Tan (N.d.).

international effects. Bader, Grävingholt and Kästner (2010) argue that Chinese foreign policy goals direct the regime's preference for nondemocratic targets, but that stabilization is more important than the often prohibitively costly autocracy promotion. von Soest (2015) theorizes about the mechanisms of authoritarian collaboration, and maintains that authoritarian leaders like Russia and China should be expected to engage in development assistance projects aimed at stabilizing targets. He argues that such collaboration is driven by a need to maximize their own survival more than a desire to promote autocratization (von Soest 2015). In the clearest understanding of authoritarian donor interests, Bader (2015) advances the idea that China is like any foreign assistance donor: interested in maximizing policy concessions in the target. The desired polity concessions are not liberalization towards democracy or regime change towards the donor's type, but rather concessions are geared towards stabilizing the target and opening new markets (Bader 2015).

Authoritarian foreign aid donors are rare, however. There are two main qualities that an authoritarian donor must have: the means to fund aid projects, and the desire to fund them. States such as Iran, Pakistan, or Vietnam might have reasons why they would commit aid to development projects in target states, such as promoting infrastructure improvements in a co-ethnic or co-religious target (Iran-Azerbaijan), improving target stability to reduce border insecurity and black market activity (Pakistan-Afghanistan), or securing lower cost raw materials and promoting new markets for manufactured goods (Vietnam-Ethiopia). However, Iran, Pakistan, and Vietnam do not have the ability to commit the aid amounts necessary since they cannot afford the economic tradeoff or they do not have the international political clout to project past regional hegemonies. Alternatively, prospective authoritarian donors might have the means, but not the desire to engage in development assistance in a general sense.

States like Algeria, United Arab Emirates, or Singapore might have the capacity to be donors, but do not have clear reasons for bilateral (not through an IGO like the United Nations) development assistance. States such as China or Russia are growing regional powers

with relatively strong economies, authoritarian governing institutions, and an interest in becoming global leaders.[4] These rising powers are therefore not only interested in extracting resources, as some western observers have maintained (Manson 2012), but also in forging good working relationships with the target state. This is the same as western democracies like the U.S. or Germany pushing for further democratization in Turkey not only for geopolitical reasons, but also for human rights improvements and deeper economic and political ties.[5]

When nondemocratic donors like China are available to developing countries in need of foreign aid, they essentially are able to "shop around," finding a donor that will support their interests (Brainard, Chollet and LaFleur 2007, Whitfield and Fraser 2009). In the extant literature, the focus is mostly on the donor's preferences (democratize, stabilize) and target state preferences are not given much attention. I contend that donors select targets that they think they can extract policy changes from, and targets represent their preferences sincerely to prospective donors, since they want to attract aid and investment with few conditions attached. Donors like China then select targets because they calculate that the target will stabilize or increase capacity to govern if it receives aid. A more stable and capable target makes for a more predictable relationship, for trade, future investment, or export of ideas.

Authoritarian-authoritarian donor-target dyads are more likely than democracy-authoritarian dyads to be stable in the long run as well, since the monitoring problem associated with conditional aid to autocracies does not exist. Unlike democracies attempting to monitor incremental democratization in the target and reevaluate future aid, nondemocratic donors do not need to be concerned with sending observers or relying on NGOs to report target progress. Instead, the goal is stability rather than political liberalization, so all the donor

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[4]It could be argued that Saudi Arabia belongs in this group, since the Saudi regime has seen itself as a regional leader, especially of Sunni Muslims, and commits aid to neighboring autocracies to increase their infrastructure and repressive apparatuses. However, Saudi Arabia is a relatively small country without a military that can be projected globally. Despite its considerable wealth, the regime is not a likely candidate to be a future global leader.

[5]For instance, Germany is Turkey's number one export partner and number two import partner, there is a sizable Turkish migrant worker population in several German cities, and the centrist German Christian Democrat party has even argued for Turkey's European Union observer status to be upgraded to a privileged membership (Barkey and Taspinar 2011).

needs to do is observe is the lack of manifestations of instability such as riots, terrorism, loose borders, or piracy. Internal stability often comes at the expense of individual rights. This leads to the first hypothesis about authoritarian foreign aid and democratization:

Hypothesis 1 *Targets of foreign aid from nondemocratic donors are less democratic.*

Aid is a highly fungible resource for regimes. Development assistance therefore can end up developing the repressive capacity of the state rather than the hospitals or roads that it was earmarked for. In this way, foreign aid can be utilized in a similar manner to resource rents and give the incumbent government more strength to deal with manifestations of instability should they occur (Ross 2001, Greene 2010). We should expect that if authoritarian donors like China are selecting targets purposefully, they will be maximizing the possibility of extracting policy concessions. Following Bader (2015), I view such concessions as oriented towards increasing stability and economic engagement with the donor. The longevity of the target is an ideal way to capture this, since effective concessions will lead to a severely reduced likelihood of regime change. This leads to the second hypothesis:

Hypothesis 2 *As foreign aid from a nondemocratic donor increases, the target regime will be more durable.*

4 Research Design

In the past, examining the question of whether foreign aid from nondemocratic donors increases authoritarian persistence has been difficult due to a lack of reliable data. Of the studies exploring similar research questions to mine, only Bader (2015) and Gibson, Hoffman and Jablonski (2015) move beyond theory development and illustrative case studies to include an empirical examination of the topic. The data-poor environment which accompanies this line of inquiry therefore demands a unique approach. I seek to make a contribution here both in terms of the data I collect as well as the method I employ.

In order to examine how authoritarian donors affect authoritarian persistence in target states, I start with a relatively new dataset of Chinese aid commitments made from 2000 to 2013 to a variety of target regimes, collected by the AidData project on Chinese development assistance (Strange et al. 2013). This dataset includes over 1,300 yearly observations where aid was committed to African, Latin American, and Asian developing countries. This data overcomes the primary problem of data on authoritarian donors, the violation of the standard "missing-at-random" assumption that underlies standard linear modeling approaches.

The Chinese foreign aid data was collected using a Media-Based Data Collection (MBDC) methodology (Strange et al. 2013). AidData's methodology involves tracking projects from start to finish, however the project collaborators point out that the process is imperfect and that the utility of MBDC increases when complemented by other methods of data collection, such as on-site fieldwork and correspondence with various project stakeholders (Strange et al. 2013). Since regimes like China are notorious for misrepresenting or not reporting their financial activities, this approach to collecting aid commitments made by the Chinese regime cannot be corroborated by official records. It is necessary to make the assumption that this data represents the population of Chinese aid projects for the years covered.[6]

4.1   Measurement

I combined the Chinese foreign aid data from the AidData project with several variables from other data sources. The combined data include a maximum of 988 country-year observations (87 regimes) from 2000-2010.[7] Of these, 539 observations (47 regimes) comprise Africa and the Middle East, and 402 observations (42 regimes) are African and Middle Eastern autocracies. I have included summary statistics for key variables in Table 1 below based on the African subset. Descriptives for the full data appear in Table 4 in the appendix.

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[6]This assumption may not be correct if, for instance, there is a systematic missingness bias to aid project type or target information. I acknowledge the potential problems with treating this data as the population, and accordingly I also re-run the analysis using frequentist models, presented in the appendix.

[7]It was necessary to limit the upper temporal bound due to the inclusion of other data which did not extend to 2013.

Table 1: Summary Statistics, Africa and Middle East

Statistic	N	Mean	St. Dev.	Min	Max
Regime Duration (Years)	539	11.40	12.65	0	59
Chinese Aid (% GDP)	440	1.07	2.85	0.00	36.66
Exports to China (% GDP)	528	4.87	19.16	0.00	339.31
Party Regime Type	539	0.17	0.38	0	1
POLITY Score	539	1.86	5.29	-7	10
GDP per Capita (USD)	528	1,812.32	2,658.72	106.02	23,347.66
GDP per Capita Growth	520	2.15	5.44	-31.34	57.99
Resource Rents (% GDP)	509	16.12	17.78	0.01	85.32

My dependent variable, *Regime Duration*, is measured in years the regime has survived since its last institutional change. This variable derived from the `durable` measure in the POLITY IV data (Marshall, Gurr and Jaggers 2010). This variable increases by one each year there is no change to the `polity` measure in the POLITY IV data, with 1800 or the year of independence as the initial observation year for each regime.[8] This variable can take on values of zero for years immediately following a POLITY score change or during an interruption to sovereignty.

The main independent variable, *Chinese Aid*, is operationalized using data from the AidData Chinese Development Finance to Africa project version 1.2 (Strange et al. 2013). This dataset captures project-level aid amounts for each country-year as aid from China in a given year. Although there are unofficial finance records available, I will only be using the verified official finance records.[9] The variable in the aid data, `usd_current` captures the amount that China committed to an African country in a given year. I aggregated the project-level data to the country-year level and divided by GDP to get a percent. This also takes into account the relative sizes of the economies of the target regimes. Following Bader

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[8]This coding decision was made by Marshall, Gurr and Jaggers (2010) since the POLITY data begin with the year 1800. Since the majority of case regimes here are postcolonial states, it is not surprising that the maximum value is 59 years with a mean of 11.4 years.

[9]The AidData Chinese Development Finance project is inviting "crowdsourced" additions to the Chinese aid data, and some of the projects that were picked up by this method of by the MBDC method were unofficial projects that appeared to be funded like official projects.

(2015) I also include another variable to measure the influence of China on the target: *Exports to China* as a percentage of GDP. Data on country-year exports were gathered from the IMF Direction of Trade Statistics repository (*Direction of Trade Statistics Yearbook* 2016). As export dependence increases, China is able to extract policy concessions from the target.

The first pair of control variables I include measure regime characteristics relevant to the authoritarian donor. First, as a party type authoritarian regime, China is likely to target other party regimes both because of institutional similarities and also due to the greater ability for party regimes to turn aid into longevity (Bader 2015). The varaible *Party Regime Type* is derived from the Geddes, Wright and Frantz (2014) dataset on authoritarian types. I also include a control for *POLITY Score*, which is the institutionalized democracy/autocracy measure from the POLITY IV data which omits country-year observations when states are occupied, failed, or in transition (Marshall, Gurr and Jaggers 2010). While there has been a debate on the merits of POLITY and alternative measures of democracy,[10] it is an acceptable measure for this study, since it is sensitive enough to capture variation from year to year. Among all observaions, this variable should show a positive effect on durability, since regimes at the upper end of the POLITY range (greater than +7) are more stable than regimes in the "anocracy" range.

I also control for several factors which otherwise might improve regime durability, as noted by the comparative democratization literature. I do not include typical domestic structural variables such as colonial history and religious or cultural traditions since these variables are fixed within country over the time period of my data. Static measures such as these are not able to explain the variation in durability within country the way other variables are. Therefore, I control for typical political economy factors such as *GDP per Capita*, *GDP per Capita Growth*, and *Resource Rents*. Each of these measures is from the World Bank Development Indicators repository (WB 2012). Keeping with the extant literature (Ross 2001, 2012, Greene 2010, Przeworski et al. 2000), regime wealth should have a stabilizing

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[10]For a brief discussion of the way different measures of democracy matter to comparative politics and international relations research, see Bogaards (2010).

effect that increases durability, as should the resource rents measure, since these variables represent the ability of the target regime to better provide public (population) and private (winning coalition) goods without requiring outside aid pledges. Economic growth is likely to have a destabilizing effect on the regime, decreasing durability.

4.2 Method

I use Bayesian regression to model the effect of foreign aid on democratization. Bayesian inference differs from Frequentist statistical inference in that the data are fixed and the parameters are variable. This allows the specification of prior distributions, or what we think we know about the world, and an intermediate likelihood that conditions the posterior distribution that we infer from our model results. The relationship between democratization and aid from authoritarian donors is a good application of the Bayesian method of inference, since the aid data is conditional likelihood that allows me update prior beliefs about the world, in this case democratization, to arrive an improved posterior result. The prior distribution is informed by the alternative determinants of democratization from the extant literature. In this application, I specify priors that are conjugate, so the posterior distribution has same parametric qualities as the prior.

Utilizing a Bayesian approach in this study is particularly useful due to the nature of the data. This data should not be considered a sample in a typical Frequentist sense, even though the years covered by the data (2000 to 2010) do not constitute all Chinese aid since the regime gained control of mainland China. Temporal constraints aside, the data provided by the AidData project is essentially a population of aid projects from 2000 to 2010. There is some missing data, however. There are 271 observations where the amount of allocated development assistance (*Chinese Aid*) is missing, and the POLITY and World Bank data have some missingness as well.

Missing data is handled differently with the Bayesian regression method than with a frequentist application of OLS regression, which would listwise-delete any observation with

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missing values. This could introduce bias into the data, especially considering that I treat my data as the population rather than a random sample. Problems such as a small usable N and low variance in the data are typical of research in comparative democratization, as noted by Western and Jackman (1994). A good solution to these problems is presented by Bayesian methodology.

The process that I use to specify missing data is slightly different than the Frequentist imputation process, which is itself a Bayesian technique (Jackman 2000). I use the prior distribution of non-missing observations for each variable to dynamically compute likely values for each missing observation, updating the distribution with each filled in missing value. This process allows me to retain the N of 988 in the full model and 539 in the African and Middle East model, compared to an N of only 667 and 415 in the frequentist versions of these models.[11] This comes with a tradeoff, potentially wider confidence bounds in the estimates for variables with a greater number of missing values, since estimated values have distributions rather than point estimates in Bayesian analysis.

I specify three Bayesian linear regression models, all three with the same set of variables listed in section 4.1 above but with different specifications of the population. The first model is run over all country-year observations which identify potential target regimes. The second model is run over all African and Middle Eastern observations. The third model is run over all African and Middle Eastern autocracies. All models were run with two parallel Markov chain Monte Carlo estimations using a burn in of 100,000 iterations before sampling 250,000 iterations. This helps ensure that the model has converged prior to sampling, especially given the dynamic imputation of missing values.

It is important to note that it is possible to test the first hypothesis and the second together using either multistage modeling or Bayesian single-stage conditional coefficient approach, where the decision to target a regime would be condition the estimate of aid. I have opted for a more simplified examination of the decision to target autocracies for this

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[11]See appendix. The frequentist models were run on list-wise deleted data, accounting for the drop in observations.

working paper. This simplified approach consists of difference of means tests using *POLITY Score* and a dummy variable of whether aid was committed or not to determine groups.

5   Results

The results of the tests of hypothesis 1 and hypothesis 2 find very limited support for the theory. First of all, the difference of means tests reveal that there are potentially conflicting results. Table 2 shows the result of the difference of means tests on the full data and subsets of the data. While all but one of the differences between means are statistically significant, there are some unexpected findings in this table. In order to find support for hypothesis 1 that autocratic donors on average target less democratic places, we would need to see that there is a statistically significant negative difference between the means of the target group, and the non-target group (statistical difference) *as well as* a large difference between the mean values for each group (substantive significance). For example, if means were +7 (non-target group) and −2 (target group), since the difference would be substantively between mostly democratic regimes and mostly non-democratic regimes. This is not reflected in the table.

Here we see that in the full data and the African and Middle East subset there are statistically significant differences, but that the mean values are very low in absolute terms. If the non-target group had a mean value that was closer to +10 there would be substantive significance as well. However, not only are all the means substantively not very different, the difference in the African subset is positive, meaning that targets are *more* democratic than non-targets. The pattern hold for the Freedom House robustness check,[12] as well as the difference of means of the dependent variable *Regime Duration*. Support for hypothesis 1 that autocratic donors target less democratic regimes is not present.

The *Regime Duration* robustness check in Table 2 presents a potentially interesting

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[12]Freedom House index of civil liberties and political rights, reversed for interpretation purposes (House 2013).

Table 2: Difference of Means Test Results

	Non-Target	Target	Difference	p-value
POLITY Score				
All Regime-years[†]	3.318	2.320	-0.998	0.021
Africa and Mid. East	0.768	2.088	1.319	0.027
Africa, Authoritarian	-0.974	-0.197	0.777	0.145
Freedom House, Reversed				
All Regime-years[†]	4.119	3.819	-0.300	0.028
Africa and Mid. East	3.216	3.775	0.559	0.003
Africa, Authoritarian	2.617	3.038	0.422	0.005
Regime Duration				
All Regime-years[†]	24.305	13.693	-10.612	0.000
Africa and Mid. East	15.053	10.622	-4.431	0.017
Africa, Authoritarian	15.922	9.455	-6.467	0.003

[†] All possible target regimes 2000–2010.

idea. According to this finding, targets are on average less durable than non-targets. This seems to play into my theory that autocratic donors will select targets which allow them to maximize the likelihood of policy concessions. This is because the Chinese regime is recognizing those regimes which are in need of stabilizing resources and might be the most willing to make concessions to receive development assistance. Further examination of this using more stringent methodology is required. There might be a temporal effect here that is not obvious in the pooled data.

The results of these tests suggest that both targets and non-targets in this data have less democracy than regimes not in the sample, such as those in European countries. This is in part due to an initial constraint on the bounds of this data. In order to eliminate observations which would never be considered targets of Chinese development assistance (such as other donors in the west) I included all yearly observations for any country which was ever an aid target in the 2000–2010 frame. This means that nearly 80 percent of the observations are in the target group. In future analyses the effect of this data restriction needs to be explored.

To assess hypothesis 2 that as Chinese Aid increases, regime durability increases I run

Bayesian linear regression models. The results of these models appear in Table 3 below. These coefficients can be directly interpreted as point estimates of the effect of these variables on *Regime Duration* (unit is years). The credible intervals for the point estimates are presented to assess how diffuse the posterior estimates are for each variable. Wider credible intervals suggest less confidence in the point estimate for the coefficient. The penalized Deviance Information Criterion (DIC) values for these models have been reported, but since different subsets of the data are used for priors in each model, these values should be considered with caution when assessing relative model fit.

Table 3: Bayesian Linear Model Results

	Full Model	Africa Only	Authoritarian
	(1)	(2)	(3)
Chinese Aid	-0.242	-0.117	-0.006
	(-2.799, 2.312)	(-4.094, 3.856)	(-4.409, 4.39)
Exports to China	-1.366	5.244	3.032
	(-2.448, -0.278)	(3.858, 6.627)	(1.421, 4.638)
Party Regime Type	-2.941	-1.493	-2.109
	(-6.062, 0.193)	(-5.14, 2.16)	(-6.349, 2.165)
POLITY Score	2.001	4.317	-4.983
	(0.572, 3.434)	(2.336, 6.291)	(-7.841, -2.141)
GDP per Capita	6.019	-9.046	-0.407
	(3.653, 8.371)	(-12.337, -5.744)	(-4.609, 3.763)
GDP per Cap. Growth	0.791	-1.463	-2.009
	(-0.65, 2.235)	(-3.28, 0.351)	(-4.247, 0.222)
GDP from Rents (%)	0.265	2.141	0.753
	(-1.153, 1.679)	(0.218, 4.059)	(-1.515, 3.038)
Intercept	16.5	16.785	19.638
	(15.078, 17.914)	(14.769, 18.791)	(16.502, 22.722)
N	988	539	402
Penalized DIC	5,663	3,580	2,640

Note: Credible intervals in parentheses. All coefficients have been standardized for interpretation. Smaller deviance values (DIC) signify better fit.

It is immediately apparent that the *Chinese Aid* measure has a negative effect, contrary to the expectations of hypothesis 2. Since all coefficients have been standardized for interpretation, it is also clear that the effect of *Aid* is very weak, since the coefficient is nearly

zero and the credible interval is rather wide. Despite carrying the wrong sign, *Aid* has little substantive impact, particularly in the Africa models.

Interestingly, my findings reflect what Bader (2015) found using a different method, namely that *Exports* is a statistically and substantively influential factor in durability while *Aid* is not. In Model (2) and (3) the *Exports* measure has the correct sign and relatively narrow credible intervals. This suggests that dependence on China's markets rather than on its development assistance is what keeps regimes alive. The mechanism for export dependence is more complicated than it is for aid, however. Export dependence might lead to Chinese leverage over policy concessions, but the line between this logic and the political economy approaches gets blurred. If export dependence is what drives durability, arguably it is because the target regime is reaping the economic benefits of trade with China, and is able to provide goods to its winning coalition without the need for more fungible development assistance. More examination of this point is necessary in future research.

Furthermore, the *Party Regime* measure also has the opposite sign in all models, but the credible intervals for this coefficient again are so wide it is unlikely that this variable gets much substantive traction.*POLITY Score* shows the correct sign in each model. In Model (3), the sign is reversed since the effect of democracy should be negative when the subset is all authoritarian regimes. This means that as a regime's POLITY score approaches the most authoritarian (-10) the regime survives longer. The political economy control variables mostly confirm the findings in the extant literature, although *GDP per Capita* is negative in the African models, contrary to expectations. *Growth* and *Rents* show the correct sign.

6   Conclusion

The finding that my results do not support either hypothesis, yet they corroborate a finding in the extant literature is surprising yet instructive. This is a working paper, and is certainly not the final say on the role of authoritarian donors in autocratic persistence or the motivations

of those donors. The theory presented above is potentially incomplete; the role of trade dependence in both the selection of targets for authoritarian donors as well as in target persistence needs to be addressed. It should be possible to incorporate the role of export dependence into the logic of authoritarian collaboration without committing to an explicitly political economy explanation.

It is clear that data problems remain an issue. While the data assembled here provide an opportunity to move past the limitations facing many existing studies, there needs to be an exploration of how coding choices affect the results. One such potential issue, identified above, is the initial constraint on what observations appear in the combined dataset. This requires more thought and robustness checks. Additionally, there are certainly covariates missing from the dataset. Geddes, Wright and Frantz (2014) identify several types of authoritarian regimes beyond the party type. Exploring how these different authoritarian types factor into donor decisions is necessary to fully flesh out the theory of authoritarian donor decision calculus.

Beyond improving the data, methodological changes are warranted as well. The Bayesian approach has a great deal of benefits yet unrealized in this working paper. Including donor selection in the model by specifying a conditional covariate is one possible avenue. Interactions between *Party* and *Aid* could improve the model as well.

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Appendix

Table 4: Summary Statistics, Full Data

Statistic	N	Mean	St. Dev.	Min	Max
Regime Duration (Years)	988	16.44	20.08	0	133
POLITY Score	978	2.58	5.74	−9	10
Party Regime Type	988	0.14	0.35	0	1
Chinese Aid (%/GDP)	717	0.02	0.09	0.00	2.07
Exports to China (%/GDP)	965	0.05	0.17	0.00	3.39
GDP per Capita (%)	965	2,963.25	4,994.80	106.02	46,569.97
GDP per Capita Growth	960	2.71	4.86	−31.34	57.99
Resource Rents (%/GDP)	918	14.61	17.16	0.01	89.33

Table 5: Frequentist (OLS) Model Results

	Full Model	Africa Only
	(1)	(2)
Chinese Aid	2.075	0.341
	(1.100)	(1.248)
Exports to China	−0.656	0.433
	(0.432)	(0.342)
Party Regime Type	0.994	1.139
	(1.421)	(1.093)
POLITY	−0.388	−3.470*
	(0.583)	(0.509)
GDP per Capita	13.729*	16.401*
	(1.005)	(0.956)
GDP per Capita Growth	1.384*	1.091*
	(0.583)	(0.457)
Resource Rents (%)	−1.594*	−3.699*
	(0.578)	(0.501)
Constant	16.142*	14.937*
	(0.588)	(0.552)
N	667	415
R^2	0.245	0.445
Adjusted R^2	0.237	0.435

Note: * $p < 0.05$; Standard Errors in parentheses. All coefficients have been standardized for interpretation.