No Strings Attached: Chinese Foreign Aid and Regime Stability in Resource-Rich Recipient Countries[*]

Huan-Kai Tseng[†]   Ryan Krog[‡]

Department of Political Science
George Washington University

Abstract

The political conditionality of Western aid is often said to have a positive effect in enhancing recipient countries' governance and civil liberties in the post-Cold War era. Recently, however, developing countries are experiencing a surge in foreign aid by the Chinese government as this rising economic giant seeks to secure a stable energy supply to fuel its domestic growth machine. Yet, unlike Western aid, China's aid often comes with little, if any, political preconditions. Thus, by reducing recipients' reliance on Western aid, China's aid may plausibly undermine the alleged democracy-promotion effect of Western aid. Contrary to widely received claim that China is using its aid to bolster authoritarianism in developing countries, we argue in this paper that China's aid allocation is primarily motivated by its growing energy need and it tends to allocate aid to recipients with significant energy resource sector. Building on this claim, we further contend that China's aid tends to enhance the authoritarian tendency of recipients whose economies rely heavily on energy resource export. We test the empirical implications of these hypotheses with recently available China's foreign aid data. Our seemingly unrelated regression (SUR) analysis distinguishes the energy development-dominated China's aid flow pattern from democracy promotion-oriented Western aid. We then probe more substantively the political effect of China's aid on recipients' democracy-conditional on the size of recipients' energy resource sectors-using treatment effects model, the results supports our hypothesis that China's aid tends to attenuate the positive democracy promotion effect of Western aid, particularly in recipient countries with significant resource sector.

1 Introduction

Does Chinese foreign aid promote authoritarianism? Every year, major OECD countries transfer millions of dollars to developing countries in the form of foreign aid to assist economic development and improve governance. Often attached to these grants are a number of political preconditions aimed at improving human rights, civil liberties, and enhancing political accountability and transparency. In the post-Cold War era, the practice of political conditionality has become a hallmark of Western aid. While academic consensus on the matter remains inconclusive, it is often argued that Western aid has a positive effect in encouraging democratization in recipient countries (Goldsmith, 2001; Dunning, 2004). Recently, however, developing countries are experiencing a surge in Chinese foreign aid inflows. Within the past decade, China has grown to become one of the largest aid donor to the developing world. In the period 2010 to 2012, China appropriated 89.34 billion RMB worth of foreign assistance, surpassing over one-third of the cumulative amount (256.29 billion RMB) allocated between 1949 and 2009.[1]

Notably, however, unlike its Western counterparts, China's aid usually come without any political preconditions. As Chinese President Xin Jinping emphasized—during his state visit to Tanzania in March 2013—to an applauding audience who saw China as a healthy counterbalance to Western influence.

> "China will continue to offer, as always, necessary assistance to Africa with no political strings attached."[2]

By marginally displacing the need to rely on Western aid, the influx of China's aid to developing countries could have hindered Western donors' attempt to promote democracy in these regions, as some recent policy analysts have noted (Lum et al., 2009; Wolf, Wang and Warner, 2013). Moreover, an emerging perspective seems to advocate the view that China's foreign aid and government-sponsored investment is associated with the spread of the Chinese version of authoritarian stability in least developed recipient countries, particularly in Africa (Zhang, 2006; Diamond, 2008; Kurlantzick and Link, 2009; Sun, 2014).

The claim that Chinese foreign aid helps to finance authoritarianism in recipient countries, however, is at odds with a growing body of cross-national empirical literature or country-specific studies that find neither significant relationship between Chinese foreign aid inflows and recipient countries' regime types (Dreher and Fuchs, 2011) nor confirmative observation that this unconditional aid has hampered economic development in recipient countries (Bräutigam, 2009; Foster et al., 2009). Indeed, the *Foreign Aid White Paper* released by the Chinese government states that the distribution of its foreign aid shows "a comparatively even [geographic] coverage."[3] Instead of seeking to affect regime

---

[1]   Source: *China's Foreign Aid* (2014). For ideological reason, the Chinese government is inclined to use "assistance" in lieu of "aid" when describing this intergovernmental voluntary transfer of resources. I address this in Footnote 14.

[2]   Fumbuka Ng'wanakilala and George Obulutsa. "China's Xi tells Africa he seeks relationship of equals." *Reuters*. 23rd March, 2013.

[3]   *China's Foreign Aid* (2011: Section IV).

types, the Chinese government appears to be more keen in using its generous aid package to gain access to economic resources in recipient countries, especially energy resources and minerals (Vanderhill, 2013: 6; Gualberti, Bazilian and Moss, 2014). In fact, attached to Xi's no-political-strings-attached pledge to Africa is a two-year 20 billion dollars' worth of concessionary loans aiming to "help African countries turn resource endowment into development strength and achieve independent and sustainable development."[4] The recent image of China taking a confident stride in pioneering the "One Belt, One Road" and the Asian Infrastructure Investment Bank (AIIB) initiatives to spur trade and infrastructure financing in its adjacent regions clearly exudes an aura of developmentalism, to be sure; yet, one is hard-pressed to find an example in which China's aid was not given to an illiberal regime or has not been associated with some sort of resource extraction programs.

The stark inconsistency between recent research findings and the more general empirical observation may raise our concerns about the validity of either claim. To those who view China as an authoritarian financier, the statements in the *White Paper* embellished in the country's recent multilateral initiatives may be taken as just another diplomatic shenanigans. On the other hand, for those who are skeptical about whether China's foreign aid in itself contributes to authoritarianism in recipient countries, the fact that Chinese aid tends only to flow to recipient countries with pronounced "rentier state" profile can lead to greater circumspection about the role of this country-level attribute in explaining both China's aid flows *and* the political outcomes in recipient countries.

Building on these informative yet countervailing claims, this study presents an analysis that identifies the determinants of this every expanding aid flow and probes its political consequences in recipient countries. Like many analysts, Our argument centers on the relationship of foreign aid to recipient countries' financial incentive for regime change. However, our approach departs from much of existing literature by parsing out China's unconditional aid from the political preconditions-loaded Western aid. While the acknowledgement by previous studies of the important role of political conditionality has been useful to explain the effectiveness of Western aid in inducing democratic reforms by recipient countries after the end of the Cold War, the growing influence of Chinese foreign aid whose allocation is not predicated on political conditionality has not been given proper theoretical weight; in particular, when the appropriation of this alternative source of aid is predisposed to recipients' endemic "resource curse" that allegedly inhibits the incidence of democracy (e.g., Ross, 2001).

Using the newly-available media-based China's aid data from the `AidData` project, we Our analysis does not contradict the consensus positive political conditionality effect of Western aid, because, as the result of our seemingly unrelated regression (SUR) suggests, Western aid tends to be allocated to countries that have made progress toward democracy. Yet the same result tells a completely different story of China's aid flows: it is only correlated with recipients' energy resource endowment but not regime types. This relationship is even more significant in sub-Saharan African countries whose economies depend heavily on natural resources export. Motivated by this contrasting finding, in an estimation using

---

[4]   Ministry of Foreign Affairs of the People's Republic of China. "Xi Jinping Delivers a Speech at the Julius Nyerere International Convention Center in Tanzania, Stressing China and Africa Will Always Remain Reliable Friends and Faithful Partners." 25th March, 2013.

the degree of resource dependence as endogenous regressor in the relationship between Chinese foreign aid and political regimes of recipient countries, we find that not only does the positive link between Chinese foreign aid and recipient country-level resource dependence persist, but we also identify an expected negative effect of resource dependence on political regime at the expense of the disappearing significance of the positive political conditionality effect from Western aid.

We thus answer recent academic inquiry on the determinants of Chinese foreign aid and provide a plausible explanation as to why recipient countries of China's aid tend to exhibit certain political and economic characteristics. Our result also suggests that, albeit less optimistically, conditional on the Chinese government's current strategic agenda of natural resource acquisition and recipient economies' resource dependence, the increase in China's no-political-strings-attached aid may undermine the democracy-promotion efforts by Western donors.

In what follows, we first outline the changing international aid practices in the post-Cold War period, followed by a brief review of existing perspectives on the political effects of aid. Section 2 introduces the institutional framework of China's foreign aid and recent trends. Section 3 considers our argument — what specific recipient country-level characteristics attract more aid appropriation from the Chinese government and what political consequences this aid allocation pattern might implicate. We describe our data, measures, and specifications in the first section Section 4, the second section presents the empirical models, discusses the result and empirical implications. We conclude by discussing the policy implications of our finding and directions for future research.

2 Foreign Aid in an Age of Paradigm shift: from alliance-building to democracy-promotion

According to Lancaster (2006, 9), foreign aid is "a voluntary transfer of public resources, from a government to another independent government, to an NGO, or to an international organization ... with at least a 25 percent grant element, one goal of which is to better the human condition in the country receiving the aid." Similarly, a majority of international organizations that describe aid under the blanket term Official Development Assistance (ODA) also define it as "those flows to developing countries and multilateral institutions provided by official agencies, including state and local governments,..., it is administered with the promotion of the economic development and welfare of developing countries as its main objective,..., it is concessional in character and contains a grant element of at least 25 %.[5] Foreign aid (or ODA) should thus be distinguished from other official flows (OOF) and military aid due to its grant element and development-oriented objectives. Yet, in so far as foreign aid involves the transfer of public resources from one government to another, the appropriation and the use of aid must, in part, address donors' strategic and national interests (Schraeder, Hook and Taylor, 1998; Lancaster, 2006: 13). Indeed,

---

[5] OECD Official Development Assistance - definition and coverage.

this was the essence of the politics of foreign aid in the Cold War period: aid was used as an instrument of foreign policy.

At the height of the Cold War, both Eastern and Western Bloc countries had appropriated billions of aid—often intermingled with a wide range of military and economic assistance programs—to the developing world to vie for influence and clients. However, overwhelmed by the predominant geostrategic interests of alliance-building, the lack of credibility on the part of donors (particularly Western donors) to actually enforce the agreed-upon political and economic reform programs in recipient countries had created a "moral hazard" lamented by Goldsmith (2001), among others,[6] a situation in which aid not only freed recipient countries of the responsibility to implement meaningful reforms but also perpetuated bad political and economic outcomes with the promise of free money.

If the geostrategic cost of losing clients explains the persistence of autocratic political institutions and underdevelopment in the developing world in the Cold War era (Brown, 2005), the sudden dissolution of the Eastern Bloc would imply an imminent change in this bad equilibrium because the disappearance of alternative donor could deepen developing countries' reliance on Western aid and make withholding aid a more effective instrument of inducing reforms by recipient countries (Bearce and Tirone, 2010). In a regression analysis of 48 sub-Saharan African countries between 1975 and 1997, Dunning (2004) found a positive significant relationship between ODA from Western donors and the level of democracy only in sub-Saharan African countries in the period 1987 to 1997, but not during 1975-1986. In short, political conditionality has became a more effective aid policy instrument for democracy-promotion after the end of the Cold War.

As a result of this unipolarity-induced structural change in recipients' compliance incentive, tying political preconditions to aid has gradually become the *modus operandi* in international aid practice in the post-Cold War period — corresponding to the diffusion of Third Wave Democratization. The practice of linking received benefits to another state to the fulfillment of conditions relating to human rights protection or the advancement of democratic principle is generally termed "political conditionality" by analysts.[7] Beginning in 1990, major Western donors and international organizations began to incorporate political freedom (U.K.), democratization (USAID, France), and good governance (World Bank) as the prerequisites for aid (Nelson and Eglinton, 1992). By the 2000s, political conditionality with respect to human rights has been made an important pillar of as well as a multilateral effort by UN Millennium Development Goals (2000), Paris Declaration on Aid Effectiveness (2005), DAC (Development Assistance Committee) outreach strategy (2005), and the Accra Agenda for Action (2008).

With the inclusion of political preconditions enshrined in international aid practice, one would have expected the positive political conditionality effect of Western aid on recipients' political institutions and economic performance to be more observable in the post-Cold War period. However, current academic perspectives remains inconclusive on the effectiveness of aid.

Alesina and Dollar (2000) and Girod (2008) showed that the shift from unilateralism to multilateralism in international aid regime following the end of the Cold War was in-

---

[6]   For example, Easterly (2003).

[7]   See Sorensen (1993, 4).

strumental in re-allocating aid from strategic allies to recipients with a good history of growth and political stability. Others also supplied confirmative empirical evidences of foreign aid having a small but nevertheless positive effect on recipients' political institutions and human rights (Nelson and Eglinton, 1992; Crawford, 2001; Finkel, Pérez-Liñán and Seligson, 2007; Scott and Steele, 2011; Resnick, 2012), which can be induced by shaming (Lebovic and Voeten, 2009) or the withholding of aid (Hyde and Boulding, 2008).

On the other hand, a large body of literature also presented findings that cast doubt on the positive relationship between Western aid and recipients' democracy. First, some studies not only failed to identify any humanitarian motivation for aid giving, but instead, found that small coalition political systems tend to receive more aid (Bueno de Mesquita and Smith, 2007). Secondly and due partially to this reason, some argued that foreign aid contributed to bad states (Bräutigam and Knack, 2004; Knack, 2004), democratic backsliding (Djankov et al., 2008), and poverty (Moyo, 2009) owing to the mismanagement of aid by bad governance (Rajan and Subramanian, 2011). Also, as a form of unearned public revenue, aid undermines public demand for democratic accountability (Remmer, 2004; Smith, 2008). Finally, van de Walle (2001) even cautioned that incumbent leaders' manipulation of structural adjustment programs was the cause of aid policy failure in African countries.

More recent stream of works acknowledged the positive relationship between aid and recipients' democracy but emphasized that this link may be conditional or endogenous. For instance, Frey and Schneider (1986), Williams (1996), Burnside and Dollar (2000), Svensson (2003), and Armah and Nelson (2008) contended that good governance are sufficient condition for the political conditionality of aid to be effective, whereas the affinity between donors' and recipients' regime types (Nielsen and Nielson, 2010; Bermeo, 2011; Dutta, Leeson and Williamson, 2013) or ethnolinguistic (Arab) solidarity (Neumayer, 2003) explains why certain recipients receive more aid from certain types of donors and why aid only serves to enhance recipients' existing regime types.[8]

Despite their diverse perspectives on the effectiveness of political conditionality of aid and the process through which this occurs, existing scholarship all seem to agree that political conditionality has assumed greater importance in post-Cold War Western aid policy to orient recipient countries toward democracy and good governance. Yet, for the same reason that Western aid increased its leverage in the absence of Soviet influence, one might expect the rise of alternative source of aid from donors who do not prioritize Western donors' democracy-promotion agenda would undermine the alleged political conditionality effect on recipients' political institutions.

---

[8]   Shushan and Marcoux (2011) found that Arab donors have given less generously over time (as compared to DAC donors) despite aid levels being relatively stable.

3 China's Foreign Aid: scope, recent Trends, and political implications

Keeping up with its rising global political and economic prowess, in recent years China has grown to become one of the largest and fastest-growing aid providers to the developing world. After graduating from its debtor position in 1999 becoming a net donor in 2007,[9] China's foreign aid and government-sponsored investment activities (FAGIA) grew from less than \$1 billion in 2002 to \$25 billion in 2007.[10] Figure 1 plots "China's government expenditure on aid" and "grants and interest-free loans" from 2001 to 2013 in two separate series and measured on the right axis with the overlapping net foreign aid inflows measured on the left axis. The graph indicates that, notwithstanding its developing country status, China experienced a *negative* net foreign aid inflows around 2011, and from then on both its government aid expenditure and concessional loans increased steadily with the former increasing at a much higher rate.[11] Figure 2 shows the sum of China's humanitarian assistance and ODA-like official flows between 2005 and 2012 in comparison to similar expenses from emerging economies (Brazil, India, Russian Federation, South Africa), OPEC Fund for International Development (OFID), and total annual flows from DAC countries are plotted in black and measured on the right axis.[12] China's foreign aid pledge increased exponentially after 2008, leading other BRICS economies, though still fell far short that of DAC donors. Undoubtedly, China has clearly emerged as a major aid donor. Accord to China's *Foreign Aid White Paper* (2011), by the end of 2009, more than 161 countries and 30 international/regional organizations have received aid from China, with grants and interest-free and concessional loans totaling RMB 256.29 billion. The geographical distribution of China's aid shows a "comparatively even coverage."[13]

[9] Source: International Development Association.

[10] The term FAGIA was coined in 2013 by RAND analysts Wolf, Wang and Warner (2013) as a bracket term to describe China's overseas official development flows, I will use this term in the rest of this study when referring to such activity, though it should be noted that, in OECD classification, FAGIA is conceptually equivalent to ODA and OOF combined and should be distinguished from pure foreign aid. I will describe this in more details the empirical analysis section.

[11] Measures of government aid expenditure and grants and interest-free loans are from Kitano and Harada's (2014) estimation. Their measure of government aid expenditure is obtained from China's Statistical Year Book, which includes net and gross disbursement of grants and interest-free loans managed by the Ministry of Commerce (MOFCOM), grants administered by 44 departments, and scholarships provided by the Ministry of Education. Grants and interest-free loans covers concessional loans and budget for multilateral aid pledged to international organizations.

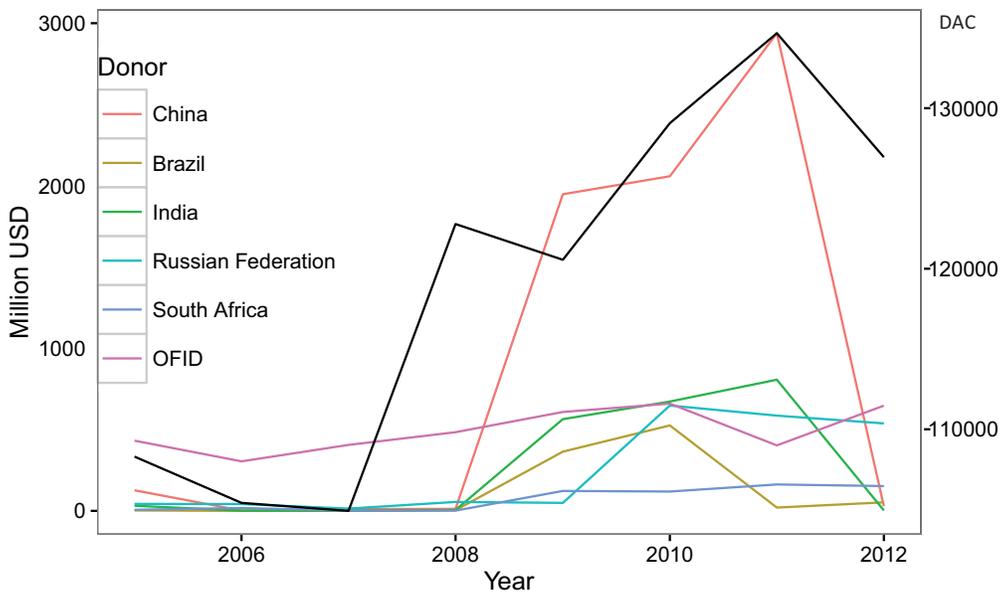[12] See OECD definition for ODA in the previous section.

[13] PRC State Council (2011, II & IV).

Figure 1: China's ODA status at a glance.
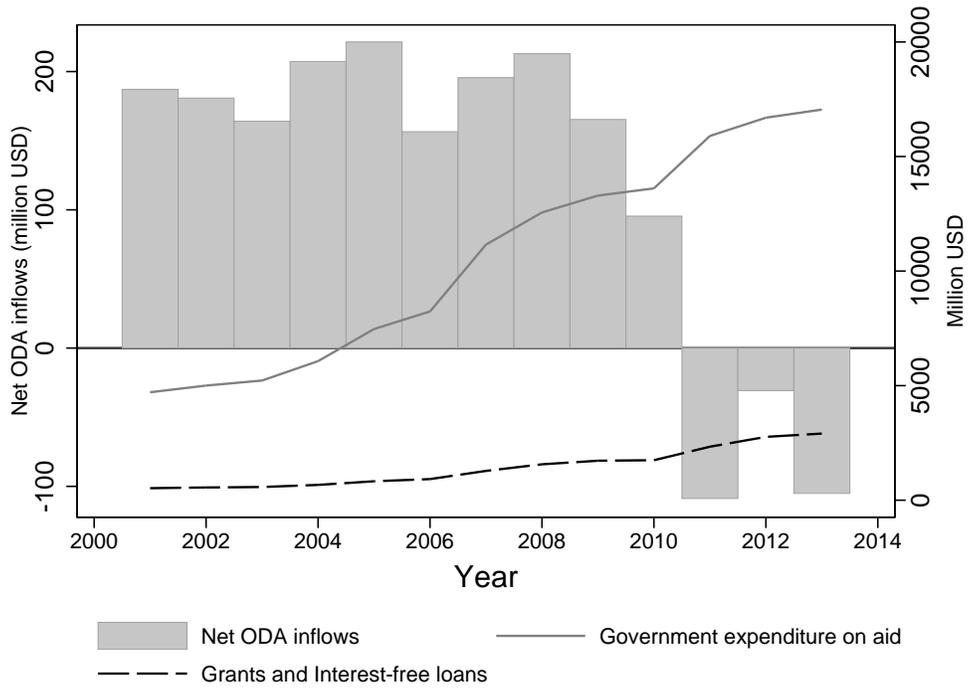
Net ODA inflows

Grants and Interest-free loans

Government expenditure on aid

Figure 2: China's aid contribution compared to other emerging economies and DAC groups.

Note: Contribution from the DAC groups measured on the right y-axis.

Despite its rapid recent expansion in international aid network, China's foreign aid, however, is not entirely "foreign" to the developing world, many of which have even higher levels of development than China. China's aid owes its origin to the Cold War. The first Chinese aid program was established in the 1960s at a time when the country had yet to recover from its disastrous Great Leap Forward movement. The aid program initially reflected Chinese leaders' ideological interests in seeking socialist revolutionary coalition with non-aligned nations, mainly in Africa, but as more countries won independence and in the aftermath of Sino-Soviet split in 1960, China's aid policy began to take a more pragmatic tone and culminated into Zhou Enlai's, then Chinese Premier, *Eight Principles of Foreign Aid* (1964) emphasizing equality, mutual benefit, and respect for the sovereignty of the host.[14] China's aid soon spread across thirty African countries, with programs ranging from production, technical assistance, and infrastructure, making inroad from major industrial cities to rural areas, underscoring then China's idea of self-reliant state-led development. In the 1970s, China donated more development aid than the Soviet to all but a few African states of strategic importance, a policy that retains to today (Bräutigam, 2009, 32-5). Between 1949 and 2009, China allocated about RMB 9 billion (or US$1.5 billion using 2009 exchange rate) aid to Africa, accounting for nearly 30 percent of its cumulative foreign aid in this period, placing China in a unique position to support some of the world's least developed countries.[15]

Although the emphases on mutual benefits and political non-interference were quite common in traditional South-South cooperation due to their shared history of colonial plunder,[16] the principle of non-interference freed China from attaching—if any[17]—political preconditions to its aid package to a region that direly needs political and economic reforms. While appreciated by many African recipients,[18] this no-strings-attached approach

---

[14] See *Eight Principles for Economic Aid and Technical Assistance to Other Countries*. State Council website: `http://english1.english.gov.cn/official/2011-04/21/content_1849913_10.htm`. According to Grimm et al. (2011, 4), China was initially reluctant to use the term "aid" as such, for it connotes an asymmetrical power relationship between the donor and the recipient. Another "moral" defense for this is that because China itself is a developing country with high level of inequality between income strata and across regions, giving aid to other countries regardless of needs for development finances at home would threaten the moral foundation of the regime's legitimacy.

[15] Source: MOFCOM and Sun (2014). For the year 2009, about 45.7 percent of China's foreign aid was directed to sub-Saharan Africa.

[16] This also characterizes much of today's BRICs' aid philosophies (Mwase and Yang, 2012).

[17] One notable exception being One China Policy (a reference to this point is stated explicitly in Forum on China-Africa Cooperation (2006, III)), which refers to the principle that Taiwan and mainland China are both inalienable parts of a single China. In practice, this implies the recognition of the People's Republic of China as the only legitimate government of China and de-recognition of Taiwan. In a number of cases, China suspended aid immediately after Burkina Faso (1994), Gambia (1995) Säo Tomé and Príncipe (1997) established diplomatic ties with Taiwan. China invoked its veto on the extension of United Nations' peacekeeping operation in Macedonia (U.N. Security Council veto S/PV.3982) after the country recognized Taiwan. But as the One China rivalry has shifted decisively toward China in recent years, this criterion may become more of a symbolic than a substantive consideration in China's aid decisions.

[18] For example, "[W]e are particularly pleased that in our relationship with China, we are equals and that agreements entered into are for mutual gain," said Jacob Zuma, President of South Africa, in response to the $20 Billion Loan pledged by China in 2012. See Jane Perlez. "With $20 Billion Loan Pledge, China Strengthens Its Ties to African Nations." 19th July, 2012. *The New York Times.*

Figure 3: China's energy consumption and production gap.
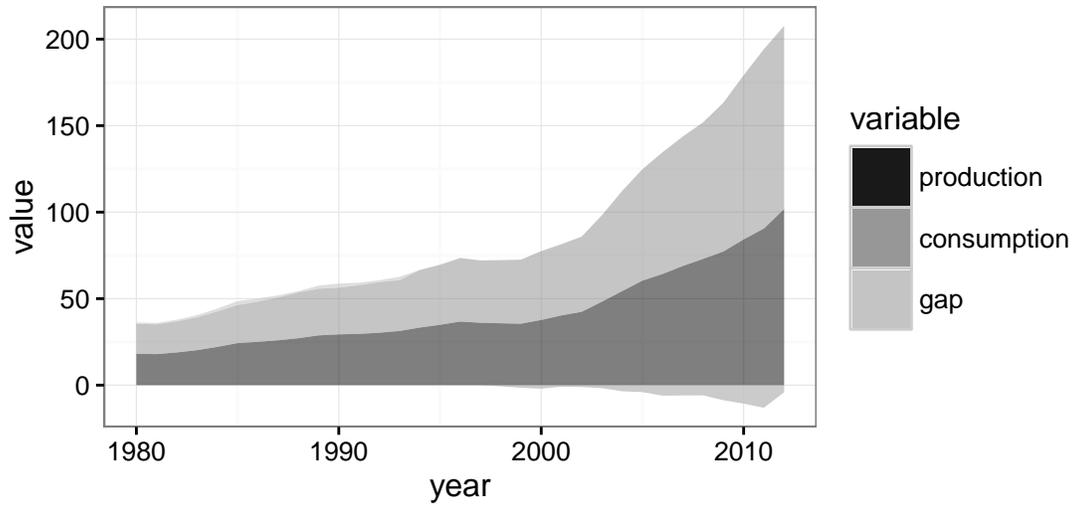
Source: US Energy Information Administration

Figure 4: Changing composition of China's import: 1999-2012.
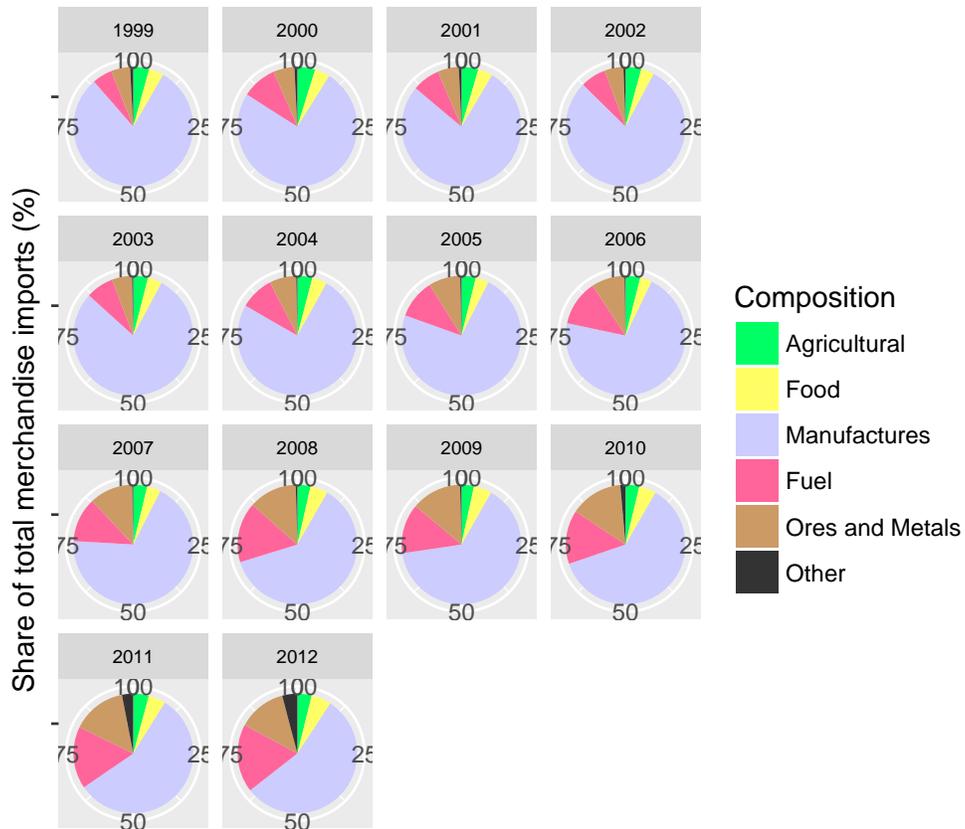
also raises doubt about China's own agenda behind its proclaimed mutually beneficial aid giving; more specifically, is the Chinese government intended to use their unconditional largess to advance certain political agenda that Western aid seeks to mitigate through the attachment of political conditionality, or, alternatively, to pursue some interests orthogonal to regime types?

In the last decade, an emerging perspective on China's aid is that the Chinese government uses its aid to prop up illiberal regimes in exchange for access to natural resources because illiberal regimes are more likely to grant extraction franchise. This assertion is aligned with China's growing energy and commodity demands. As shown in Figure 3 and 4, China began to experience an energy production-consumption gap from 1998 onward while the import of fuel and minerals as a share of total import increased from less than 10 percent in 1999 to over 30 percent in 2012. In the same way that aid undermines democratic accountability, the influx of China's aid to resource-exporting recipients can entrench petropower like Nigeria or natural resource-rich illiberal regimes (Naím, 2007). As such, recent geo-spatial analysis by Kishi and Raleigh (2015) found a positive relationship between the density of China's aid and the incidence of armed conflicts in Africa between 2000 and 2011. By giving recipient countries greater budgetary discretion, China's aid bolsters incumbent regimes' coercive capacity to repress any potential opposition at the expense of the prospect for power-sharing institutional reforms. Thus, this unconditional aid may deepen recipient countries' existing socio-political cleavages and exacerbate incumbent rulers' authoritarian tendency. China's oil-driven loan-exemption agreement with South Sudan (2012), its elusive arms deals and later involvement in the highly controversial $5 billion oil-for-aid loan in Angola (2007) and the $9 billion mining and infrastructure aid partnership with the Democratic Republic of Congo (2008) are just a few notorious examples.[19] Some recent claims went further by arguing that the Chinese government may be actively leveraging its aid and trade relations to promote authoritarianism in its key economic and strategic partners (Burnell, 2010; Bader, 2014; Nathan, 2015).

The link between China's aid and authoritarianism seems direct and obvious, but the underlying mechanisms rendering China's aid motivation to observed political outcomes in recipient countries may not be correctly specified. An oft-overlooked aspect behind the drive of China's aid-giving to illiberal rentier states is China's quest for natural resources to fuel its domestic growth machine — whose performance lies at the core of the Communist Party's political survival. A visual comparison of geographic distribution of China's aid against key recipient country profiles may be useful to adjudicate this rival claim vis-à-vis current academic consensus of a negative link between China's aid and democracy, if only as an initial probe.

---

[19]   This solicited concern from the IMF as this "loan" actually raised these recipients' debt level.

Figure 5: Geographic distribution of China's aid and recipient countries' level of democracy
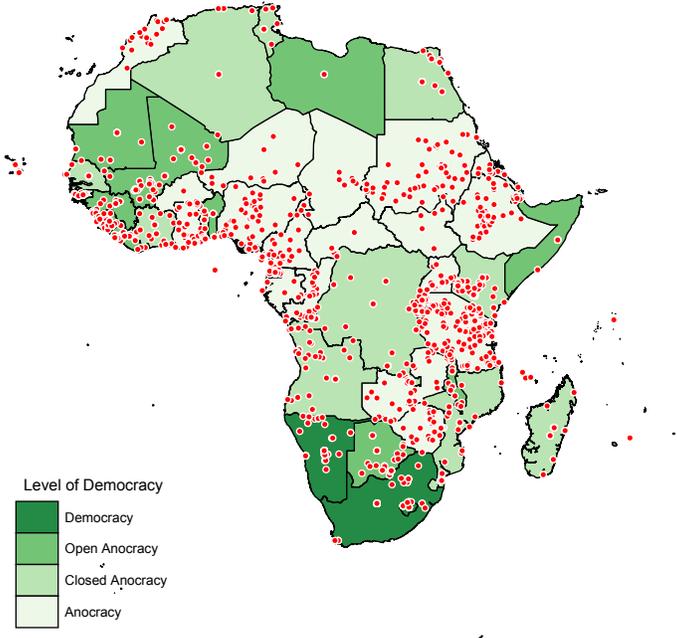
Note: Classification scheme. Democracy and full democracy: Polity scores 6 to 10. Open anocracy: Polity scores 1 to 5. Closed anocracy: Polity scores -5 to 0. Anocracy: Polity scores -6 to -10.

Figure 6: Geographic distribution of China's aid and recipient countries' resource dependence
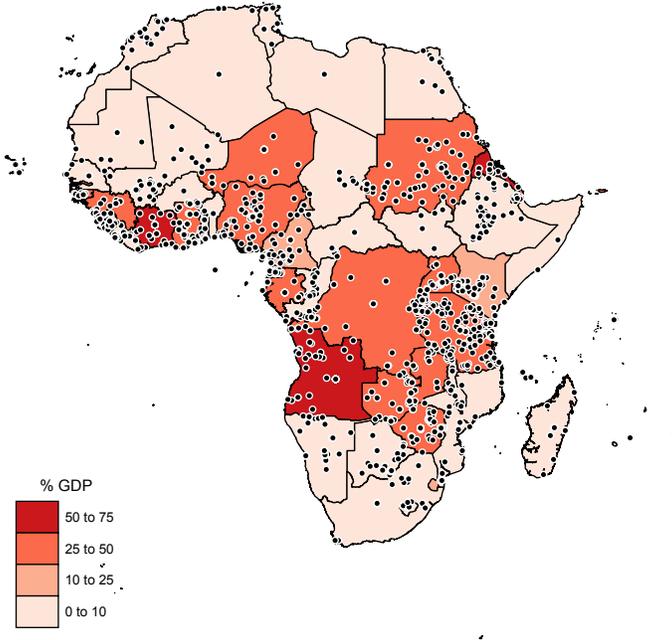
We map 3300 counts of China's aid projects pledged between 2000 and 2012 geo-coded by AidData to their respective locations in the African continent where each dot represents a Chinese aid project.[20] We then classify recipient countries' levels of democracy and share of resource sector in the economy by the Polity Scores's five-category political regime classification and the World Bank's total natural resources rents as % of GDP, respectively. The two indicators are then sorted by color schemes and mapped at country-level in the same continent-wide shapefile overlaid with Chinese aid project data points. In Figure 5 where Chinese aid projects are mapped above recipient countries' level of democracy, we see that China's aid activities scatter across much of Africa but do not appear to be particularly concentrated in less democratic countries (even though levels of democracy have generally been low in this continent). However, as we pair geo-mapped China's aid data with recipient country-level resource sector profile displayed in Figure 6, the pattern is highly suggestive. The geographic information in Figure 6 suggests that China allocated more aid (in terms of the number of projects) to countries in the western coastal region and east-central part of Africa where recipient economies are more "resource-dependent," as measured by the share of natural resources rents in GDP.

At first sight, the result is indeed consistent with China's priority in its development strategy. As a growing economy facing a broad swath of developmental issues, China seeks to make use of development finance in ways that also benefits its own stability and growth (Bräutigam, 2009, 25), not just as an altruistic policy instrument. But how do this economic consideration motivates aid decisions and, as such, influences observed political outcomes in recipient countries? Through what causal mechanism is the political effect of such aid produced? A more informative direction of inquiry is therefore to look at the institutional framework of China's aid system and its policy components, which we take up in the following two subsections.

3.1 Institutional Framework of China's Foreign Aid System

One way to understand China's aid motivation is to look at the overlapping structure of China's aid system. Although the State Council (China's chief executive office) oversees recipient engagement and approves annual aid budget, the Ministry of Commerce (MOF-COM), the Ministry of Foreign Affairs and China's Export-Import Bank (Eximbank) are the principle agencies that formulate and implement aid policies. The MOFCOM, which houses the Department of Aid, is in charge of distributing concessional loans to recipient countries, while the Ministry of Foreign Affairs, on the other hand, coordinates with the MOFCOM and serves as the local diplomatic point of contact with contracted Chinese firms and host governments. As China's main policy bank, the Eximbank finances loans and contracted projects allocated by the MOFCOM fixed at market rate. In addition, over 23 other ministries and agencies also run their own foreign aid programs and pass

---

[20] African countries shapefiles are obtained from ArcGIS. Aid projects allocated through regional/international organization or containing more than 2 recipients are dropped from the original 3548 counts of aid projects for the purpose of mapping on the country-level.

Figure 7: Institutional framework of China's aid system
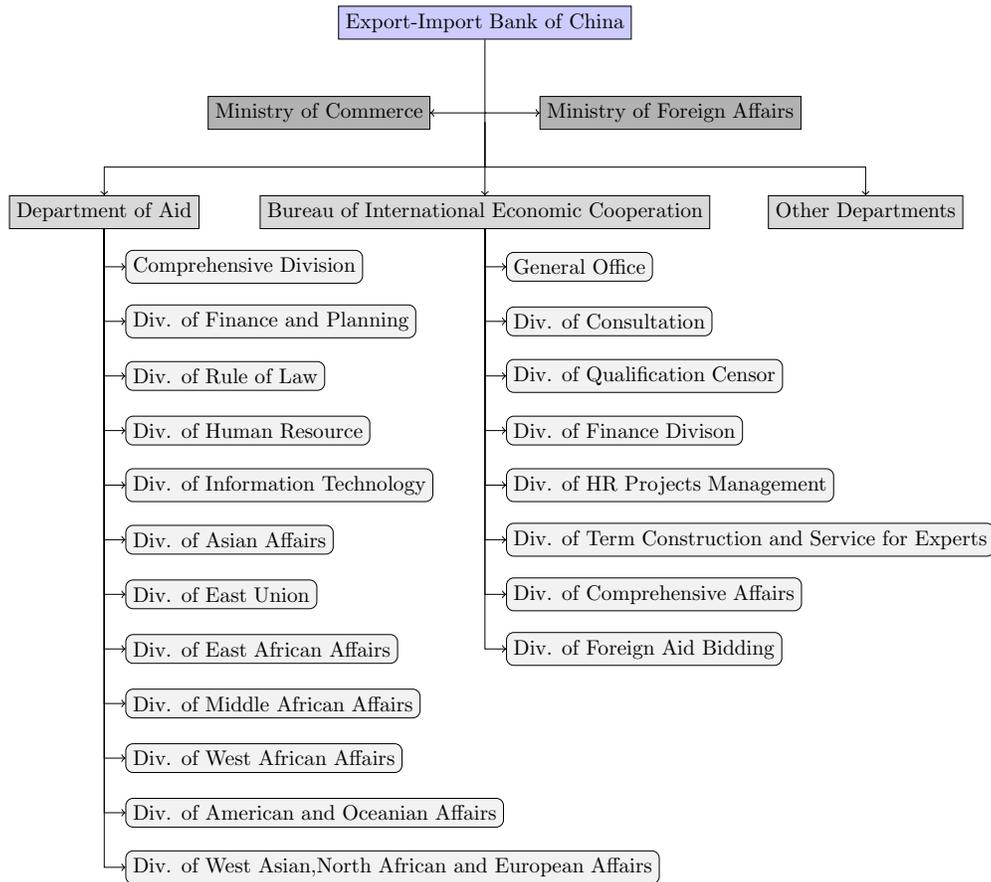
their budgets to the MOFCOM,[21] their relationship to other agencies and the Eximbank are presented in Figure 7.

This overlapping system exhibits a clear commercial yet pragmatic orientation because it is the MOFCOM that takes the lead in sourcing aid projects to recipient countries in the institutional interests of business and trade promotion. First, China sees its development assistance as a way to foster trade, enhance industrial competitiveness, and boost employment.[22] In structuring repayment schedules, China's loans consider a recipients ability to repay; when repayment in monetary terms is not possible, natural resources may be accepted as a viable repayment options (Carmody, 2011). Owing largely to this reason, China's aid programs are often accompanied by many related projects spanning

---

[21]   For example, the Ministry of Health runs its overseas medical programmes and the Ministry of Education provides scholarships to African students.

[22]   Bremmer (2009) refers this strategic deployment of state-financed business activities as "state capitalism."

across multiple years geared toward joint development of recipients' extractive sector, which greatly resembles OOF or even foreign investment than ODA. The three China-to-Africa aid programs mentioned earlier are examples in point. One salient feature of the implementation aspect of China's aid programs is the many "turnkey" projects in which contracted Chinese firms construct the facilities and turn completed projects over to the purchaser (mainly the MOFCOM and departments/agencies that contract the projects), from which completed projects are transferred to the end-user (the recipient governments).[23] Notably, although recipients do receive the facilities and services pledged by China, during the contracting process, the pledged money seldom leaves the Chinese hands because China's aid programs generally requires at least 50 percent of the goods and services used toward the programs to be sourced from China and contracted firms tend to import Chinese workers to work on local construction projects.[24]

The second pillar of the Chinese aid system that is part and parcel of this observed aid allocation and contracting pattern is the Eximbank whose asset base is highly exposed to overseas investment operations. The Eximbank offers a broad array of instruments to finance aid operations, ranging from more ODA-like grants and debt relief, to export-promotion items such as export credits and commercial loans and lines of credit. However, even the Eximbank's aid credits are not considered "concessional" for they are generally fixed at London Interbank Offered Rate (LIBOR, which is the market rate) plus some margins; instead, it is the Ministry of Finance that subsidizes the actual cost of the funds resulting from interest rate difference (Bräutigam, 2011b).

Even though China's "aid" contribution (per OECD standard) is relatively small compared to traditional DAC donors, when other state-sponsored or subsidized overseas investments are included, China appears to be a major source of OOF. The bulk of the Eximbank's lending operations is tended toward supporting Chinese firms "going global." Estimates by Moss and Rose (2006) and Davies (2010) suggest that China's Eximbank has surpassed its Japanese and UK counterparts in becoming one of the largest export credit agencies in the world with an asset base totaling US$445.1 billion (using 2014 annual average exchange rate) compared to US$23.5 billion for the Export-Import Bank of the United States (as of 2014, EXIM Bank of the United States 2014). Figure 8 compares the sectoral

---

[23] One example that would serve to explain China's preference for such ODA-like turnkey approach is documented in Bräutigam and Tang (2009, 691). A Chinese firm had a contract with Liberia's state-owned Kpatawee rice seed multiplication farm from a former aid project, which positions the firm well to win subsequent contracts to manage the farm's operation. This example also underscores the fact that China's aid is often intermingled with OOF and state-sponsored foreign investment activities.

[24] In this respect, China's aid policy is not much different from that of Western aid. The domestic sources restrictions often seen in US foreign aid and defense acquisition programs stipulate that the programs should benefit American firms/producers. In the aftermath of Libyan revolution, the Chinese government reportedly evacuated as many as 36,000 Chinese workers from Libya, one of the largest evacuation operations in history. See CCTV. "35,860 Chinese nationals in Libya evacuated: FM." 3rd March, 2011. The Libyan case may be an extreme due to China's heavy involvement in the country's oil and infrastructure development (it consumed more than 10 percent of Libya's oil export), Deborah Bräutigam's database of Chinese workers also shows similar trends of Chinese firms employing large number of Chinese workers to work in contracted aid and construction projects, although the number and ratio (of Chinese workers to local workers) are substantially lower than the Libyan case.

Figure 8: Sectoral distribution of China's aid: 1949-2009 vs. 2010-2012
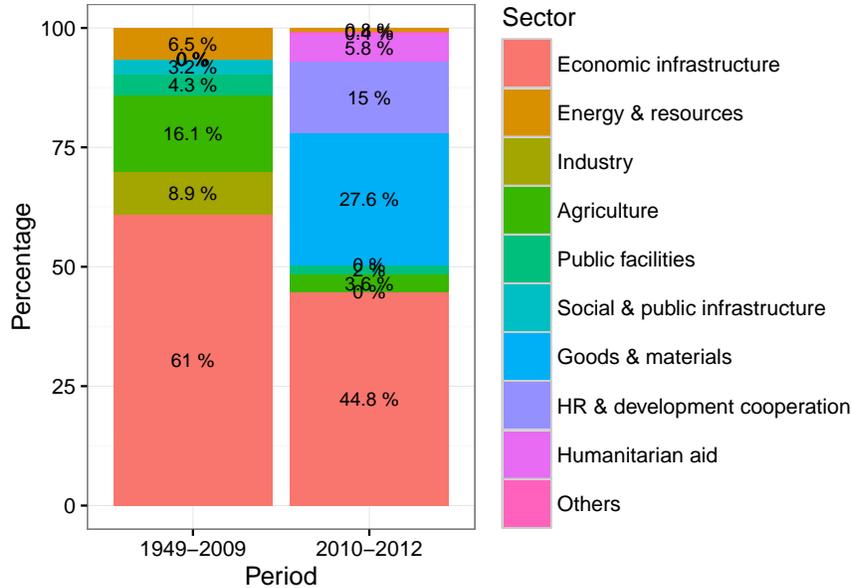
distribution of China's aid in the period 1949-2009 and 2010-2012 reported in the 2011 and 2014 edition of *Foreign Aid White Paper*. Although the largest component, "Economic infrastructure," has downed from 61 percent to 44.8 percent, two new sectors in 2014 listing, "Social & public infrastructure" and "Goods & materials," constitute respectively 27.8 and 15 percent of disbursed loans during 2010-2012, and both were financed through preferential import/export credits and natural resource-backed loans (Information Office of the State Council, 2014) — a key stimulant to recent boom in Africa's crude materials export to China (Haroz, 2011).

As with China's overlapping aid framework, these non-concessional commercial flows should be understood as part of China's natural resources-oriented development financing to resource-rich recipient countries. First, because recipients varies in the level of development, financing public infrastructure projects may be necessary down payment for anchoring future large-scale resource extraction projects;[25] in more developed recipients, such as Latin America, China-sponsored extractive activities are more prominent (Lum et al., 2009). Secondly, aided by Chinese-developed Special Economic Zones (SEZs) along the coast of Africa, the surge in goods and materials trade in aid allocation portfolio reflects not only China's growing commodity demands but also the commercial nature of its aid, as many of China's loan agreements with recipients require the latter to spend the

---

[25]   The Chinese government's interest in developing infrastructures in recipient countries also extends to the area of telecommunication. Unbeknownst to many market watchers, in recent years, Chinese firms have become the largest telecommunication providers in Africa. By 2010, two of the largest Chinese telecommunication equipment manufacturers (and the primary contractors for China's foreign assistance programs), Huawei and ZTE, have set up operation in 50 African countries and provided communications services for over 300 million African users, see Marshall (2011).

Table 1: Number of countries holding preferential trade credit agreements with China

Africa	18 countries
Latin America and the Caribbean	33 countries
Southeast Asia	10 countries

Figure 9: Import share (%) by region: 1980-2012
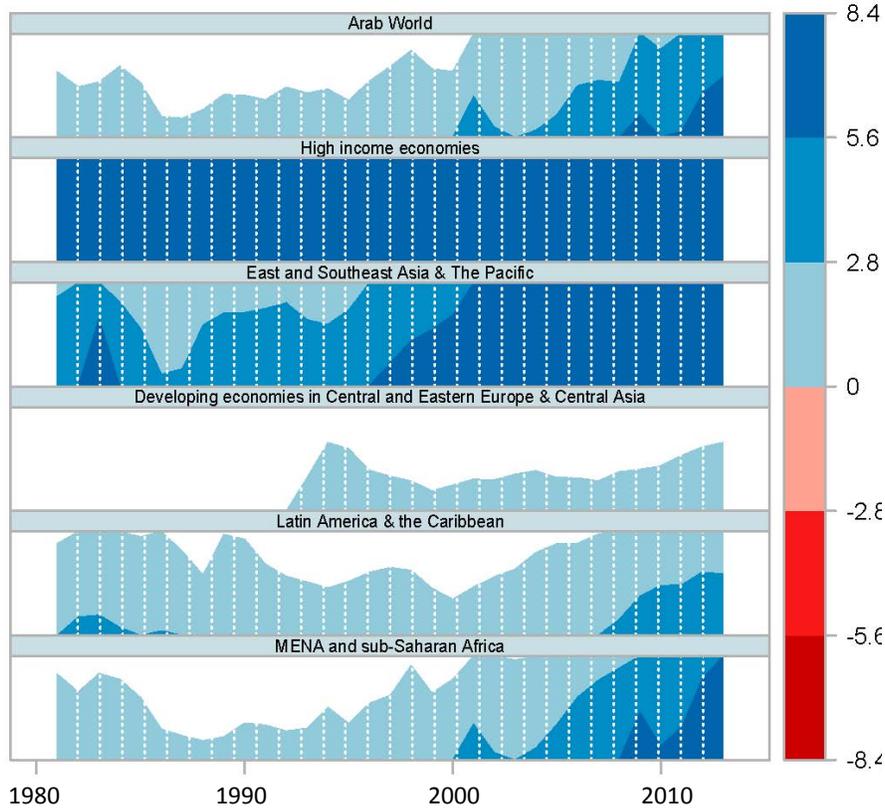
Note: Percentage labeled by colors.
Source: World Integrated Trade Solution (WITS), the World Bank.

part of their export revenues (paid by China's loans) on Chinese goods and services (Robertson and Corkin, 2011).[26] This is captured by the trends displayed in Table 1 and Figure 9: in the last decade, China has increased its natural resources import from *and* export of manufacturing goods to regions where it had signed more preferential framework of loan agreements.

This type of natural resources-oriented development finance, however, can work to undermine recipient countries' political institutions through its effect on the extractive sector. Precisely because this unconditional aid aims to promote the development of

---

[26] The decision was made in 2006 to establish up to fifty overseas SEZs, the Chinese government has so far helped fund SEZs in Algeria, Egypt, Ethiopia, Mauritius, Nigeria, and Zambia (Bräutigam and Tang, 2009).

recipients' extractive sector, it strengthens the authoritarian tendency of resource rents that Western donors attempt to condition, which thereby undermines the democracy-promotion effort of Western aid. Here lies the difficulty of theorizing as well as measuring the political effect of China's foreign aid on recipient countries: because the *political effect* of Chinese aid should be evaluated against the intentional yet competing "political conditionality" effect of Western aid, yet, the primary motivation of China's aid allocation may be *apolitical* and one can only infer its effect from observed recipient regime types without being able to identify the causal path through which this effect occurred in the presence of competing influence. However, such difficulty needs not constrain us from pursuing the political effect of Chinese aid. Rather, we can apply the understanding of China's aid motivation analyzed in this section to a structural empirical approach to test the determinants of China's foreign aid and probe its effect on recipients' political institutions against the alleged positive political effect of Western aid.

4   China's foreign aid, natural resources, and political regimes in recipient countries

The extraction of subsoil resources (particularly energy minerals) that produces copious "rents"—defined as the economic return to resource owners (i.e., the nation states) that exceeds production and transport costs (Mommer, 2002, 109-118)—is long posited to engender a negative effect on the political institutions of landlord states.[27] According to much of existing scholarship, the tendency of resource rents to substitute states' fiscal reliance on non-resource activities is an important mechanism by which resource rents foster the persistence of autocratic institutions: they argued that because resource rents replace taxation, reinforce oil-based interests, inhibit the development of non-resource sector, and finance states' repressive capacity, jointly or separately, these characteristics hinder the incidence of democracy (Karl, 1997; Ross, 2001; Jensen and Wantchekon, 2004; Dunning, 2008). Thus, at least in the developing world, higher levels of resource rents tend to promote authoritarianism.

For this reason, China's foreign aid can influence the political outcomes in recipient countries through its effect on the latter's extractive sector. At first glance, the tendency of resource rents to form a dominant source of public revenue may nullify the political effect of foreign aid hypothesized in this study; the concept of "rentier states" whose fiscal coffers can be easily replenished with resource rents runs counter to the economic incentive of foreign aid. In countries where relatively well-developed extractive industries are already in place, such as post-Soviet Central Asian republics, foreign aid is less effective at inducing reforms because states themselves direct and fund their own social assistance programs (Luong, 2003).[28] However, most developing countries often lack the

---

[27]   Beblawi (1987), for example, more narrowly defined "rents" to be extracted only from oil production.
[28]   Skype interview with USAID official to Kazakhstan on Dec. 16th, 2013.

exploratory technology and capital for their own mining projects.[29] To them, China's natural resources-oriented development finance provides the much-needed technical assistance and capitalization for recipient countries to sustain their mining activities. In other word, China's aid promotes the growth of the sector that is least conducive to democracy.

I argue that it is through this mechanism that China's foreign aid can impart an authoritarian effect in resource-rich recipient countries. There are three ways in which this effect can influence recipients' political institutions. First and foremost, by displacing Western aid as an alternative source of external revenue, China's aid reduces the leverage of Western aid and thereby decreases recipients' incentive to implement political reforms. In addition, this unconditional aid augments incumbent rulers' discretionary fiscal resources, allowing them to further concentrate political power (Bauer, 2000). Second, China's aid entrenches powerful resource-based interests that would prevent meaningful democratic change. China's economic interests in Liberia's timber and iron ores is said to have helped keep President Charles Taylor in power and the accumulated $37 billion oil-backed loans (since 2008) provided by China to Venezuela is partially responsible for maintaining the PSUV's 16-year political dominance.[30] Finally, boosted by China's loans and commodity-for-manufacturing goods trade through preferential import/export credits, resource sector growth can crowd out the non-resource sector (Arellano et al., 2009), destabilize local manufacturing industries and hurt job market (Tull, 2006), making democratization more costly to recipient governments. In short, the *political effect* of China's aid is translated into the link between resource rents and political institutions through its economic impact on recipients' resource sector.

Indeed, one might question the validity of this mechanism because, like other forms of unearned income (such as resource rents), unconditional aid in itself widens the margins of manoeuver of autocrats, and helps them to rein in domestic and international pressure for democracy (Smith, 2008), it does not need to go through the resource sector for its authoritarian effect to realize. Yet, it is through this mechanism that the observed political consequences of China's unique aid practices can be explained.

From oil-rich Venezuela in relatively well-developed Latin America to junior mines in democratic South Africa and oil fields in war-torn South Sudan across the African continent, China's aid spanned across a wide array of regime types with different levels of development, it does not seem that the Chinese government has intentionally targeted authoritarian regimes as like-minded recipients for promoting authoritarianism. Yet, one common feature shared by these recipients is that they all tend to have a significant resource sector, which is at the core of their attractiveness to China's aid flows. The central claim we maintain in this study is that although China's aid allocation is not motivated by the intention to expand its sphere of authoritarian influence, it can nevertheless have an authoritarian effect on recipient's political institutions, and such effect must works through recipient countries' resource sector.

Absent natural resource wealth, China might not structure its resource-oriented aid package the way presented here, and without this alternative source of aid, recipient gov-

---

[29] For example, a 2009 PwC mining survey of emerging markets stated that it is "virtually impossible" for junior mining firms to get off ground due to a lack of capital.

[30] Prudence Ho, "Venezuela Oil Loans Go Awry for China." *Wall Street Journal.* 18th June, 2015.

Figure 10: Conceptualization of causal paths
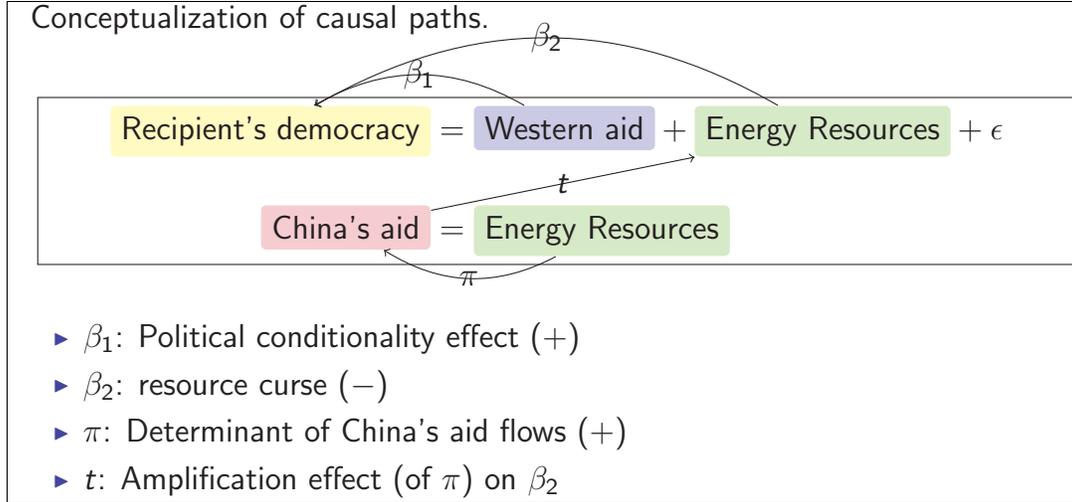
ernments may not be able to extract revenues from resource rents and trade to counter the economic leverage of political conditionality attached to Western aid. Other things equal, regime types should have no bearing on China's aid decisions, whilst it is an important empirical indicator for the effectiveness of Western aid. Alternatively, natural resource wealth may be a more important factor for drawing China's aid flows, and at higher levels of resource dependence (for example, higher levels of rents or share of the resource sector in the economy) China's aid reinforces the authoritarian tendency of resource rents which, at the margin, offsets the democracy-promotion effect of Western aid.

The theoretical framework for the argument developed here is conceptualized in Figure 10. At the first stage of causal process more resource-dependent recipient countries attract more China's aid and through which China's aid enhances such economic profile. This leads directly to our first and main hypothesis:

H 1 *China's aid tends to flow to resource-rich recipient countries.*

Two extended hypotheses are derived from **H 1**. First,

H 1a *China's aid promotes resource sector growth.*

Then, through the effect of **H 1a**, the resource sector hinders recipients' democracy at the second stage of Figure 10, which can be tested by the following hypothesis:

H 1b *The expanded resource sector tends to have a negative effect on recipient countries' political institutions.*

Furthermore, because the resource sector renders the effect of China's aid to political institutions, we might expect the effect of **H 1b** to be more pronounced in highly resource-dependent recipient countries, which, at the margin, offsets the alleged democracy-promotion effect of Western aid. Therefore,

H 2 *The negative effect of China's aid is more observable in recipient countries that are more resource-dependent.*

According to the 2014 edition of China's *Foreign Aid White Paper*, Africa received the lion's share of China's foreign assistance funds (51.8 percent), followed by Asia (30.5 percent) and Latin America (8.4 percent) between 2010 to 2012. This official statistics are matched by Lum et al.'s (2009) media-based research and Wolf, Wang and Warner's (2013) LexisNexis analysis, all ranking Africa the largest recipient (by region) of China's foreign aid in various forms. Therefore, we are more likely to observe the authoritarian effect of China's aid in African states where Western aid is less effective at inducing democratic reforms.

Having laid out the hypotheses and their empirical implications, in the next section, we proceed to test each of these claims more generally using statistical models.

5 Determinants and the Political Effect of China's Foreign Aid

Section 3 has provided striking spatial evidences on the association between China's aid and natural resources from a distributional perspective. In this section, we marshal large-N evidence to further investigate this link and its political implications. We anchor our estimation in the theoretical framework sketched out in the previous section and evaluate the effects of China's aid on recipient countries' resource sector *and* political institutions in conjunction with other control variables that represent competing explanations. We begin by a description of data, measures, and specifications, and followed by statistical analysis and discussion of results.

5.1 Data and Methods

Souring China's aid data presents a major hurdle for analysts, for two reasons. First, as discussed in the preceding sections, it is difficult to disentangle the exact concessional grants/loans that would qualify as ODA from the more numerous OOF-like elements in China's aid package. Second, because of this definitional issue on China's end, data corresponding to the very terms of these foreign assistance categories are not available from the Chinese sources, mindful that they may not be comparable with the OECD definition.

Dreher and Fuchs (2011), for example, used data from Bartke (1989) who collected news coverage of China's economic aid between 1956 and 1987 and from *China's Commerce Yearbook* (1990-2005). Lancaster (2007) and Kitano and Harada (2014) also attempted to extrapolate China's foreign aid from from the *Statistical Yearbook* and financial statement of the Eximbank. With limited disclosure from the Chinese government and the varied levels of detail, these previous attempts are likely to be plagued by aggregation and comparability problems outlined above.

Fortunately, the Chinese government does not prevent recipients for revealing the terms in official statements or to the media (Hubbard, 2007, 7), which allows us to infer both the value, types, and the locations of the projects pledged by the Chinese government from the recipients' end. Studies by Lum et al. (2009) and Wolf, Wang and Warner (2013) both used this media-based data collection (MBDA) approach to identify the geographic distribution of China's aid. Recent `Aid Data` project also employs the same approach to track China's aid flows, consisting of two stages. First, its identifies supplier of development finance and content by keywords from `Factiva`, a Dow Jones-owned media database sourcing data from newspapers, radio and television transcripts. Each project is then assigned to a Project ID. In the second stage, more specialized searches are conducted for projects initially identified during the first stage.[31] Finally, each project in the compiled dataset is coded with relevant information, such as donors, recipient, purpose, value (by the currency used in the original news source), contracting firms, and latitude and longitude coordinates (for geo-mapping purpose). A snapshot of part of `Aid Data`'s Chinese development finance data is shown in Figure ().

The MBDA approach has the advantage of efficiently capturing voluminous amount of reported aid data, but it is not without problem. For example, it might introduce selection bias by the media or the donors/recipients (Drakos and Gofas, 2006) or underreporting due to countries having lower levels of press freedom or lacking modern journalism industries simply as a result of underdevelopment (Hollyer, Rosendorff and Vreeland, 2014). There is no guarantee that this approach impartially covers the entire spectrum of available media reports. The approach is thus a feasible, albeit imperfect, way to fill data gaps that would otherwise not possible to obtain from donors' self-reported statistics and has garnered wide application in recent international relations research.[32] In this part of the analysis, we settle on the MBDA approach and use `Aid Data`'s Chinese development finance data to extract as much information about China's aid as possible.

We use country-year format as unit of analysis since this allows us to analyze the change in recipients' political outcomes as a function of China's aid that is appropriated annually or across several years.[33] The time frame of this analysis runs from 2000 (the year after China graduated from its IDB debtor position) and ends in 2011 when the `Aid Data` last updated its data before our research ended. To prepare a data structure for

---

[31]   For more technical information on `Aid Data`'s data collection process, see Strange et al. (2013).
[32]   For example, Nielsen et al. (2011), Young and Findley (2011), Tan and de Mesquita (2013). It should be noted that not all aid projects in the `Aid Data` database have been identified as implemented or completed (Strange et al., 2013, 7).
[33]   Units of observation at the aggregate level in the original `Aid Data` data, including geographic regions and regional and international organizations (e.g., EU, OECD) are excluded from our data. This applies to all other variables obtained from other sources.

this, we first distinguished ODA element labeled by `Aid Data` from non-ODA elements (OOF and military aid),[34] we then transformed the value of each project i (denoted by a unique Project ID) to constant 2000 US dollar adjusted for inflation, matched by recipient country and merged them by year to get an aggregate measure of total China's ODA received by country j in year t

$$\sum_i^n CAid_{ijt} \forall j, \, t = CAid_{jt}.$$

We did the same for China's OOF to generate a measure of $COOF_{jt}$.[35] We also generated an aggregate measure of Western aid, $WAid_{jt}$. After this transformation, our data frame reduces from a total of 2648 observations (i.e., Project ID) to a data of 564 country-year(s) observations belonging to 51 countries (excluding regional/multiple recipients). We then merged this data with the World Bank's net ODA received per capita, which has more complete aid information provided by major aid donors based on OECD common reporting standard, converted all series (ODA, China's aid and OOF) to thousand US dollar as unit of measurement. This gives us a cross-national dataset of 212 countries over the years 2000-2011.

I discuss my empirical models and other variables in the following subsections.

5.2   Testing the Determinants of China's Foreign Aid

We first evaluate the validity of **H 1**: if the motivation behind China's aid allocation differs from that of Western donors in way hypothesized by our previous analysis. Our theory posits that China's aid allocation is driven by the country's quest for natural resources and tends to flow to resource-rich recipient countries, as opposed to Western aid that allegedly has a positive "political conditionality" effect on recipients' political institutions. One way to conceptualize this hypothesis is to assume there are two different causal processes driving the Chinese and Western aid flows, and the two processes are related only through recipient country-specific contextual variables. This framework is structurally similar to seemingly unrelated regressions (SUR; see Zellner 1962), which is a generalized linear regression model that consists of multiple systems of equations. In the SUR, each equation has its own dependent variable and potentially different sets of explanatory variables, and by cross-equation restrictions,[36] their error terms are independent across time but may be contemporaneously related to other systems of equations—a claim that can adjudicated by F test or Breusch-Pagan test. Each system of equations can then be estimated separately via OLS (Srivastava and Giles, 1987).

---

[34]   Projects categorized as "Emergency Response" (sector code: 700) or "Unallocated/Unspecified" (sector code: 998) are dropped because of the former's one-off nature and the latter's intent being unclear. A screen capture of part of `Aid Data`'s data format is shown in Figure A3 in the Appendix.

[35]   China's military aid to developing countries will not be analyzed here as this study focuses mainly on the political outcomes of China's ODA and OFF.

[36]   This corresponds to the restrictions that the effects of parameters are the same for each equation.

Using $CAid_{jt}$ and $WAid_{jt}$ as dependent variables for two separate systems of equations having their own unique explanatory variables $\{\delta^C, \delta^A\}$ but sharing the same set of control variable X through which the two systems of equations are related, stack them on top of each other, we can specify a system of two equations of the form

$$
\begin{matrix}
\text{Chinese aid} \left\{ \begin{matrix} \\ \\ \\ \\ \end{matrix} \right. \\
\text{Western aid} \left\{ \begin{matrix} \\ \\ \\ \end{matrix} \right.
\end{matrix}
\begin{pmatrix}
CAid_{[1]jt} \\
\vdots \\
CAid_{[m]jt} \\
WAid_{[m+1]jt} \\
\vdots \\
WAid_{[n]jt}
\end{pmatrix}
=
\begin{pmatrix}
\delta^C_{[1]jt} & \cdots & X^C \\
\vdots & \vdots & \vdots \\
\delta^C_{[m]jt} & \cdots & X^C \\
\cdots & \delta^W_{[m+1]jt} & X^W \\
\vdots & \vdots & \vdots \\
\cdots & \delta^W_{[n]jt} & X^W
\end{pmatrix}
\begin{pmatrix}
\beta_{[1]jt} \\
\vdots \\
\beta_{[m]jt} \\
\beta_{[m+1]jt} \\
\vdots \\
\beta_{[n]jt}
\end{pmatrix}
+
\begin{pmatrix}
\varepsilon_{[1]jt} \\
\vdots \\
\vdots \\
\vdots \\
\vdots \\
\varepsilon_{[n]jt}
\end{pmatrix}, \quad (1)
$$

where 1-m rows and $m + 1-n$ rows are two systems of equations using $\{CAid_{jt}, \delta^C\}$ and $\{WAid_{jt}, \delta^W\}$ as their unique dependent and main explanatory variables, and $E[\varepsilon_{[i]t}\varepsilon_{[k]t'}|X] = \sigma_{ik}$, $E[\varepsilon_{[i]t}\varepsilon_{[i]t'}|X] = 0$ whenever $t \neq t'$. We would therefore expect to identify a strong correlation between the pair $\{CAid_{jt}, \delta^C\}$ and $\{WAid_{jt}, \delta^W\}$ when estimated jointly by (1).[37]

Because we assume recipient countries' natural resource wealth and changes in the level of democracy and development level are the primary factors (δ^C, δ^W) driving Chinese and Western aid inflows, we operationalize these variables with conceptually close empirical measures. We take the sum of a country's net oil and gas export values from Ross and Mahdavi's (2014) `Oil and Gas data` to approximate a recipient country's natural resource wealth: net values of oil (gas) exports per year are measured in metric tonnes (cubic feet) and both are calculated in 2000 constant US dollar (billion). If China's aid allocation is primarily motivated by its quest for natural resources (and particularly energy resources), we would expect China to allocate more aid to countries with higher values on this variable, indicating a high energy production capacity and/or high market price that motivated such pursuit. We adopt the commonly used 21-point Polity scores from Polity IV Project as our measure for political regimes, the main determinant of Western aid. The Polity scores, albeit being an imperfect measure for the various aspects of political offices it intended to calibrate (Jackman and Treier, 2008), provides a more graded measure of a country's form of governance, and because it has greater range of values, it allows us to track more gradual changes in a country's political systems during shorter spell like the time frame we have here. We transformed to all positive values by adding 11 to each observation such that they are distributed (1, 21). We also include annual GDP growth rate—an indicator often used by Western development agencies to evaluate the worthiness for subsequent aid appropriation—as a potential explanatory variable for both Chinese and Western aid under the assumption that recipients demonstrating better growth performance should draw more aid from Western donors (though necessarily from China). These variables therefore serve as valid proxies for δ^C and δ^W.

By (1), we specify a system of two equations with different sets of explanatory vari-

---

[37] It is easy to see that the two systems of equations are only related through the common error term, ε.

ables and include $CAid_{jt}$ and {$WAid_{jt}$ as part of the RHS variables in each other's system of equations to test for the possible substitution effect between Chinese and Western aid[38]

$$\begin{cases} CAid_{jt} = (\delta^C_{jt} + X^C_{jt} + WAid_{jt})\beta_C + \varepsilon^C_{jt} & (2) \\ WAid_{jt} = (\delta^W_{jt} + X^W_{jt} + CAid_{jt})\beta_W + \varepsilon^W_{jt}, & (3) \end{cases}$$

where X^C_{jt} and X^W_{jt} are the set of control variables in equation (2) and (3), and $X^C_{jt} \neq X^W_{jt}$ to satisfy exclusion restriction. We include GDP per capita and net FDI inflows (all converted to 2000 constant US dollar) from the World Bank's WDI series in both X^C_{jt} and X^W_{jt} for the reasons that less developed countries tend to draw more aid and that aid signals donors' confidence in recipients' economies (Garriga and Phillips, 2013) and stimulates the production of complementary inputs that attract FDI (Selaya and Sunsen, 2012) which, in turn, would draw more aid to recipient countries as a result of their better economic performance. Including these variables as control help mitigate against spurious correlation and reverse causation. We also include recipients' trade relations with China and diplomatic relations with Taiwan as additional control variables in equation (2). Data on China's shares in recipient countries' annual import and export values are acquired from World Integrated Trade Solution (WITS). Both statistics are coded with positive numerical values between 0 and 100 only when China was a top 5 export and import partner for a recipient country in a given year, otherwise it is coded 0, capturing the importance of trade relations in China's aid allocation decisions. Suppose China is relatively dependent on a recipient country either for imports as an export market for Chinese-made manufactured goods, it may allocate more aid to this country to further secure such trade linkage.[39] Finally, we dummy-coded recipient countries' diplomatic relations with Taiwan on an annual basis. We expect China to continue (suspend) its aid to a potential recipient country should the country de-recognize (maintain/establish diplomatic ties with) Taiwan.

At below, we estimate a set of SUR models adjusted for the number of regressors in equation (2) and (3). Model 1 uses only the ODA element of China's aid (per OECD standard) as the dependent variable of (2). Model 2 includes China's OOF in $CAid_{jt}$. The results are reported in Table 2.

From Table 2, we see that the determinants of China's aid allocation clearly differs from that of Western aid, which carries important political implications. In Model 1, one point increase in recipient countries' level of democracy along the 21-point Polity scores is strongly associated with about 2.86 million US dollars more Western aid inflows, accounting for the effects of other variables; however, Western aid does not exhibit any

---

[38] Because aid programs are scheduled and appropriated over a given span of years, it is unlikely that they are serially correlated across the entire series, we did not include lag dependent variables in our specification.

[39] To be sure, this varies by product types, their supply and global prices, which is why these two indicators vary over time. For example, in the aftermath of China's economic slowdown in 2015, Zambia's copper prices have fallen 18 percent in six months due to shrinking demands from China (*Financial Times* Sep. 9th, 2015).

significant relationship with recipient countries' net oil and gas export values or annual GDP growth rate. In addition, Western aid is inversely associated with recipients' levels of development (*GDP per capita*) at .001 significance level but shares a positive (though weak) relationship with net FDI inflows to recipient countries. Thirdly, Model 1 also finds a significant negative relationship between Western and Chinese aid (coef. $= -0.016$), indicating a substitutive relationship between these two competing sources of aid. On the other hand, when using the ODA component of China's aid as dependent variable, equation (2) of Model 1 tells a slightly different story. First, the negative relationship between level of development (*GDP per capita*) and aid giving is four times stronger in the context of China's aid allocation than the estimated coefficient for Western aid (eqn. (3)). Yet, the ODA component of China's aid shares barely any significant relationship with either recipients' levels of democracy or net FDI inflows. Second, recipient countries' trade relations with China significantly the increase in China's ODA inflows by an average of 11.8 million US dollars as China's export in a recipient country's top 5 trade partners' import share increases by 1 percentage point, although not for the case of recipient countries' export to China. Third, recipient countries' diplomatic ties with Taiwan strongly reduced China's ODA inflows (coef. $= -94.220$). Finally, recipient countries' trade relations with China significantly the increase in China's ODA inflows by an average of 11.8 million US dollars as China's export in a recipient country's top 5 trade partners' import share increases by 1 percentage point, although not for the case of recipient countries' export to China. It should be noted that net oil and gas export values has a positive effect on drawing China's ODA inflows even though it is not significant. The analysis of Model 1 picks up some interesting findings for it not only lends empirical support to the widely-acknowledged positive political conditionality effect and the complementary relationship between foreign aid (pledged by traditional donors) and FDI argued by recent scholarship, it also suggests that China's aid allocation may be motivated by entirely different considerations: in particular, China's aid giving is associated with recipients' energy resources export and import of Chinese goods and services. The fact that the relationship between recipients' energy resources export and China's aid is not significant may be because the primary source of finance to China's officially-sponsored activities in recipient countries, China's OOF, was not included in our measure of $CAid_{jt}$. We address this in Model 2.

In Model 2, we regress the sum of the ODA and OOF component of China's aid on the same set of regressors. The result of equation (3) part of Model 2 is essentially the same as that of Model 1. One point increase in recipient countries' levels of democracy is associated with about 2.89 million US dollars more Western aid inflows, while the level of development and net FDI inflows maintain their original significant negative and positive relationship with Western aid inflows. Furthermore, the negatively substitutive relationship between Western and Chinese aid still persists. We then turn to the estimation result of equation (2). The relationships of recipient countries' levels of development and import share to this alternative measure of China's aid maintain their original signs and are amplified (in terms of the sizes of their coefficients), but the effect of net energy resources export now becomes significant. Per one billion US dollar increase in net oil and gas export is associated with approximately 9.6 million more Chinese ODA and OOF inflows to recipient countries that produce and export these energy resources. In addition, as with Western aid, this alternative measure of China's aid shows a significant relationship

with Western aid. More importantly, in both Model 1 and 2, recipient countries' level of democracy was never significantly associated with either the ODA or (ODA + OOF) measure of China's aid and the estimated coefficients are positive though not significant. Overall, the result of Model 2 does support our main hypothesis **H 1** that the Chinese government allocates more aid to resource-rich recipient countries irrespective of their regime types and external diplomatic relations.[40]   Despite these confirmatory findings, the Chi-square statistics of Breusch-Pagan test of the correlation of cross-equation residuals for both Model 1 and 2 do not warrant us to reject the hypothesis that such correlation is zero at any conventional significance levels, implying net oil and gas export values and the levels of democracy may not be the unique explanatory variables for Western and Chinese aid. Simply put, the symmetry issue imposed by cross-equation restrictions arises when the same relationship can be estimated for different equations (panels). There may exist unobserved group-level heterogeneity that disproportionately attracts Chinese over Western aid at the aid allocation stage, which then distinguishes the effects of other variables on subsequent Western and Chinese aid inflows. To further test our claim, we select a sub-sample based on aggregate-level attributes that distinguish the countries most likely to become recipients of China's aid from other candidate countries. Selecting a sub-sample this way allows us to partial out the relationship of other determinants to Western and Chinese aid on country level.[41] Informed by the results of Model 1 and 2, we select our sub-sample at regional level on the basis of the World Bank's measure of total natural resources rents, which calculates the sum of oil, natural gas, coal, mineral, and forest rents as a percentage of GDP — a simple indicator of resource-dependence. As expected, the region that received most China's aid, Middle East and North Africa (MENA), stands out on this measure, having an average share of exportable resource sector in the economy of about 18.5%, much higher than Asia (15%), Europe (2.5%), Latin America and the Caribbean (7.9%), North America (3.5%), and Oceania (6.8%).

In Model 3, we replicate our SUR analysis of Model 2 using the same set of explanatory and dependent variables but restrict our sample to countries in the MENA region. The result is listed in the right panel of Table 2. As with previous estimates, recipient countries' level of development and level of democracy maintain the same relationship with Western aid inflows while the substitutive relationship between Chinese and Western aid persists, but some noticeable changes emerge in the sets of relationship in both equations. First, the fact that the effect of net oil and gas export values on China's aid turns insignificant and negative is particularly notable, for in Model 2, it is significant and positive. This is because we have restricted our sample to MENA countries that are generally highly resource-dependent, the attribute that attracted more China's aid in the first place. Secondly, after conditioning the effect of this regional-level attribute, net FDI inflows is no longer significantly associated with Western aid, instead, it is China's aid

---

[40]   For example, our dichotomous coding of recipient countries' diplomatic relations with Taiwan lost statistical significance in Model 2 even though the size of its estimated coefficient is much larger than Model 1's estimate.

[41]   Another fix to this is to allow for a random component in the common error term (in the shared equation)—similar to random errors—that differs across equations (Hayashi, 2000, 301). Since the number of regressors in the two equations are different, the shared component might not fulfill the rank conditions posited by Theil (1971), hence, we did not take this approach here.

that shares a significant negative relationship with net FDI inflows to recipient countries. In so far as China's resources and commercial-oriented OOF flows to recipient countries in the form of development finance, it crowds out Western aid and FDI in these sectors, which is matched by the much stronger positive relationship (coef. $= 41.220$) between recipients' import share (of top 5 trade partners) and China's aid (ODA and OOF) inflows. Last but not least, recipient countries' levels of democracy now even have a significant positive effect on China's aid inflows to MENA countries. The result of Model 3, once again, strengthens our claim that China's aid allocation is driven by the Chinese government desire to secure a stable supply of crude resources for its growth machine by way of using OOF projects to finance recipient countries' resource sector and promoting bilateral trade of goods and services through preferential import/export credits, without specifically targeting authoritarian regimes as clients for authoritarian promotion.

Figure 2 displays coefficient estimates of all three models along with their corresponding 95% confidence intervals for a visual comparison of the finding of this section, we dropped the dichotomous "diplomatic relations with Taiwan" variable for better visualization result.

The estimated coefficients of recipient countries' levels of democracy (*Polity scores*) in all three models are clearly in tension with empirical observation of the deterioration of civil liberties and the quality of democracy in top destination countries for China's aid. We argue that the tendency of China's aid packages to promote the growth of the resource sector in recipient economies is the key to explain political outcomes in recipient countries of China's aid. China's aid appears to influence both recipient countries' resource sector and political institutions, and the latter are only affected when China's aid reinforces the authoritarian tendency of the resource sector. The relationship is endogenous. In the next section, we shift gears by examining the effects of China's aid on recipient countries' political institutions through estimating a model that identifies the causal paths *from* China's aid *to* recipients' political institutions from the endogeneity between China's aid and recipients' resource sector.

5.3 Regime Change in China's aid recipient countries

How does China's aid influence political outcomes in recipient countries? Our previous SUR analysis finds that recipient countries' natural resources export profile is positively associated with China's aid inflows while the recipients' levels of democracy hold no traction on China's aid, holding other variables constant. In this section, we evaluate these puzzles posed by hypothesis **H 1b** and **H 2** from the other end of the causal chain by testing the effects of China's aid on these two potentially important determinants.

Before we turn to introducing our methods and variables, two things are in order. First, while it may be tempting to gauge the effect of China's aid in relation to other variables on recipient countries' political institutions by estimating a simple linear model (such as the OLS), this linear additive specification does not address the causal links hypothesized by our analysis in the preceding sections. In fact, we argue that because China's aid is not politically-oriented, its political effect must work through recipient

28

countries' resource sector that drew it there in the first place, and through which China's aid produces an authoritarian effect on recipients' political institutions. Secondly, recent advance in causal mediation analysis allows analysts to parse out the causal paths between the explanatory variable and outcome of interest from the confounding effect of the mediator (Imai, Tingley and Keele, 2010; Imai, Keele and Yamamoto, 2010; Imai et al., 2011), but should we model recipient countries' resource sector as the mediator in the relationship between China's aid and these countries' political institutions, we will need to establish the independence between China's aid and resource sector by sequential ignorability, which runs counter to our claim of the positive relationship between China's aid and recipients' resource sector. Hence, we do not use this approach here.

Even with these limitations, we still attempt to identify the specific causal links running from China's aid to recipient countries' political institutions from the more general effects of political conditionality and natural resource wealth established by much of existing scholarship. Our theory posits that China's aid targets recipient countries' resource sector and, through promoting the growth of extractive industries, China's aid can undermine the alleged positive political conditionality effect of Western aid. This theoretical framework implies that resource rents determine whether a country is likely to receive China's aid within a given period and, conditional on a country being the recipient of China's aid, China's aid reinforces the authoritarian effect of natural resources-based economic development on the country's political institutions. This two-step causal process is conceptualized in Figure 10 introduced earlier, which can be rendered formally as

$$Political\ institutions_{jt} = X_{jt}\beta + \Pi Aid_{jt}(1) + \epsilon_{jt} \tag{4}$$

$$Aid_{ijt}(.) = \begin{cases} 1, & Resource\ rents_{jt} + \mathcal{W}_{jt}\gamma + u_{jt} > 0 \\ 0, & \text{otherwise} \end{cases} \tag{5}$$

$$\forall\, j,\, t,$$

where X and $\mathcal{W}$ are the regressors in equation (4) and (5), respectively. $Aid = \{0,\ 1\}$ is an indicator function that only enters into (4) when country j receives China's aid (in the forms of ODA or OOF) in year t. Note that, because $Aid(.)$ is a function of $Resource\ rents$ and $\mathcal{W}$ in (5), by taking a value of 1, it carries over the effects of these RHS variables into equation (4).

The structure of this theoretical framework is similar to the endogenous binary treatment-effects models elaborated in recent applied econometrics literature that allows the endogenous variable to influence both treatment assignment and outcome variables (Wooldridge, 2010; Greene, 2012) through the residual from 5 (u), which can be estimated by maximum likelihood (Maddala, 1983) or the control-function (CF) estimators (Wooldridge, 2010) provided by commercial statistical packages. We only need to impose additional assumption on the two error terms, ϵ and u, and the estimation process to link the estimation of equation (4) to (5). We assume the respective error terms for the two equations, ϵ and u, bivariate normal with zero-mean and share a covariance matrix

$$\begin{bmatrix} \sigma^2 & \rho\sigma \\ \rho\sigma & 1 \end{bmatrix} \qquad\qquad (6)$$

By 6, the effect of the RHS variables in (5) can be rendered to equation (4) through the ancillary correlation parameter ρ whose "sign" indicates the relationship between *Aid* and the RHS variables in (5) in order for the estimated effect of *Aid* (Π) on the outcome variable (*Political institutions*) to occur.[42]

Arranging our theoretical model this way allows us to test the effects of key variables at different stages of the causal process when they are called for by the theory. In addition, this specification helps to distinguish the mechanisms through which China's aid affected recipient countries' resource sector *and* political institutions from the competing influences of Western aid and resource rents estimated in the same model.

We now discuss the operationalization of the variables used in this estimation. We use the same rescaled 21-point Polity scores as our main dependent variable but also include the 7-point Legislative Indices of Electoral Competitiveness (LIEC) from the Database of Political Institutions (DPI), since legislative elections are the most common and frequently contested type of election in developing countries. The LIEC measures (i) if a legislative body exists and (ii) open to popular election, and (iii) by the vote share of the winning candidate/party, how competitive is a given election (Keefer and Walsh, 2001). We collapsed observations scoring 3.5 and 6.5 to their nearby categories (4 and 7) for ease of interpretation.

We include different set of regressors in equation (4) and (5). We use the same measures of GDP per capita and Western aid inflows from the SUR test and also include population (natural log transformed), resource dependence, economic inequality, ethnolinguistic polarization. For equation (5), we use the same measure of net oil and gas export values to approximate $\mathcal{W}$, the main predictor for whether country will receive China's aid in a given year, we also include previous measures of China's share in recipient countries' annual export and import volume from top 5 trade partners along with recipient countries' diplomatic relations with Taiwan as potential explanatory variables for *Aid*.

We describe our measures for other control variables included in equation (4. We rescaled the World Bank's measure of total natural resources rents to an index bounded between 0 and 1, deducted it from 1 to get an estimate of the share of non-resource sector in the economic and then took the ratio of the share of resource sector to non-resource sector as a measure for a country's degree of resource dependence in its economic activities. We adopted Frederick Solt's measure of economic inequality from his Standardized World Income Inequality Database (SWIID, Version 4.0) which extracts estimates of income inequality from two separate Luxembourg Income Study (LIS) series and averages over 19 reference categories to generate a weighted measure of household-based income inequality (Solt, 2009). According to some formal literature in comparative democratization, eco-

---

[42]   In most statistical packages, the inverse hyperbolic tangent of ρ is estimated in natural log form

$$\text{Atanh } \rho = \frac{1}{2}\ln\left(\frac{1+\rho}{1-\rho}\right).$$

nomic inequality can have a negative (Boix, 2003) or an inverted U-shaped relationship (Acemoğlu and Robinson, 2006) with the level of democracy. We also include a measure of ethno-linguistic polarization constructed by Montalvo and Reynal-Querol (2005) (using the formula advanced by Esteban and Ray (1994) and Reynal-Querol (2002)) to capture how far the distribution of the ethnic groups is from the highest level of polarization (0.5).[43] Higher degree of ethno-linguistic polarization implies *less* polarization among a country's ethno-linguistic subgroups and therefore tends to promote and/or maintain democracy. Finally, the dichotomous indicator variable *Aid* enters into the specification of (4)) when the effects of the RHS variables on *Aid* are identified in (5). The interaction term of $Aid(1)$ with the amount of China's ODA and OOF renders the effect of China's aid inflows to recipient countries' political institutions. Because the effect of China's ODA and OOF inflows is realized only when $Aid(1)$ is identified, $Aid(1)$ and its interaction term thus loosely resemble average causal effect on the treated sample (country-year(s) that have received China's aid) in experimental term where the RHS variables in (5) model the assignment of $Aid(1)$ to the full sample.

We first estimate an OLS model including all regressors in equation (4) using robust standard errors as a baseline for comparing the result from subsequent two-stage estimates. We then estimate equation (4) and (5) jointly with CF estimator and robust standard errors to account for country-level heteroskedasticity.[44] The model is estimated using Polity scores as dependent variable and the DPI measure of LIEC as alternative dependent variable for robustness check. The ODA and (ODA + OOF) component of China's aid are alternatively used as proxies for $CAid$ in equation (4). The results of OLS estimate (Model 1) and the four different combinations of two-stage estimates (Model 2-5) are reported in Table 3, estimated coefficients in equation (5) are listed below the dashed lines. Chi-square statistics of Wald test of the no correlation between (4) and (5) (i.e., ρ = 0) are listed at the bottom of the table.

The result of Model 1 shows exactly what one would expect from received wisdom: more resource-dependent countries tend to lower levels of democracy, while higher GDP *per capita* and the inflows of Western aid both tend to promote democracy although not by much. Also note that in Model 1, China's aid barely has any significant effect on recipient countries' political outcomes. This would make us wonder if China's aid matters for recipient countries' political institutions; after all, China's aid allocation is driven mainly by resources and commercial incentives.

On the contrary, as we move to two-stage estimation, the interpretation shifts in favor of our theory. In Model 2 and 3, recipient countries' net oil and gas export values shows a positive and significant relationship with the inflows of China's aid, although the estimated coefficients of recipients' annual top 5 export destination countries (*Export*, which includes China) turn negative and significant. This may be due to the ODA element of China's aid is not allocated toward promoting recipients' export to China; it is the OOF part of China's aid that is financing the bilateral preferential trade credits. This

---

[43] A simple interpretation for this is the probability that two randomly selected individuals from a given country will not belong to the same ethnic group.

[44] Robust standard errors are preferred because the estimated variance comes from stacked moment conditions and is non-symmetric, which converges to different matrices than that of the CF parameter estimator.

interpretation is supported by the estimated effects of the dichotomous indicator *Aid* and its interaction term with ODA and ODA + OOF in equation (4). The effects of *Aid* in Model 2 and 3 are both strongly negative and significant, they are associated with an average of more than 10 point reduction in recipient countries' Polity scores. Yet, the effect of the interaction term (that renders the effect of China's aid flows to recipient countries' political institutions) is only significant in model using ODA + OOF as proxy for $CAid$ (Model 3, ODA + OOF$|Aid = 1$) but not when only the ODA element is used (Model 2, ODA $|Aid = 1$) even though their effects are almost negligible. Another supporting evidence is found in the decrease in significance level for the negatively-signed coefficient estimate for *Export* as a result of the OOF element being included in $CAid$. Most importantly, when compared to the result of Model 1, the effect of Western aid lost significance in both Model 2 and 3 when estimated in conjunction with the effect of China's aid rendered by the two-stage estimate. Lastly, the estimated coefficients of GDP *per capita* and resource dependence maintain their expected signs and are significant. The most surprising result is the level of inequality, which shares a positive association with recipient countries' levels of democracy. Lastly, the Chi-square statistics from Wald test of both models reject the null hypothesis of no correlation between the two equations at significant levels, and suggest that the negative effects of recipient countries having received China's aid and its interaction with the amount of China's aid flows occur when the RHS variables in (5) is positively associated with $Aid = 1$ at $\rho \simeq 0.8$. Overall, these are strong empirical evidences that when China's aid was attracted to recipient countries' resource sector, it reinforces the existing authoritarian tendency of resource sector growth which, at the margin, offsets the democracy-promotion effect of Western aid.

As a simple robustness check, we reestimate the same specification using the DPI measure of LIEC as alternative dependent variable. The results reported in the panels for Model 4 and 5 are largely in line with the estimates of Model 2 and 3: having received China's aid ($Aid = 1$) reinforces the significant negative effect of resource dependence (coef. $\simeq$ -1.03$\sim$-1.04) on recipient countries' Polity scores by about 1.67 point, while GDP *per capita* tends to increase recipient countries' levels of democracy by minuscule amount in both models. Population and ethno-linguistic polarization assume statistical significance in Model 4 and 5, both having positive effects on recipients' levels of democracy. On the other hand, levels of inequality and the variable of interest in equation (5), net oil and gas export values, lost significance and the estimated coefficients of inequality changed signs in both models. Finally, the Chi-square statistics from Wald tests significantly reject the hypothesis of no correlation in both models and suggest that China's aid tends to impart a negative effect on recipients' levels of democracy when the RHS variables in (5) is associated with a country being the recipient of China's aid at $\rho \simeq 0.84$. I view these results as providing additional support to the claim made by hypothesis **H 1b** and **H 2** of the relationship between China's aid and recipient countries' resource sector and political institutions.

Table 12 plots the coefficient estimates of Model 2-5 with 95% confidence intervals for a visual comparison, and variables in (5) are labeled in grey.

The empirical evidences from our statistical analysis in the last section not only validate the hypotheses suggested by our argument, but also suggests that recent studies that concern China's aid attenuating the effectiveness of Western aid are not unwarranted. For

example, Dutta, Leeson and Williamson (2013) argues aid serves to *amplify* recipients' existing political regime characteristics by making democracies more democratic through promoting democratic reforms while entrenching the authoritarian rulers' hold on power by giving them with free financial and material resources. This argument is partially supported by our finding because, as our analysis shows, although the alleged positive conditionality effect of Western aid is borne out by our statistical findings, recipients with high resource-dependence profile tend to attract more China's aid and therefore have greater propensity of experiencing the amplified authoritarian effect of aid suggested by Dutta, Leeson and Williamson (2013). Our analysis thus places a scope condition on this argument.

In addition, Neumayer's (2003) and Bermeo's (2011) findings raise the possibility that the *sources* of foreign aid and the motivations of donors, particularly emerging donors whose political and economic interests are orthogonal to those of Western donors, may be the missing variables that will help to explain the variance in democratic outcomes across recipient countries. In particular, they both point to aid from oil-rich Middle Eastern donors as a potential source of authoritarian influence. Our argument addresses this concern and our analysis not only describes how such authoritarian effect can occur but also identifies the causal links by which such effect is produced.

6   Conclusion

For more than a decade, scholars have debated, both theoretically and in practice, whether and how foreign aid can translate into more democratic governance. Consensus on this matter remains elusive. To some, aid is associated with higher levels of democracy, particularly in the post-Cold War period. To others, aid reduces the likelihood of democratization by helping to sustain "bad" political institutions. While previous research offers important insights, it has failed to account for some dramatic changes in the politics of foreign aid over the past several decades; specifically, the emergence of new donor countries—China, in particular—as major providers of foreign aid.

This study surveyed the scope and extent of China's aid allocation in the last decade, analyzed its motivation and potential political impact on recipients' democratic development. Our analysis identified the unique determinants of Western and China's aid and suggests that although supporting authoritarianism may not be on Beijing's primary aid agenda, given China's current natural resources and commercially-oriented aid allocation pattern, an increase in China's aid inflows can hinder democratic development in resource-dependent recipient countries.

The central theoretical contribution of this study lies not only in extending the ongoing debate on China's aid by testing the political effect of this alternative source of aid, but also in suggesting and testing a plausible causal mechanism that might help to explain the variation in political outcomes across recipient countries. Our analysis also shows that a wide array of natural resources and commercially-driven OOFs often attached to China's aid pledges are a more powerful explanans for observed political outcomes in recipient

countries than the "aid" itself, which may be a useful direction for future research. With respect to aid program evaluation, our finding suggests that, rather than questioning the effectiveness of political conditional *per se*, Western donors and international aid organizations can better improve the effectiveness of aid by encouraging resource-dependent recipients to "diversify" their economies (OECD, 2011), which can eventually serve as a fertile ground for promoting democratic reform in recipient countries in the long run. If it is recipient countries' resource dependence that draws more aid from China as well as from other rising donors (who do not intend to use aid specifically for promoting authoritarianism) in the first place and thereby amplifies the existing authoritarian tendency of resource-dependent recipients, then the recommendation of throwing out the aid baby with the political conditionality bath water altogether may be misplaced;[45] in fact, the overall efficacy of aid policy can be improved by modifying the conditionality clause from emphasizing democratic reforms to prioritizing economic diversification. This study thus serves as a platform to bridge academic and policy views on this emerging issue in international relations.

---

[45] For example, Dijkstra (2002).

Table 2: SUR test of the determinants of Chinese and Western aid

Variable	DV:	Model 1 $CAid_{jt}$ (ODA only)		Model 2 $CAid_{jt}$ (ODA + OOF)		Model 3 MENA only	
		Western aid	Chinese aid	Western aid	Chinese aid	Western aid	Chinese aid
GDP per capita		−0.004***	−0.016***	−0.004***	−0.049***	0.003*	−0.027
		(0.001)	(0.005)	(0.001)	(0.013)	(0.001)	(0.033)
GDP growth		0.003	1.928	0.022	6.631	0.006	13.010
		(0.496)	(2.587)	(0.496)	(7.295)	(0.558)	(12.807)
Net FDI inflows		0.002***	0.000	0.002***	−0.005	0.001	−0.166***
(Million USD)		(0.001)	(0.003)	(0.001)	(0.008)	(0.002)	(0.050)
Net Oil-gas rents		0.117	1.924	0.156	9.586**	−0.686*	−4.660
(Billion USD)		(0.199)	(1.036)	(0.200)	(2.922)	(0.313)	(7.248)
Polity scores		2.860***	2.219	2.892***	11.790	4.731***	50.520*
		(0.561)	(2.986)	(0.561)	(8.419)	(0.776)	(19.694)
$CAid_{jt}$		−0.016*		−0.007**		−0.008***	
(Million USD)		(0.007)		(0.002)		(0.002)	
Western aid			−0.173		−1.177*		−3.617**
(Million USD)			(0.197)		(0.555)		(1.253)
Export			−1.395		−0.870		5.622
(Top 5 share)			(1.919)		(5.409)		(13.031)
Import			11.810***		18.300**		41.220**
(Top 5 share)			(2.344)		(6.605)		(13.674)
Taiwan			−94.220*		−244.600		−26.99
			(45.342)		(127.781)		(372.810)
Constant		41.810***	20.830	41.700***	112.900	10.340	−389.000
		(9.449)	(52.879)	(9.436)	(149.099)	(12.101)	(332.188)
N		791		791		353	
$\chi^2(1)$		1.442		2.373		3.884	
Pr		0.230		0.123		0.049	

Standard error in parentheses. *p<.05, **p<.01, ***p<.001.

Table 3: The authoritarian effect of China's aid on recipient countries' political institutions

| Variable	DV:	Model 1 OLS	Model 2 ODA only	Model 3 ODA + OOF	Model 4 ODA only	Model 5 ODA + OOF
			Polity score		DPI LIEC	
Population(log)		0.350*	0.008	0.014	0.066*	0.065*
		(0.142)	(0.084)	(0.084)	(0.032)	(0.032)
GDP per capita		0.001***	0.000***	0.000***	0.000**	0.000**
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Resource dependence		-4.145***	0.000*	-0.804***	-1.040***	-1.034***
		(0.550)	(0.000)	(0.362)	(0.156)	(0.155)
Western aid		0.008*	0.004	0.005	0.000	0.000
		(0.004)	(0.002)	(0.003)	(0.001)	(0.001)
Inequality		0.228***	0.113***	0.110***	-0.003	-0.004
		(0.026)	(0.017)	(0.017)	(0.006)	(0.006)
Ethno-linguistic		1.387	-1.082	-1.070	0.442*	0.443*
polarization		(0.851)	(0.559)	(0.554)	(0.200)	(0.200)
China's aid		-0.000				
(ODA + OOF)		(0.000)				
$ODA|\boldsymbol{Aid} = 1$			0.000		0.000	
			(0.000)		(0.000)	
$ODA + OOF|\boldsymbol{Aid} = 1$				0.000*		0.000
				(0.000)		(0.000)
$\boldsymbol{Aid} = 1$			-13.392***	-13.351***	-1.670***	-1.675***
			(0.388)	(0.346)	(0.128)	(0.126)
Constant		-2.700	13.402***	13.370***	5.798***	5.831***
		(2.725)	(2.113)	(2.073)	(0.668)	(0.668)
Net oil-gas rents			0.005***	0.005***	0.001	0.001
			(0.002)	(0.002)	(0.003)	(0.003)
Export			-0.015**	-0.015*	-0.021*	-0.022*
			(0.006)	(0.006)	(0.001)	(0.010)
Import			0.000	-0.001	-0.012	-0.012
			(0.004)	(0.004)	(0.007)	(0.007)
Taiwan			-1.305	-0.730	-0.918	-0.916
			(8.833)	(18264.19)	(0.195)	(0.194)
N		766	766	766	725	725
ρ			0.796	0.796	0.837	0.838
σ			7.03	6.984	1.436	0.436
λ			7.004	0.954	1.202	1.203
$\chi^2(1)$			118.30	155.55	269.24	270.17
Pr			0.000	0.000	0.000	0.000

Robust standard errors used in all models.

Standard error in parentheses. *p<.05, **p<.01, ***p<.001.

$\chi^2(1)$: Wald test of $\rho = 0$

Figure 11: The Determinants of Chinese and Western aid allocations

(a) Model 1: $CAid$ (ODA only)

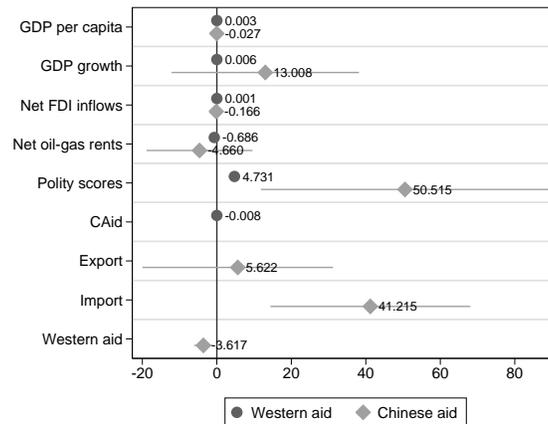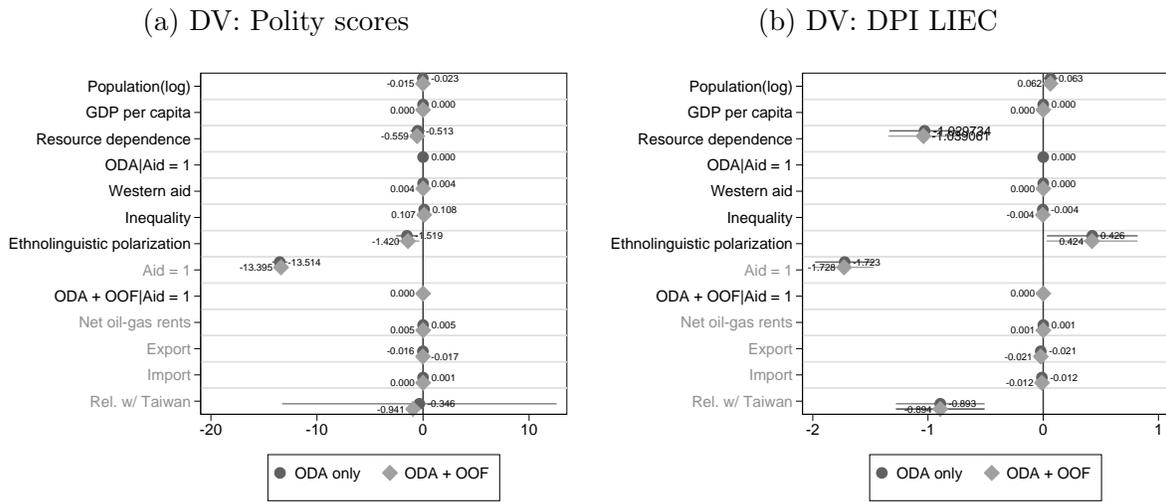(b) Model 2: $CAid$ (ODA + OOF)
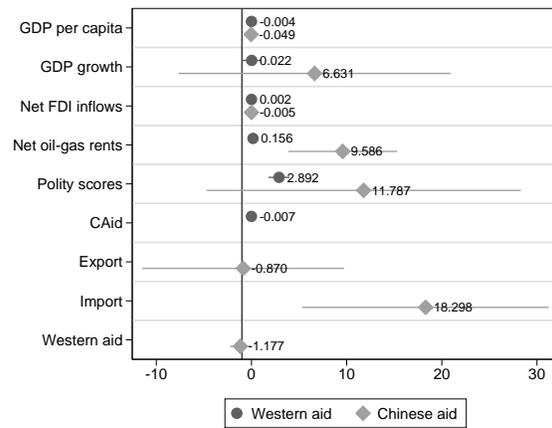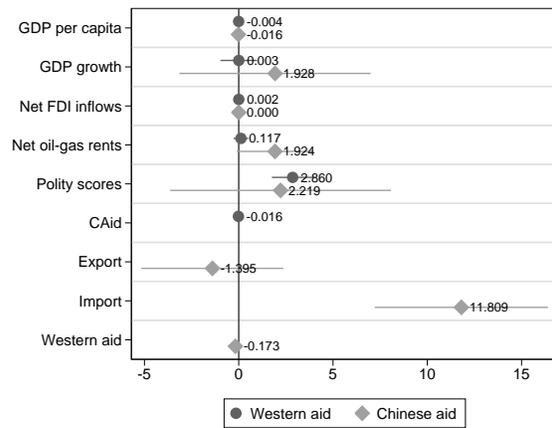
(c) Model 3: MENA only

Figure 12: The effects of aid and resource dependence on recipient countries' political institutions

(a) DV: Polity scores

(b) DV: DPI LIEC

7 Appendix

Figure A3: Screen capture of AidData's data format

References

Acemoğlu, Daron and James A. Robinson. 2006. *Economic Origins of Dictatorship and Democracy*. New York, NY: Cambridge University Press.

Alesina, Alberto and David Dollar. 2000. "Who Gives Foreign Aid to Whom and Why?" *Journal of Economic Growth* 5(1):33–63.

Arellano, Cristina, Aleš Bulíř, Timothy Lane and Leslie Lipschitz. 2009. "The Dynamic Implications of Foreign Aid and its Variability." *Journal of Development Economics* 88(1):87–102.

Armah, Stephen E. and Carl H. Nelson. 2008. "Is Foreign Aid Beneficial for Sub-Saharan Africa? A Panel Data Analysis." Paper Presented at 2008 Annual Meeting of American Agricultural Economics Association, Orlando, Florida. April, 2008 .

Bader, Julia. 2014. *China's Foreign Relations and the Survival of Autocracies*. London, UK: Routledge.

Bartke, Wolfgang. 1989. *The Economic Aid of the PR China to Developing and Socialist Countries*. Munich, Germany: K. G. Saur.

Bauer, Peter T. 2000. *From Subsistence to Exchange and Other Essays*. Princeton, NJ: Princeton University Press.

Bearce, David H. and Daniel C. Tirone. 2010. "Foreign Aid Effectiveness and the Strategic Goals of Donor Governments." *The Journal of Politics* 72(3):837–51.

Beblawi, Hazem. 1987. "The Rentier State in the Arab World" In Hazem Beblawi and Giacomo Luciani, co-eds., *The Rentier State: Nation, State and the Integration of the Arab World*. London, UK: Croom Helm.

Bermeo, Sarah Blodgett. 2011. "Foreign Aid and Regime Change: A Role for Donor Intent." *World Development* 39(11):2021–31.

Boix, Carles. 2003. *Democracy and Redistribution*. New York, NY: Cambridge University Press.

Bräutigam, Deborah. 2009. *The Dragon's Gift: The Real Story of China in Africa*. New York, NY: Oxford University Press.

Bräutigam, Deborah. 2011b. "Aid 'With Chinese Characteristics': Chinese Foreign Aid and Development Finance Meet the OECD-DAC Aid Regime." *Journal of International Development* 23(5):752–64.

Bräutigam, Deborah A and Stephen Knack. 2004. "Foreign Aid, Institutions, and Governance in Sub-Saharan Africa." *Economic Development and Cultural Change* 52(2):255–85.

Bräutigam, Deborah A and Xiaoyang Tang. 2009. "China's Engagement in African Agriculture: "Down to the Countryside"." *The China Journal* 199:686–706.

Bremmer, Ian. 2009. "State Capitalism and the Crisis." McKinsey Quarterly. URL http://www.mckinsey.com/insights/public_sector/state_capitalism_and_the_crisis.

Brown, Stephen. 2005. "Foreign Aid and Democracy Promotion: Lessons from Africa." *The European Journal of Development Research* 17(2):179–198.

Bueno de Mesquita, Bruce and Alastair Smith. 2007. "Foreign Aid and Policy Concessions." *The Journal of Conflice Resolution* 51(2):251–84.

Burnell, Peter. 2010. "Promoting Democracy and Promoting Autocracy: Towards A Comparative Evaluation." *Journal of Politics and Law* 3(2):3–14.

Burnside, Craig and David Dollar. 2000. "Aid, Policies, and Growth." *The American Economic Review* 90(4):847–68.

Carmody, Padraig R. 2011. *The New Scramble for Africa.* New York, NY: Cambridge University Press.

CCTV. 2011. "35,860 Chinese nationals in Libya evacuated: FM." CCTV. March 3rd, 2011. URL `http://english.cntv.cn/20110303/103938.shtml`.

Crawford, Gordon. 2001. *Foreign Aid and Political Reform: A Comparative Analysis of Democracy Assistance and Political Conditionality.* New York, NY: Palgrave MacMillan.

Davies, Martyn. 2010. "How China is influencing Africas developmen." Background Paper for the Perspectives on Global Development 2010 Shifting Wealth. OECD Development Centre .

Diamond, Larry. 2008. "The Democratic Rollback: The Resurgence of the Predatory State." *Foreign Affairs* 87(2):36–48.

Dijkstra, A. Geske. 2002. "The Effectiveness of Policy Conditionality: Eight Country Experiences." *Development and Change* 33(2):307–34.

Djankov, Simeon, , José Garcia Montalvo and Marta Reynal-Querol. 2008. "The Curse of Aid." *Journal of Economic Growth* 13(3):169–194.

Drakos, Konstantinos and Andreas Gofas. 2006. "The Devil You Know but Are Afraid to Face: Underreporting Bias and its Distorting Effects on the Study of Terrorism." *Journal of Conflict Resolution* 50(5):714–35.

Dreher, Axel and Andreas Fuchs. 2011. "Rogue Aid? The Determinants of China's Aid Allocation." CESifo Working Paper Series No. 3851 .

Dunning, Thad. 2004. "Conditioning the Effects of Aid: Cold War Politics, Donor Credibility, and Democracy in Africa." *International Organization* 58(2):409–23.

Dunning, Thad. 2008. *Crude Democracy: Natural Resource Wealth and Political Regimes.* New York, NY: Cambridge University Press.

Dutta, Nabamita, Peter T. Leeson and Claudia R. Williamson. 2013. "The Amplification Effect: Foreign Aid's Impact on Political Institutions." *International Review for Social Sciences* 66(2):208–28.

Easterly, William. 2003. "Can Foreign Aid Buy Growth?" *Journal of Economic Perspectives* 17(3):23–48.

England, Andrew. 2015. "Zambia bears the brunt of Chinas economic slowdown." *Financial Times.* September 9th, 2015. URL: `http://www.ft.com/cms/s/0/065afc1e-556b-11e5-a28b-50226830d644.htmlaxzz3y4hIeEIS`.

Esteban, Joan-María and Debraj Ray. 1994. "On the Measurement of Polarization." *Econometrica* 62(4):819–51.

EXIM Bank of the United States. 2014. "EXIM Bank Annual Report 2014." EXIM Bank website. URL `http://www.exim.gov/sites/default/files/reports/annual/EXIM-2014-AR.pdf`.

Finkel, Steven E., Aníbal Pérez-Liñán and Mitchell A. Seligson. 2007. "The Effects of U.S. Foreign Assistance on Democracy Building, 1990-2003." *World Politics* 59(3):404–440.

Forum on China-Africa Cooperation. 2006. "Chinas African Policy (released Jan. 12th 2006)." URL `http://www.focac.org/eng/zt/zgdfzzcwj/t230479.htm`. (Accessed Feb. 26th 2014).

Foster, Vivien, William Butterfield, Chuan Chen and Nataliya Pushak. 2009. *Building Bridges: Chinas Growing Role as Infrastructure Financier for Sub-Saharan Africa.* Washington, D.C.: World Bank.

Frey, Bruno S. and Friedrich Schneider. 1986. "Competing Models of International Lending Activity." *Journal of Development Economics* 20(2):225–45.

Garriga, Ana Carolina and Brian J. Phillips. 2013. "Foreign Aid as a Signal to Investors: Predicting FDI in Post-conflict countries." *Journal of Conflict Resolution* doi: 10.1177/0022002712467937 .

Girod, Desha M. 2008. "Cut from the same cloth? Bilateral vs. multilateral aid." Paper Presented at 2008 Annual Meeting of American Political Science Association, Boston, MA .

Goldsmith, Arthur A. 2001. "Foreign Aid and Statehood in Africa." *International Organization* 55(1):123–48.

Greene, William H. 2012. *Econometric Analysis* 7th ed. Upper Saddle River, NJ: Prentice Hall.

Grimm, Sven, Rachel Rank, Matthew McDonald and Elizabeth Schickerling. 2011. "Transparency of Chinese Aid: An analysis of the published information on Chinese external financial flows." Publish What You Found report .

Gualberti, Giorgio, Morgan Bazilian and Todd Moss. 2014. "Energy Investments in Africa by the U.S., Europe and China." *IAEE Energy Forum* Second Quarter:31–5.

Haroz, David. 2011. "China in Africa: Symbiosis or Exploitation." *The Fletcher Forum of World Affairs* 35(2):65–88.

Hayashi, Fumio. 2000. *Econometrics.* Princeton, NJ: Princeton University Press.

Ho, Prudence. 2015. "Venezuela Oil Loans Go Awry for China." *The Wall Street Journel* June 18, 2015. URL: `http://www.wsj.com/articles/venezuela-oil-loans-go-awry-for-china-1434656360`.

Hollyer, James R., B. Peter Rosendorff and James Raymond Vreeland. 2014. "Measuring Transparency." *Political Analysis* 22(4):413–34.

Hubbard, Paul. 2007. "Aiding Transparency: What We Can Learn About China Exim Banks Concessional Loans." Center for Global Development Working Paper No. 126 .

Hyde, Susan D. and Carew E. Boulding. 2008. "Political Terror, Election Fraud, and Foreign Aid: When to donors withdraw aid to promote democracy?" Paper Presented at Annual Meeting of Midwest Political Science Association in Chicago, IL. April, 2008 .

Imai, Kosuke, Dustin H. Tingley and Luke Keele. 2010. "A General Approach to Causal Mediation Analysis." *Psychological Methods* 15(4):309–34.

Imai, Kosuke, Luke Keele, Dustin Tingley and Teppei Yamamoto. 2011. "Unpacking the Black Box of Causality: Learning about Causal Mechanisms from Experimental and Observational Studies." *American Political Science Review* 105(4):756–89.

Imai, Kosuke, Luke Keele and Teppe Yamamoto. 2010. "Identification, Inference, and Sensitivity Analysis for Causal Mediation Effects." *Statistical Science* 25(1):51–71.

Information Office of the State Council. 2011. "China's Foreign Aid." XinHua. April 21st, 2011. URL: `http://news.xinhuanet.com/english2010/china/2011-04/21/c_13839683.htm`.

Information Office of the State Council. 2014. "China's Foreign Aid." XinHua. July 10th, 2014. URL: `http://news.xinhuanet.com/english/china/2014-07/10/c_133474011.htm`.

Jackman, Simon and Shawn Treier. 2008. "Democracy as a Latent Variable." *American Journal of Political Science* 52(1):201–17.

Jensen, Nathan and Leonard Wantchekon. 2004. "Resource Wealth and Political Regimes in Africa." *Comparative Political Studies* 37:816–41.

Karl, Terry Lynn. 1997. *The Paradox of Plenty: Oil Booms and Petro-States.* Berkeley, CA: University of California Press.

Keefer, Philip and Patrick Walsh. 2001. "New Tools in Comparative Political Economy: The Database of Political Institutions." *World Bank Economic Review* 15(1):165–76.

Kishi, Roudabeh and Clionadh Raleigh. 2015. "Chinese Aid and Africas Pariah States 2000-2011." Working Paper. Department of Geography, University of Sussex .

Kitano, Naohiro and Yukinori Harada. 2014. "Estimating China's Foreign Aid 2001-2013." *JICA-RI Working Paper, No. 78* .

Knack, Stephen. 2004. "Does Foreign Aid Promote Democracy?" *International Studies Quarterly* 48(1):251–66.

Kurlantzick, Joshua and Perry Link. 2009. "China: Resilent, Sophisticated Authoritarianism" In *Undermining Democracy: 21st Century*. Washington, D.C.: Freedom House.

Lancaster, Carol. 2006. *Foreign Aid: Diplomacy, Development, Domestic Politics.* Chicago, IL: University of Chicago Press.

Lancaster, Carol. 2007. "The China Aid System." Center for Global Development Essay .

Lebovic, Jame H. and Erik Voeten. 2009. "The Cost of Shame: International Organizations and Foreign Aid in the Punishing of Human Rights Violators." *Journal of Peace Research* 46(1):79–97.

Li, Xiaoyun. 2008. "Chinas Foreign Aid and Aid to Africa: overview." PowerPoint presentation available at `http://www.oecd.org/dac/povertyreduction/40378067.pdf`.

Lum, Thomas, Hannah Fischer, Julissa Gomez-Granger and Anne Leland. 2009. "China's Foreign Aid Activities in Africa, Latin America, and Southeast Asia." Congressional Research Service No. R40361 .

Luong, Pauline Jones. 2003. *The Transformation of Central Asia: States and Societies from Soviet Rule to Independence.* Ithaca, NY: Cornell University Press.

Maddala, G. S. 1983. *Limited-Dependent and Qualitative Variables in Econometrics.* Cambridge, UK: Cambridge University Press.

Marshall, Andrea. 2011. "China's mighty Telecom footprint in Africa." *eLearning Africa News Portal.* February 21st, 2011. URL: `http://ela-newsportal.com/china%E2%80%99s-mighty-telecom-footprint-in-africa/`.

Ministry of Foreign Affairs of the People's Republic of China. 2013. "Xi Jinping Delivers a Speech at the Julius Nyerere International Convention Center in Tanzania, Stressing China and Africa Will Always Remain Reliable Friends and Faithful Partners." March 25th, 2013. URL: `http://www.fmprc.gov.cn/mfa_eng/topics_665678/xjpcf1_665694/t1025803.shtml`.

Mommer, Bernard. 2002. *Global Oil and the Nation State.* Oxford, UK: Oxford University Press.

Montalvo, José G. and Marta Reynal-Querol. 2005. "Ethnic Polarization, Potential Conflict, and Civil Wars." *American Economic Review* 95(3):796–816.

Moss, Todd J. and Sarah Rose. 2006. "China Exim Bank and Africa: New Lending, New Challenges." Center for Global Development. Washington D.C. .

Moyo, Dambisa. 2009. *Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa.* New York, NY: Farrar, Straus and Giroux.

Mwase, Nkunde and Yongzheng Yang. 2012. "BRICs' Philosophies for Development Financing and Their Implications for LICs." *IMF Working Paper,* WP/12/74 .

Naím, Moisès. 2007. "Rogue Aid." *Foreign Policy* March-April:95–6.

Nathan, Andrew J. 2015. "China's Challenge." *Journal of Democracy* 26(1):156–70.

Nelson, Joan M. and Stephanie J. Eglinton. 1992. "Encouraging Democracy: What Role for Conditioned Aid?" Policy Essay No. 4. Washington, DC: Overseas Development .

Neumayer, Eric. 2003. "What Factors Determine the Allocation of Aid by Arab Countries and Multilateral Agencies?" *The Journal of Development Studies* 39(4):134–47.

Ng'wanakilala, Fumbuka and George Obulutsa. 2013. "China's Xi tells Africa he seeks relationship of equals." *Reuters.* March 25th, 2013. URL: http://www.reuters.com/article/us-china-africa-idUSBRE92O0D220130325AyzqfwwdzEs48L8z.97.

Nielsen, Richard A., Michael G. Findley, Zachary S. Davis, Tara Candland and Daniel L. Nielson. 2011. "Foreign Aid Shocks as a Cause of Violent Armed Conict." *American Journal of Political Science* 55(2):219–32.

Nielsen, Richard and Daniel Nielson. 2010. "Triage for Democracy: Selection Effects in Governance Aid." Mimeo .

OECD. 1972. "OECD official development assistance - definition and coverage." http://www.oecd.org/dac/stats/officialdevelopmentassistancedefinitionandcoverage.htm.

OECD. 2011. *Economic Diversification in Africa: A Review of Selected Countries.* Paris, France: OECD Publication.

Perlez, Jane. 2012. "With $20 Billion Loan Pledge, China Strengthens Its Ties to African Nations." *The New York Times.* July 19th, 2012. URL: http://www.nytimes.com/2012/07/20/world/asia/china-pledges-20-billion-in-loans-to-african-nations.html.

PRC State Council. 2011. *China's Foreign Aid White Paper.* Beijing, China: Information Office of the State Council.

PricewaterhouseCoopers. 2009. "When the going gets tough..." Review of global trends in the mining industry. `http://www.infomine.com/publications/docs/PricewaterhouseCoopers2009.pdf`.

Rajan, Raghuram G. and Arvind Subramanian. 2011. "Aid, Dutch Disease, and Manufacturing Growth." *Journal of Development Economics* 94(1):106–118.

Remmer, Karen L. 2004. "Does foreign aid promote the expansion of Government?" *American Political Science Review* 48(1):77–92.

Resnick, Danielle. 2012. "Foreign Aid in Africa: Tracing Channels of Influence on Democratic Transitions and Consolidation." UNI-WIDER Working Paper No. 2012/15 .

Reynal-Querol, Marta. 2002. "Ethnicity, Political Systems, and Civil Wars." *Journal of Conflict Resolution* 46(1):29–54.

Robertson, Charles and Lucy Corkin. 2011. "China in Africa, Renaissance Capital." *Economics and Strategy Research*. URL: `http://www.fastestbillion.com/res/Research/China_in_Africa-210411.pdf`.

Ross, Michael L. 2001. "Does Oil Hinder Democracy?" *World Politics* 53(3):325–61.

Ross, Michael L. and Paasha Mahdavi. 2014. "Oil and Gas Data, 1932-2014." Michael L. Ross dataverse. URL: `https://dataverse.harvard.edu/dataverse/mlross`.

Schraeder, Peter J., Steven W. Hook and Bruce Taylor. 1998. "Clarifying the Foreign Aid Puzzle: A Comparison of American, Japanese, French, and Swedish Aid Flows." *World Politics* 50(2):294–323.

Scott, Jame M. and Carie A. Steele. 2011. "Sponsoring Democracy: The United States and Democracy Aid to the Developing World, 19882001." *International Studies Quarterly* 55(1):47–69.

Selaya, Pablo and Eva Rytter Sunsen. 2012. "Does Foreign Aid Increase Foreign Direct Investment?" *World Development* 40(11):2155–76.

Shushan, Debra L. and Christopher Marcoux. 2011. "The Rise (and Decline?) of Arab Aid: Generosity and Allocation in the Oil Era." *World Development* 39(11):1969–80.

Smith, Alastair. 2008. "The Perils of Unearned Income." *The Journal of Politics* 70(3):780–793.

Solt, Frederick. 2009. "Standardizing the World Income Inequality Database." *Social Science Quarterly* 90(2):231–42.

Sorensen, George. 1993. *Political Conditionality*. London, UK: Routledge.

Srivastava, Virendra K. and David E. A. Giles. 1987. *Seemingly Unrelated Regression Equations Models: Estimation and Inference*. New York, NY: Marcel Dekker.

State Council. 2011. "Eight Principles for Economic Aid and Technical Assistance to Other Countries." `http://english.gov.cn/official/2011-04/21/content_1849913_10.htm`. (Accessed Feb. 25th 2013).

Strange, Austin, Bradley Parks, Michael J. Tierney, Andreas Fuchs, Axel Dreher and Vijaya Ramachandran. 2013. "Chinas Development Finance to Africa: A Media-Based Approach to Data Collection." Center for Global Development Working Paper No. 323 .

Sun, Yun. 2014. "China's Aid to Africa: Monster or Messiah?" *Brookings Institution*, February 2014. URL: `http://www.brookings.edu/research/opinions/2014/02/07-china-aid-to-africa-sun`.

Svensson, Jakob. 2003. "Why Conditional Aid Does Not Work and What Can Be Done About It?" *Journal of Development Economics* 70(2):381–402.

Tan, Bann-Seng Tan and Bruce Bueno de Mesquita. 2013. "Does Chinese Foreign Aid Giving Differ from Other Donor Nations?" Working paper, Department of Politics, New York University .

Theil, Henri. 1971. *Principles of Econometrics*. New York, NY: J. Wiley & Son.

Tull, Denis M. 2006. "China's engagement in Africa: Scope, Significance and Consequences." *The Journal of Modern African Studies* 44(3):459–79.

U.N. Security Council. 1999. "U.N. Security Council Resolution on "The situation in the former Yugoslav Republic of Macedonia". 3982nd meeting. Feb. 25th 1999." `http://www.un.org/en/ga/search/view_doc.asp?symbol=S/PV.3982`. (Accessed Feb. 27th 2013).

van de Walle, Nicolas. 2001. *African economies and the politics of permanent crisis, 1979-1999*. New York, NY: Cambridge University Press.

Vanderhill, Rachel. 2013. *Promoting Authoritarianism Abroad*. Boulder, CO: Lynne Rienner.

Williams, Cindy. 1996. ""The Role of Foreign Aid in Economic Development". United States Senate, 98th Cong. (1996) (Statement of Cindy Williams before the Subcommittee on African Affairs, Senate Committee on Foreign Relations. May 1st 1996).".

Wolf, Charles Jr., Xiao Wang and Eric Warner. 2013. *China's Foreign Aid and Government-Sponsored Activities: Scale, Content, Destinations, and Implications*. Washington, D.C.: RAND Corporation.

Wooldridge, Jeffrey M. 2010. *Econometric Analysis of Cross Section and Panel Data*. Cambridge, MA: MIT Press.

Young, Joseph K. and Michael G. Findley. 2011. "Can Peace Be Purchased? A Sectoral-Level Analysis of Aids Influence on Transnational Terrorism." *Public Choice* 149(3):365–81.

Zellner, Arnold. 1962. "An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias." *Journal of the American Statistical Association* 57(298):348–68.

Zhang, Wei-Wei. 2006. "The Allure of the Chinese model." *International Herald Tribune*, November 1st, 2006.