Rogue aid or the poor helping the poor?

Making sense of Chinese foreign aid to Africa

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Abstract

This thesis investigates Chinese foreign aid allocation to Africa between 2000 and 2014. China is an emerging donor of foreign aid and has become an alternative source of assistance for African recipient countries. Considering the characteristics and history of Chinese activity in the region, this thesis focus on answering whether Chinese foreign aid allocation is guided by self-interest. Through conventional perspectives on foreign aid, the aim is to scrutinize Chinese aid allocation through traditionally expected donor motivations: Recipient need, recipient merit, and donor country self-interest. China seems to have an interest in cultivating recipient countries with oil endowments, and there are reasons to expect China select oil rich recipients with weak institutional capacity that are easier to influence. Using data on Chinese foreign aid flows from Dreher et al. (2017)[1], the thesis employs a two-step regression analysis to uncover whether Chinese foreign aid allocation is guided by self-interest. In addition, the same regression models will be tested on foreign flows of the Development Assistance Committee (DAC) and the United States to compare the results of Chinese foreign aid. This empirical analysis finds that Chinese aid allocation is partly guided by self-interest with a positive association to several proxies of recipient country oil abundance. Recipient merit through Taiwan recognition is also decisive for receiving Chinese aid, but not for how much in monetary amounts allocated. No association between Chinese foreign aid and oil producing recipient's institutional quality is found. However, this thesis does find an association between a decrease in US foreign aid and oil producing recipients having strong institutional quality.

[1]Data is from Dreher, Axel, Andreas Fuchs, Bradley Parks, Austin M. Strange, and Michael J. Tierney. 2017. Aid, China, and Growth: Evidence from a New Global Development Finance Dataset. AidData Working Paper #46. Williamsburg, VA: AidData. Use of the data is the responsibility of the author of this thesis. All potential mistakes or errors in application of the data is the responsibility of the author of this thesis.

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List of Abbreviations

DAC – Development Assistance Committee

EIA – Energy Information Administration

FDI – foreign direct investment

IMF – International Monetary Fund

ODA – Official Development Assistance

OECD – Organisation for Economic Co-operation and Development

OOF – Other official flows

SMP – staff-monitored programme

SOE – State-owned enterprise

TUFF – Tracking Underreported Financial Flows

WDI – World Development Indicators

WGI – Worldwide Governance Indicators

1. Introduction

Africa is an extremely aid-dependent region. After centuries of colonialism and western extractive policies, the prospects for the development of the region are uncertain. On the one hand, sub-Saharan Africa accounts for 60 % of the people of the world living in poverty and the progress of development is slow. But on the other hand, the continent has a growing young population and vast reserves of natural resources. These factors may stimulate growth in the long term and lift African societies out of poverty. One way of alleviating these developmental issues has been through foreign aid, the transferring of resources from richer countries to poorer countries. Aid has been an instrument the west has applied to gradually reduce poverty. For several countries in the developing world that are recipients, bilateral aid is a paramount source of revenue (Davies and Klasen 2019, 249). Traditionally, the legitimate standards and practices of foreign aid allocation have been defined by the Organisation for European Economic Co-operation (OECD) and the subsidiary Development Assistance Committee (DAC), mainly consisting of western industrialized democracies. The OECD-DAC have set the developmental agenda the last decades. In recent years however, aid recipient countries have become increasingly disillusioned with this system, which has been perceived as unfair and rigid. Furthermore, the loss of legitimacy coincides with the emergence of alternative donor countries. The most controversial "new donor" is China (Dreher, Nunnenkamp, and Thiele 2011, 1951; Dreher et al 2013, 411; Gulrajani and Swiss 2017, 12). The academic interest in China as an emerging donor in Africa began in the early 2000s. Several pundits and media outlets have increasingly sounded the alarm of China supposedly using foreign aid as an instrument for neo-colonial purposes. Many point to Chinas activity in various African countries as evidence. China allegedly targets oil rich recipient countries, ignoring their relative need or institutional development. Chinese foreign is often accused of being entirely self-interest based. If Chinese foreign aid is not developmental in intent, how can we understand Chinese intentions in Africa? How can we investigate alleged Chinese aid allocation guided by self-interested motives? And how appropriate are the applied perspectives on foreign aid allocation for empirical analysis? That is what this thesis aims to acquire a deeper understanding of.

What is clear is that the Chinese government understands what foreign aid is very differently from the West and the OECD-DAC. What is economic activity with developmental intent for China can be predatory economic expansion with counterproductive implications in the eyes of Western countries (Yushi et al. 2020, 4). Furthermore, China imposes no requirements for institutional and democratic reform tied to their aid allocation. This disincentivize poorly governed and repressive regimes to democratize or improve institutional quality, as Western aid no longer is the only source of assistance (Alden 2005, 154). China also seems interested in cultivating good relations with recipients that are oil abundant. For these reasons, Chinese intentions are viewed with suspicion. However, the problem is that reading intentions from aid allocation is difficult and requires an understanding of the basis in which foreign aid traditionally have been disbursed. The debate among scholars on how to systemize aid allocation have been ongoing for decades, and the established perspectives were mainly modelled on Western aid. And studies analyzing Chinese foreign aid through the perspectives of Western standards have only relatively recently become popular (Morgan and Zheng 2019, 1284). This thesis will attempt to contribute to this respect and focus on how China fits within theoretical perspectives based upon Western aid allocation.

Major studies on foreign aid allocation mainly systemize explanations by incorporating several schools of thought, and this is perhaps best exemplified by the framework of Berthélemy (2006b). When focusing on traditional donors, he sorts the phenomenon into three main schools of thought: Recipient need, recipient merit and donor country self-interest. Recipient need means that the foreign aid allocation is altruistically distributed to the countries that need it the most based on performance of developmental criteria like poverty or health. Recipient merit means that foreign aid is allocated to the recipients with "the right policies" in the donors' eyes. This can be good performance on indictors like governance, democracy, or economic policies, because foreign aid is perceived to be more effective in sound institutional environments. This is usually referred to as aid under conditionalities. The third perspective is donor country self-interest where foreign aid is allocated opportunistically to so the donor country can reap benefit of some determinants. This can be the recipient country's natural resources, for instance oil and minerals, their markets, or their geostrategic positions. Contemporary research on foreign aid allocation usually attempts to incorporate assumptions representing several perspectives, but many pundits and policymakers tend to assume that China is guided by the last perspective, donor country self-interest.

Based on such assumptions, this thesis aims to answer *if Chinese foreign aid allocation to Africa is entirely self-interest based?* Furthermore, given that the perspectives on allocation summarized are derived from the traditional foreign aid theories, *how adequately can Chinese foreign aid to Africa be understood aid applied to conventional Western perspectives on foreign aid and with the expectations of China as a donor?* If the Chinese prime interest in Africa is the continents vast natural resources, specifically petroleum endowments, then the expectation is that Chinese aid allocation will favor oil abundant countries. But it is hard to fully understand the nature of Chinese aid allocation because they understand aid differently from the West and the traditional theoretical perspectives might not be the best tools for accounting for it. The theme of this thesis does not concern itself with the consequences of Chinese foreign aid. It cannot in any definitive way conclude on the intentions of it. But what this thesis aims to do is through quantitative empirical analysis deepen our understanding of which type of attributes within African countries are associated with Chinese foreign aid allocation. In other words, this thesis cannot conclude on what Chinas precise motivations are, but it can show which type of countries receive more foreign aid.

Western countries have also disbursed aid based on self-interest. This may partly explain why Western aid has lost some appeal while Chinese assistance has gained momentum. And China has an apparent symbolic ethos in the developing world. It used to be a very poor country. But China has turned from an impoverished agricultural society, plagued by disastrous Maoism and unrest, into a major economic power competing with the West. It reaps the fruits from a globalized economy while retaining its sovereignty (Alden 2005, 156). The proponents of China-Africa partnerships call it South-South cooperation based on noninterference and mutual respect. They have also described it as “the poor helping the poor”. Based on this, the Chinese foreign aid program operates with the touchstone principle of on non-interference, rejecting the Western principle of conditionality. This has led China to support autocracies and repressive governments. Having a demand for energy consumption at home, there is also an underlying suspicion that China applies its foreign aid as an instrument for access to natural resources like oil (Taylor 2006, 940). It has culminated in an accusation that China practices ‘rogue aid’, supporting only oil abundant autocracies as an effort to circumvent the western order and promote authoritarianism (Naím 2007, 95). While such views lack systematic evidence, they nevertheless proliferate in academic, media and policy circles. However, this thesis finds the argument that China forms an anti-democracy bloc and actively cultivates autocracy unconvincing. This thesis claims that it makes more sense for China to be interested in the

functioning of institutions than in democracy in the African recipient countries. If China seeks efficient access to petroleum exports, institutions with strong checks and balances would make it more difficult to influence oil abundant countries. Democracy hardly seems to be a priority for China, with exception of geographically close regimes. The assumption that Chinese aid is opportunistically motivated is partly derived from the similar assumption of China being a different donor in comparison to Western countries. The Chinese alternative source of assistance is framed as a rivaling developmental model to the DAC regime. Therefore, in addition, this thesis aims to compare DAC and US aid flows to Chinese aid flows, through models with the same recipient determinants.

Through quantitative empirical analysis, this thesis finds that it is not solely self-interest that drives Chinese foreign aid allocation. China does in fact have conditionalities for their potential recipients: Namely, that they must not recognize Taiwan as a sovereign state. Taiwan recognition is a vital factor determining whether recipients get Chinese foreign aid or receive nothing at all. But it does not determine how much foreign aid China allocates in monetary amounts. There appears to be an association between greater amounts of Chinese aid and recipients being efficient in oil production. There is however no finding supporting the suspicion that good governance inhibits Chinas interest in oil abundant countries. Although the results suggest China allocates less aid to less corrupt countries, control of corruption does not seem to have an intervening effect on allocation to countries that are large oil producers. Comparatively, the empirical analysis does find that US aid decreases when control of corruption is an intervening factor on large-scale oil production.

This thesis looks at Chinese aid to 50 African countries in the period between 2000 and 2014, using data from Dreher et al. (2017) that assembled data for Chinese non-reported foreign aid flows. The focus of this investigation is based on the self-interest perspective, whether China takes advantage of a decrease in DAC aid to fill this vacuum themselves, whether China skews their aid to oil abundant recipients, and whether this interest in oil abundance dissipates if the recipient is has strong institutions. The finding is that China seems robustly interested in countries that are efficient in their oil production and that recognizing Taiwan is a determining factor for receiving Chinese aid at all.

This introduction is the first part of this thesis. The second part of this thesis explains the foreign aid literature systematized under the three schools of thought: recipient need, recipient merit,

and donor self-interest. These conventional perspectives will guide the discussion throughout as the text moves forward. The third part aims to contextualize the controversy regarding emerging donor countries of foreign aid, as well as the history of China's evolving foreign aid program up till today. Part four discuss the positive and problematic characteristics of Chinese foreign aid. There are traits with Chinas allocation approach that is problematic in respect to several developing recipient countries. Part three and four provide the sufficient contextual understanding of Chinese foreign aid, leading up to the debates and expectations on China as a donor country. Part five presents the theoretical expectations on Chinese foreign aid allocation. It is in part five that the three hypotheses to be tested are presented. The sixth part present the troublesome concept of foreign aid and the even more complicated matter with interpreting Chinese foreign aid. Part seven sets forth the data on Chinese aid from Dreher et al. (2017) and the explanatory variables representing the schools of thought on foreign aid allocation. Part eighth discusses the methodology and the two-step model applied. The first step in this solution is a linear probability model for a binary variable of Chinese aid. The second step models analyze Chinese aid in monetary amounts using pooled, random, and fixed effects. The ninth part displays the empirical results through the two-step approach, as well as several robustness tests and the final models, that compare US and DAC aid. The tenth and final part will discuss the results of the regression analysis and its empirical and theoretical implications.

2. Schools of thought on foreign aid allocation

Generally, the origins and development of the form of foreign aid known today are usually traced to the aftermath of the second World War, as the United Nations was established, and massive rebuilding projects ensued. (Arvin and Lew 2015, 1). A complex and cooperative system defining the rules of the game in foreign aid, technically called 'development assistance', have gradually emerged. In general, established democracies and industrial economies are donors of aid. developing countries, many of them in Africa, are the recipients of foreign aid. It has been quite the variation in ways to map out donor's allocation characteristics while also attempting to understand donor intents. Scholars have for decades vehemently disagreed which models are best suited and which assumptions most accurate. In regard to foreign aid allocation, models would apply assumptions with allocation based on donor self-interest or based on recipient need, but gradually, the models incorporating variables

combining several schools of thought became popular. They were called "hybrid" models. Hybrid models are statistical models including variables from all the schools of thought: allocation from political motives, strategic, commercial, and humanitarian. "Hybrid models" does a better job counteracting and dealing with omitted variable bias (Berthélemy 2006a, 179; McGillivray and White 1993, 4) when important explanatory variables are ignored and left out, obscuring the actual effect. There are three established schools for thought and ways to model donor behavior that have been proved practical to use in research studying foreign aid. Contemporary studies on the subject typically integrate models with consideration to the relative need for aid of the developing country, or the attributes with said country that the donor country find to be strategically important for its self-interest (Kolstad, Wiig and Williams 2008, 17). There are usually three perspectives that dominate the literature on what intents determine the allocation of foreign aid: First there is recipient need, the relative need a developing country or recipient has that necessitates that the donor direct its foreign aid flows to this country. Second, we have recipient merit, the perceived "worthiness" of the recipient in form of the right policies in the eyes of the donor country which by the DAC this has typically been understood as good governance. Thirdly and finally, there is the donor country self-interest perspective where the donor country allocates aid based on economic returns or strategic interests ahead of relative need or good policies of the recipient (Berthélemy 2006b, 78; Hoeffler and Outram 2011, 241).

2.1. Recipient need – aid by altruism

Recipient need is allocation based on how much the receiving country needs the aid, and the expectation is that the aid flows target the neediest countries. Recipient need is commonly also understood as developmental motives for aid. In this case, purpose of aid is poverty alleviation, meaning that foreign aid is only to be allocated to countries where aid is believed to improve developmental conditions (Berthélemy 2006a, 184). According to Maizels and Nissanke the recipient need model is mostly based on the assumptions that each country receives aid proportional to its economic needs and that the developing country is poor because it lags way behind in terms of domestic resources and foreign exchange availabilities (Maizels and Nissanke 1984, 881-882). The recipient need-models only contain economic and social determinants of the recipient country because the central assumption is that humanitarian considerations are the primary motivation for the allocation of foreign aid and that the flows should allocated in the most equitable way to the poorest countries. The amount of aid should then be allocated in proportion to the recipient country's relative need (McGillivray and White

1993, 11). Also called the 'idealist paradigm', the primary motivation is to reduce poverty and promote economic development in the recipient countries, more so than self-interest (Schraeder, Hook and Taylor 1998, 298). Donors will themselves posit that they will provide aid in order to help the recipient help themselves and to become self-reliant in the long-term (Yushi et al. 2020, 7). The logic on early foreign aid was that the development assistance that the United States committed to the European states would promote and reinvigorate them to economic growth and eventually into becoming potential aid providers themselves. The purpose of the aid industry was therefore to assist developing countries to become self-sustaining and prosperous, so that they themselves could be donor countries eventually, like several European recipients had become by the late 1900s (Gulrajani and Swiss 2019, 353). While the OECD-DAC aid structure has claimed to do this for several years, others expect different allocation trends. Critics note that, even though official development assistance is supposed to alleviate poverty, generate development, and promote democracy, empirical evidence suggests that the western donors like the United States are not entirely altruistic themselves (Kragelund 2008, 579; Lee 2019, 574). Such research suggests that self-interest trumps need.

Foreign aid programs will commonly be presented by donor governments as exclusively motivated by recipient need, even though altruism might not be the actual motivation. Morgenthau (1962) believed that the only legitimate kind of financial grants from one country to another, apart from military and humanitarian aid, was financial assistance promoting economic development. Morgenthau also believed this justification of developmental aid rested on the assumption that economic development could be improved through transfers of money (Morgenthau 1962, 302). Some expect that the non-DAC donors like China should be better on recipient need because they recently have been recipients themselves and know what works and what doesn't (Dreher et al. 2013, 404; Taylor 2006, 940). And China has claimed to better represent the global south in contrast to the OECD-DAC, with a new well-working flexible model based on equal partnerships, increased trade and investment, and sharing of technical expertise (Dreher et al. 2011, 1951; de Renzio and Seifert 2014, 1865). The idealized view inherent in the recipient need model has been under scrutiny for a long time because the amounts of aid poor counties have received has not corresponded to their actual socioeconomic need, and the eventual established consensus is that the donor countries have substantial leverage over its recipient countries (McKinlay and Little 1977, 59). Maizels and Nissanke, in their influential contributions to the aid literature, have outright rejected the recipient need

model for explaining bilateral aid allocation for the DAC members and found other perspectives like commercial interests more convincing (1984, 883). Their explanation for the perspectives low explanatory power is that different donor countries might have different aid allocation criteria. What does exemplify the foreign aid from the DAC countries, however, is aid disbursements that are conditional on fulfilling some criteria. It is also lack of such criteria that critics say defines Chinese foreign aid allocation.

2.2. Recipient merit – aid by compliance to conditionalities

The second perspective is recipient merit, which postulate that aid allocation goes to the countries with better policies, particularly with regards to good governance, institutional quality, trade openness, and democracy. DAC donors traditionally require conditions for foreign aid. This either take the form of demand for support in political or economic matters; or conditions that the recipient improve their policies in governance, democracy or human rights that OECD considers to be vital in order to reduce poverty (Dreher et al. 2011, 1951).

Consensus among academics and policy makers is that the recipient countries institutions and good governance are decisive for sustainable growth and poverty reduction. Institutions is conventionally defined as legal rules and norms that are robust, properly enforced, and rational-legally administered by a bureaucracy. These views also tend to promote for the recipient countries economic systems open to investment and trade (Dollar and Levin 2006, 2036). Western assumptions like this often entail the narrative that underdevelopment is due to nonfriendly economic systems and lack of technological know-how. Assuming this is true, then financial aid is supposedly what these environments need. According to Morgenthau, the established consensus has been that what boosted economic development for the west was capital formation and incentives for technical innovation, and the logic that follows this model should work for underdeveloped countries today as well (Morgenthau 1962, 304-305).

There have been instances of European-American institutional norms and frameworks being exported and successfully emulated elsewhere, exemplified by Japan during its modernization period during 19th century. This real or imagined success formula had a brief resurgence during the 1990s (Mungiu-Pippidi 2015, 98). In recipient countries, the challenges of corruption and poor governance as a curb on development gained more attention during the assuaging end of cold war. Regimes opened and democratization movements in the developing world made these issues safer to put on the agenda (Cremer 2008, 5). On the part of the donor countries, the

problem was never actually taken seriously until the World Bank started to conduct thorough research on the matter. It coincided with the western euphoria after the fall of the Berlin Wall, and a following uncritical belief in the international community's power as an external force to influence regimes by applying and exporting Western governance principles. Instruments and models to fight corruption and promote good governance were refined and adopted and sought implemented by the major donors. But even though the understandings of the institutional sources of corruption became more sophisticated, the solutions implemented was neoliberal and Anglo-American one-size-fits all models assumed universally applicable (Mungiu-Pippidi 2015, 98). Therefore, a practice gradually emerged where development assistance allocation was earmarked with conditions guided by such principles. Recipients showing merit in this regard are considered not only countries with the correct policies, but also safe and predicable economic environments.

The concept of merit, what is here understood as "conditionality", is often assessed in terms of benchmarks under quality of institutions, government, and economic policies in line with the Washington consensus. According to this logic, only the countries accomplishing these benchmarks and goals are eligible to receiving DAC development assistance because aid supposedly has better effects the better the institutional environment (Dreher et al. 2013, 405). With OECD-DAC this usually means good governance or anti-corruption measures (Hoeffler and Outram 2011, 241).

The idea that the effectiveness of foreign aid is dependent on the quality of institutions in the recipient country can be traced back to empirical evidence as far back as the success of the Marshall Plan (Dollar and Levin 2006, 2035). But while the Marshall plan is a success story, the recipients then were industrialized countries and institutionally well-working systems incapacitated by the Second World War. Whereas the current recipients of aid are underdeveloped and primary export oriented. They lack this institutional baseline (Morgenthau 1962, 304). By requiring prerequisites of institutional reform before the commitment of aid, like supporting establishment of anti-corruption commissions and audit agencies (Kolstad, Wiig and Williams 2008, 26), the donor incentivizes the recipient governments to improve governance and democracy if they wish to receive financial assistance. Conditionality, what Li define as "the exercise of leverage by donors who attach conditions of democratic governance to the disbursement of aid" have by its proponents been argued as the most important instrument that can give foreign aid a democratizing effect on recipient countries (Li 2017, 202).

Good institutions and good governance are important factors for the provision and effectiveness of development assistance because they demonstrate that the recipient country uses the financial resources wisely, in for example infrastructure and education, and signals to the donor that their foreign aid is not wasted. However, countries with good institutions, some argue, are in less need of such assistance because their performance suggests they have access to international capital markets and poverty is less concentrated in such middle-income countries (Dollar and Levin 2006, 2036). This could raise a selection problem of whether foreign aid is best allocated to countries with good governance or the poorest ones where the need for financial assistance is the greatest. More positively viewed; conditionality solves principal-agent problems if the preference of the recipient government is not in line with the benchmarks deemed necessary by the donor country. Nevertheless, it forces the recipients to reform if government need foreign aid. It can also be useful to the recipient country in the long term because it signals that it is a stable and predictable policy environment with a regime willing to reform, a government safe to establish diplomatic connections with; and given time a safe place to invest in (Li 2017, 203). One could also make the argument that there's an overlapping aspect with recipient need, in that ensuring good institutions, good governance, and civilian and democratic elected government prevents a country from spiraling into authoritarianism and chaos. This is akin to what Morgenthau called "subsistence foreign aid", that is development assistance intended to prevent breakdown of government or sustain the status quo, especially if the alternative regime is unacceptable (Morgenthau 1962, 302). The World Bank have for example terminated aid projects in countries like Sudan, Nigeria, and DR Congo as a reaction to rising corruption levels (Cremer 2008, 122). However, there is some debate if even the OECD donors actually does reward good governance or if it is only rhetoric, as several corrupt countries have received DAC development assistance (Dreher et al. 2011, 1951).

The concept of conditionality is central when discussing Chinese aid, because an important critique is that China on the face of it does not apply conditionalities in their foreign aid program. Instead of promoting principles of institutional reform, China earmarks their aid for infrastructure projects like railways, roads, hospitals, water irrigation, and power and electricity, or with conditions that Chinese workers build the projects or that Chinese companies are the main implementers (Yushi et al. 2020, 5). China imposes no clear demands for potential recipients, with one exception of its One China Policy.

China does require that the recipient government honor the conditionality in not recognizing Taiwan as an independent entity from China. This is known as the One China Policy. China considers Taiwan a breakaway province and any formal diplomatic recognition of the island as an independent state is unacceptable. But apart from the One China policy, there are no demands for good governance, democracy or human rights for bilateral cooperation (Alden 2005, 153; Tull 2006, 463). One would expect a difference between Chinese and Western allocation in this respect because of Chinas non-interference policy and Western conditionality principles when allocating foreign aid.

2.3. Donor self-interest – aid by opportunism

Donor country self-interest is a third school of thought. Also called "realist paradigm", this theoretical perspective became popular in the cold war era. In the aid literature, foreign aid allocation is recognized as a tool a powerful country can apply to advance their interest, even if it comes at the expense of the official altruistic motivation of improving impoverished areas. It assumes that the primary motivation a donor country has for allocation of foreign aid always is with strategic self-interest in mind (McKinlay and Little 1977, 61; Markovtis, Strange and Tingley 2019, 588; Schraeder, Hook and Taylor 1998, 297). During the height of the Cold War, it became apparent that donor countries, exemplified by the two superpowers the United States and the Soviet Union, used their foreign aid programs opportunistically in order to advance their own geopolitical interest, while the perceived need of the recipient countries took a backseat (Broich 2017, 182; McKinlay and Little 1977, 59). Historically, it has also been a common feature of geopolitics and diplomacy. In international relations, it is an observance of recognizing concessional gifts between states as an old expression of alliance, reciprocity, way of forging long-lasting political relationships (Markovtis, Strange and Tingley 2019, 594). It was during 1970s the phenomenon received a surge in scholarly attention. A lot of research has concluded that donor country self-interest is the most important factor, even to such an extent where it could undermine developmental goals (Hoeffler and Outram 2011, 237).

The self-interest models assume donors allocate foreign aid based on the recipient's economic, political, and strategic importance to the donor in question. The assumption is that foreign aid is merely an instrument for the powerful donor country to exert its foreign policy influence. It is therefore aid motivated on the basis of self-interest (McGillivray and White 1993, 11). Beyond explaining self-interest from the military alliance perspective, the so called neorealists started to incorporate the recipient's economic potential into their models when explaining why

a donor would benefit from allocating foreign aid to developing countries (Schraeder, Hook and Taylor 1998, 298). Aid can be used to open economic markets in the recipient country for enterprises in the donor country. It implies economic interest on the part of the donor country towards the recipient country because it enables firms' access to the markets in the recipient country (Markovtis, Strange and Tingley 2019, 590; Yushi et al. 2020, 7). If the case where one assumes the donor country was to "maximize the developmental returns" from their foreign aid disbursements, the assumption further would be that they also would favor countries with a better economic performance where the donor country can "absorb" the returns (Maizels and Nissanke 1984, 884; McGillivray and White 1993, 7).

Self-interest is linked to varieties of goals the donor might have. From one perspective, foreign aid can have a positive influence on the favorability of the donor country from the recipient countries point of view. Foreign aid buys a lot of goodwill, and the donor country will allocate aid towards the countries with the more similar policies or similar positions. Foreign aid can also be a tool for a donor country to improve its own geopolitical position (Berthélemy 2006a, 183). There is now a consensus that all donors of development assistance, DAC and non-DAC, also allocate foreign aid motivated by their strategic self-interest, for example to stimulate and promote bilateral trade between the countries and/or reward their political allies. Quite a few studies have found support for this argument (Dreher et al. 2013, 405; McKinlay and Little 1977, 59; Morgan 2018, 210). Donors would want to strengthen their economic security by providing development assistance to the stronger economies (or potential future stronger economies) in a region. One understanding posit that foreign aid is supposed to improve the economic situation of the donor country by promoting trade and investment with the recipient country (Schraeder, Hook and Taylor 1998, 304).

Strengthening economic partnership, energy security, and stimulation of trade relations are often cited motivations for non-DAC donors as well. China has often been deemed the "chief villain" of non-altruistic donors only motivated by self-interest (Dreher et al. 2013, 405). But a lot of the earlier research in the 'aid allocation'-literature has found quite a lot of the variation in this regard. It has typically been found that major powers like The United States favor oil-rich countries in the Middle East; Japan favors commercial interests for access to markets; France has sometimes prioritized their former colonies; while the Nordic donors have been more inclined to allocate flows based on recipient need like poverty (Kolstad, Wiig and Williams 2008, 17; Kragelund 2008, 577). Criticism of the West during the Cold War was generally that the priority was on skewed on stabilizing governments favorable to the

American-led order as opposed to the Soviet Union, and these geopolitical priorities trumped the meritocratic considerations like human rights and institutional development and recipient need like poverty (Dunning 2004, 412).

3. China – among emerging donors

These three preceding perspectives have recurred in several studies on foreign aid allocation for the past twenty-five years. It is only recently that emerging donors have been seriously investigated in this respect. This gap exists because they have not been legitimately considered traditional donors of foreign aid and because data more often than not is lacking. Part of the legitimacy of the DAC system is transparency of disbursements, that all donors report their developmental assistance in accordance with the standards agreed upon (Gulrajani and Swiss 2019, 355). These standards do not apply to emerging donor countries for the most part, however. The reactions emerging donors of foreign aid have received from western actors has been confrontational. They are often viewed with suspicion and condemnation by traditional donors, being perceived as circumventing the efforts of the current Western development assistance regime. But among the recipient countries, their reputation is often much better. There are reasons why the emerging donors are ascendant and have increasingly gained legitimacy over the years.

3.1. Emerging donors lack of political conditionalities

As mentioned, the DAC foreign aid regime is characterized by conditionalities for aid. Recipients therefore need to reform and improve their institutions in order to be eligible for assistance. What sets emerging donors apart is that they impose no such standards and are therefore viewed as ignorant of the conditionalities purpose. According to some authors and governments, emerging donors deliberately target autocratic, oil rich client states with gross records on human rights, accountability, democracy, and good governance (Broich 2017, 182). This is what the conventional literature claims, not necessarily what is the truth. Nonetheless, the concern of DAC is that conditionalities as an incentive dissipate if there is an alternative source of foreign aid with no strings attached. The cost for a recipient country of receiving aid from an emerging donor is much lower for an autocracy or poorly governed state when there are no demands for reform or improving conditions. Some research partly supports this concern.

Several studies have found that conditionality worked after the Cold War after ideological motivations for foreign aid disappeared (Li 2017, 202). Dunning (2004) that found foreign aid with conditionalities was effective only during the early post-Cold War years. Major donors would not risk the cost of losing important political relationships, even if the recipients were autocratic and repressive, because these clients might otherwise get closer to competing donors. In the short period after the Cold War the relationship between development assistance and democracy in Africa was positive (Dunning 2004, 410). The positive effect of conditionalities was therefore period-dependent in that no rivaling geopolitical donors offered separate viable alternatives for a source of assistance, in the immediate aftermath of the demise of the Soviet Union. Li (2017) found that aid with tied conditionalities to Africa only works when African countries does not have an alternative source of aid. When alternative sources of assistance are not tied to demands for reform, the effects the OECD desires for good governance and democracy does not appear to bear fruit. In other words, conditionality does not appear to work when there are alternative sources of aid with no strings attached available (Li 2017, 217). But decades after the Cold War, there are today alternative sources of foreign aid from several emerging donors that are less rigid than the DAC programs.

Countries categorized as emerging donors are non-DAC members and usually include Russia, India, Iran, Saudi Arabia, Qatar, and the United Arab Emirates. Emerging donors are often accused of attempting to circumvent the DAC development assistance regime. But when this system was established by the OECD, these "new" donors' countries were not invited to stipulate and define the playing field. Circumvention for some might therefore be enabled industrializing countries exercising foreign policy for others. But the donor that has sparked most concern is China. The Chinese foreign aid program imposes no conditionalities of institutional or democratic improvement and is guided by a principle of non-interference. By emphasizing non-interference, the Chinese might have created a different demand for foreign for recipient countries that want sovereignty from external conditionalities, and who resent fiscal transparency doctrines the OECD have required for decades (Tan-Mullins, Mohan and Power 2010, 876). And while the DAC in recent years have put increased emphasis social and institutional infrastructure, emerging donors like China have been more engaged towards physical infrastructure like improvement of roads and railways and technical improvement of the production sectors in the developing countries (Dreher et al 2013, 408). They therefore fill important gaps left out by the DAC donors and implementation of projects are less hindered

by bureaucratic red tape. This alternative aid regime has by several recipients been perceived as more efficient. The problematic consequences present themselves when this the alternative source of foreign aid does not require any conditionalities or incentives for reform. Simply the possibility of receiving Chinese foreign aid as an alternative to Western aid, associated with administratively costly reforms, is by this understanding detrimental for the incentives to improve governance and democracy in developing countries (Li 2017, 202).
From some African countries' perspectives, China is a reliable donor country that will not interfere in their internal affairs (Mohan and Power 2008, 31).

3.2. Frustration with the DAC regime

But why have DAC conditionalities become unpopular while the supply of alternative sources of aid have risen? The rise of new donor countries can be partly attributed to the waning legitimacy of the contemporary foreign aid regime, spearheaded by OECD-DAC regime. The system of development assistance has since the turn of the millennium been lamented for being far too complex, rigidly bureaucratic, overtly fragmented, and hampered by coordination problems between bilateral and multilateral donors (Kragelund 2008, 556). There have been warning signs of growing disillusionment toward the traditional donor countries and particularly the aid for conditionality system. For instance, improving institutional quality as a condition has been criticized. One-size fits all solutions based on vague Western standards of "deviation from the norm" in order to solve developmental issues like corruption are rarely adjusted to the specific political and cultural context (Cremer 2008, 58; Mungiu-Pippidi 2015, 208). State and informal institutions are "sticky", they are hard to change, and often institutional reform combating corruption has proved trickier in the private sector than in government (Kolstad, Wiig and Williams 2008, 23). Central actors might not have any incentive for institutional rules to change. If costly reforms imposed do not work, then conditionalities can be perceived as counterproductive to the purposes of development.

Frustratingly, DAC donor counties have also shifted priorities on which type of conditionalities they impose. They promoted fiscal adjustment and stabilization programs in the 1980s but changed towards institutional building in the 1990s (Tan-Mullins, Mohan and Power 2010, 860; Woods 2008, 1217). Developing countries are often required to continuously show measurable results. Many recipients resent the conditionality principles of the west as rigid and view them as infringements of their sovereignty. The OECD doctrines have been criticized for of having a Washington consensus baseline that paternalistically dictate how developing

countries should govern (Dreher et al. 2011, 1951). Academics have also commented. Paul Collier insisted that conditionalities only worsen governance and accountability because the transfer of sovereignty, and by implication responsibility, does not incentivize the governments in their own terms to develop political processes that reward compliance and punish nonconformity with institutional rules (Collier 1999, 319). Conditionalities, from the deeply critical view, deny African countries agency and self-determination. In addition, the evidence that DAC conditionality actually fulfills its predicted effects of improved democracy and institutions are mixed. Some evidence also suggests their implementation of the 2005 Paris Declaration on Aid Effectiveness was more rosy rhetoric than actual improvement (Dreher et al 2013, 410).

Rising skepticism in Africa to the traditional DAC aid is associated with weariness of such rigid conditionalities resulting in slow bureaucratic processes pre-aid commitment. From this perspective, the attractiveness of alternative emerging donor offers makes sense. The DAC inability to adapt accordingly have exacerbated this disillusionment (Woods 2008, 1220). Furthermore, evidence also suggest that traditional donors have allocated aid based on strategic self-interest as well. They are guilty of the exact same opportunism emerging donors are accused of. During the Cold War, western donors' allocation even largely resembles the allocation of emerging donors. It was self-interest-based skewed towards the infrastructure and natural resource procurement sectors (Kragelund 2008, 579; Martuscelli 2020, 298). Even though emerging donors are deemed to have changed the aid game, the presence of alternative donors of foreign aid is nothing new. China has a long history of aiding the developing world and Africa.

3.3. Chinese aid is not new

China is hardly a "new" or "emerging" donor. During the Ming dynasty China supplied a medieval form of foreign aid to its allies to maintain regional stability through the tributary system (Markovtis, Strange and Tingley 2019, 595), and they have assisted other countries for decades since the Peoples Republic was proclaimed and formally established in 1949. At the offset this started as an ideologically motivated form of foreign aid to spark revolution in the recipient countries and promote international communism. But this gradually changed into the pragmatic aid program known today.

3.3.1. Ideologically driven foreign aid

The assistance China provided used to be based on ideological kinship but is today balanced on pragmatism. But China does have a history of applying developmental finance to buy political influence and expand its sphere of influence. During the Cold War, the Chinese were very generous in aid disbursements. The Chinese offered grants and interest rate-free loans (DiLorenzo and Cheng 2019, 125; Tan-Mullins, Mohan and Power 2010, 863). Chinese foreign aid to Africa was characteristically "prestige aid" projects (Morgenthau 1962, 303). Large-scale construction projects like football stadiums, foreign ministry buildings, and railroads served as spectacular displays of symbolic diplomacy. A famous example from the 1970s is the building and loan-finance of the TARZA railroad, which connected to the then capital of Tanzania, Dar es Salaam, to Kapiri Mposhi in Zambia (Alden 2005, 150; Morgan and Zheng 2019, 1291). Some empirical evidence suggests that the bonds formed between China and African countries during the Mao era still affects the aid allocation pattern today. Morgan found that Chinese foreign aid was also allocated to African countries with longer traditions of cooperation with China, and flows would be biased toward these countries, particularly in the sectors education, health, transport, water irrigation, and agriculture (Morgan 2018, 230). Since the Peoples Republics inception in 1949, developmental aid was one of Chinas primary foreign policy instruments in its relation to developing countries. But the allocation was biased in favor of like-minded socialist friendly regimes (Kragelund 2008, 571; Strange 2019, 265).

3.3.2. Paradigm shift

China tended to allocate less aid to countries aligned with the United States, but this changed, after 1971 when they were fully incorporated into the international community. With the Sino-Soviet split in the 1960s, US détente policies, and Chinas welcoming into the UN, ideologically driven selectivity for aid was increasingly considered obsolete by the Politburo. The pool of potential African recipients became larger (Morgan 2018, 222). But overall, the generosity of the Chinese aid levels in the form of grants and favorable loans was not hugely affected, because they competed with the Soviet Union for favorability in developing countries (Kragelund 2008, 571). In the 1980s, there was a paradigm shift that can partly be explained by the improving relations with the United States and the Soviet Union resulting in de-escalation of proxy support. Chinese development assistance also gradually seized as it became apparent that the cost-benefit ratio was neither fiscally responsible nor sustainable. Thus came a paradigm shift in Chinese development assistance. Instead of supporting socialist regimes, the primary intent was to stimulate Chinese economic interests. In 1980 the Central Committee

of the Communist Party (CCP) central committee decreed that foreign aid would be selectively targeted to recipients based on the benefit it would give China (Morgan and Zheng 2019, 1291; Strange 2019, 267).

3.3.3. The end of the Cold War and go global policy

The good relations China had built with African countries during the Cold War and proved to be useful in the 1990s in the wake of the Tiananmen square massacre. China became isolated from the international community and condemned by the West but found maintained support among several African countries (Kragelund 2008, 572; Strange 2019, 268). Several African leaders refrained from condemning the Chinese government during the Tiananmen square uprisings and supported China amidst Western condemnation. China also received support from African nations in the effort to marginalize Taiwanese entry into the international community, and this has been an important factor for Chinese aid polices in the region (Taylor 2006, 939). China has gained support in several developing countries for its 'One China policy', an effort to exclude Taiwan from full access in the international community by providing generously development assistance and fostering good relationships with African countries (Broich 2017, 183). Support has also manifested itself into fruition for China in the UN. African countries have supported blocking UN resolutions in condemning Chinese human rights abuses, which for instances helped China fend off critics when they amassed international support for Beijing's bid to host the 2008 summer Olympics (Alden 2005, 153).

The larger shift was during the 1990s when China initiated its 'go out policy'. Chinese firms and state-owned enterprises (SOEs) entered African markets. It would be a joint and massive effort of strengthening the Chinese economy. During the 1990s grant like concessional projects decreased and commercial projects increased. It was during this period that the Chinese combined traditional aid strategies with investments and sectoral market-based financing (Morgan and Zheng 2019, 1292). At the dawn of the millennium, this 'go out policy' encouraged Chinese companies and enterprises to invest in foreign countries, provide technical assistance, enter into partnerships with companies and governments abroad and partake in aid projects that could help strengthening their competitive ability (Bader 2015b, 142; Brand, McEwen-Fial and Muno 2015, 16). 1994 was the year the Export Import Bank of China (China Eximbank) and China Developmental Bank (CBD) were established. Both are run by Chinas Ministry of Finance and among their responsibilities are providing concessional loans and commercial investments (Morgan and Zheng 2019, 1292). This package approach to aid and

economic cooperation as part of the 'go out policy' have been researched. Biggeri and Sanfilippo found that it was a complex interaction between FDI, foreign aid, and trade that were the main drivers for Chinese foreign policy activities in Africa. But they also found country characteristics like natural resource abundance as highly stimulating factors for attracting Chinese bilateral cooperation (Biggeri and Sanfilippo 2009, 46). The importance of natural resources cannot be understated, and it can be explained by the Chinese economies demand for petroleum fuels. China is in an energy transition period. The need to ensure energy security is not covered by the oil within China own borders. Oil imports is therefore sought in other countries (Broich 2017, 183). Access to natural resources is important to maintain sustainable growth for China because it allows them to compensate for domestic resource shortages (DiLorenzo and Cheng 2019, 129-130). A strong economy is among the Chinese leadership top priorities to keep the peace internally and suppress dissenters, and energy security is an important factor in order to attain that stability. To sustain the massive economic growth the Chinese economy has displayed over the last decades, petroleum and mineral resources have been deemed important for China to sustain this progress (Cheung et al. 2012, 217; Bader and Daxecker 2015, 777).

3.3.4. Chinese aid today

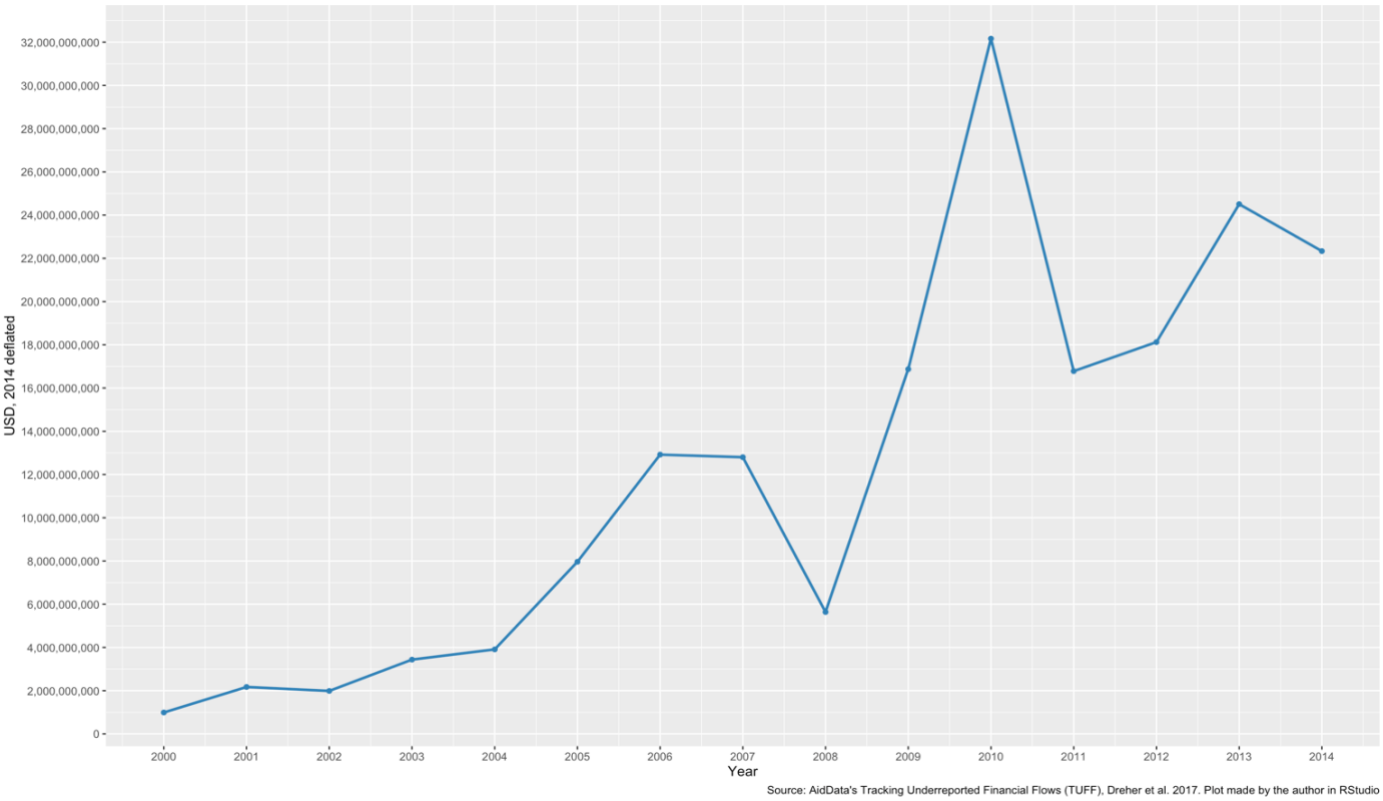
Chinese aid today is typically flexible and effectively implemented, which is a large part of the appeal of Chinese financial assistance for countries that desperately need it (Yushi et al. 2020, 4). Chinese aid consists of grants and interest rate-free loans and more concessional loans, market loans, export credits, state sponsored investments, or package proposals which bundle together all of them. The involved actors is often either the EximBank, CBD, or various Chinese state-owned enterprises (Kragelund 2008, 573; Morgan and Zheng 2019, 1295). Providing the recipients available loans with low interest rate is a central difference from DAC aid, which is often more grant based. DAC Loans are also usually customized to prevent too heavy debt burdens (Kragelund 2008, 577). The package approach to foreign aid has often been called "the Angola model". In these bundles of foreign direct investment (FDI), trade bargains, and low-interest rate loans, and construction of big and ambitious infrastructure projects, Chinese SOEs are the main implementers and Chinese labor is used. Therefore, the economic stimulus from these projects kicks back to the Chinese economy rather than to economy the recipient country (Bader and Daxecker 2015, 778; Bader 2015b, 142; Martuscelli 2020, 287). The infrastructure projects are often financed in that Chinese government collateralizes access to oil in return for the credit (Tan-Mullins, Mohan and Power 2010, 874). After signing of a

bilateral agreement, a sort of infrastructure-for-resources swap ensue, where the China EximBank provides loans and while the recipient government has security in its sales from primary commodities like oil. Concessional loans can have a repayment period to as much as 15 years which usually starts as soon as a project is in the beginning phase of being implemented, and often takes the form of export credits tied to rights of procurement of reproduces. But the Chinese government selects the implementing firms, which are usually Chinese. 'The Angola model' has only been implemented in Angola, Ghana, DR Congo, Nigeria, and Sudan (Kitano and Harada 2016, 1051; Martuscelli 2020, 294; Tan-Mullins, Mohan and Power 2010, 868). While the representativeness of this practice is uncertain, it implies a Chinese interest in oil in Africa. And for critics it is anecdotal evidence of Chinese self-interest guiding their foreign aid policy.

State and commercial interests in China have long considered Africa a region of vital interest because of the continent's vast natural resource endowments. While the interest in Africa used to be ideological in an effort to spread communism as a Cold War strategy, since the 1990s it has been commercial and what traditionally would be aid in the self-interest category. This means that the allocation basis has more emphasis on establishing links where natural resources are present and stimulant markets exist. (Taylor 2006, 944). China also imposes no conditionalities on governance or democracy and promote a practice of non-interference. The only clear Chinese conditionality is acceptance of the One China principle, requiring countries to not to recognize Taiwan as independent from mainland China (McCormick 2008, 82). As mentioned, Western donors have put an emphasis on good governance and democracy, while they have criticized the Chinese for ignoring such determinants as eligibility. They further accuse China of favoring countries with natural resources, especially petroleum endowments. The alleged 'aid for oil strategy' involves financial assistance being used to fund construction and infrastructure projects. In exchange China gets easier access to oil rents, while such deals also letting them circumvent the market price for crude oil (Zafar 2007, 120).

FIGURE 1 shows the evolution of amounts from all commitments of Chinese aid to Africa between 2000 to 2014 based on data from Dreher et al. (2017). This data will be discussed further in the data and empirical sections. As can be clearly seen in Figure 1, Chinese aid increases steadily from the early 2000s around the time Chinas 'Go out' policy was officially launched. Interestingly, the aid level drops dramatically in 2008, the year of the global financial crisis, before it reaches an absolute high in 2010.

FIGURE 1 - Chinese foregin aid to Africa in the period 2000-2014, USD 2014 deflated value amount by year
(sum of all ODA-like + OOF-like + Vague official projects per year)



Source: AidData's Tracking Underreported Financial Flows (TUFF), Dreher et al. 2017. Plot made by the author in RStudio

4. Chinese foreign aid – The problematic characteristics

4.1. Positive aspects

Before starting with the troubling characteristics and potential implications of Chinese foreign aid to Africa, it is worth to take note that it is not uniformly accepted that their activity is a bad thing. There are nuances to Chinese developmental policies. More positive interpretations assume that foreign aid from emerging donors will be better targeted to further development because many of these donors were recently recipients of foreign aid themselves. From experience, they should understand which sectors to prioritize when allocating developmental assistance. The recipient countries will, by this logic, be more trusting of donors that have shared their development experience (Dreher et al. 2011, 1951). This is also seen as a counterpoint to the traditional OECD-led aid regime. As discussed, the conditionalities particularly related to good governance imposed on developing countries has been perceived to be discriminatory and condescending. With the growing frustration of these rigid requirements, aid from alternative donors became increasingly attractive. Chinese aid without

tied conditionalities has therefore been viewed as a more flexible alternative requiring less institutional costs for the recipient governments (Kjøllesdal and Welle-Strand 2010, 4).

Chinese aid is also efficient and quickly implemented which is highly appealing compared to the DAC system which is increasingly viewed as too bureaucratic and slow in implementation. African leaders have indicated that the ability to alleviate poverty and promote development is hampered. When bureaucratic red tape prevents effective solutions to urgent problems (Li 2017, 207). No conditionalities means less rigidity and bureaucracy in loan repayment procedures and more efficient implementation of projects. This is therefore an important reason explaining why African countries can be attracted to bilateral agreements with China (Martuscelli 2020, 294). The Sierra Leone ambassador to China is often quoted in this regard, saying, "The Chinese just come and do it. They don't hold meetings about environmental impact assessments, human rights, bad governance and good governance. I'm not saying it's right, just that Chinese investments is succeeding because they don't set high benchmarks" (Taylor 2006, 946). Positively viewed then, the Chinese provide foreign aid in a way that enables African governments to build their institutions through infrastructure and markets, not through rigid rules of institutional benchmarks that have to be reached pre-commitment (Yushi et al. 2020, 5). Chinas defenders reject the notion that the emerging donor is sabotaging the effort to improve governance and democracy, but rather that they expose the aspirations of DACs conditionalities as unrealistic and the incentives for development unhelpful. Called a "a silent revolution", it has now come to be accepted that the emerging donor countries are in the global aid game to stay. They have gradually been gaining legitimacy at a time as the DAC regime is losing its monopoly on foreign aid (Gulrajani and Swiss 2019, 363; Woods 2008, 1221).

It might also be facile to assume counterproductive outcomes from Chinese influence. If one takes the perspective of modernization theory, then improvement of infrastructure, education, and health promises development no matter who provides it. A more vibrant market economy might ready a society for democratization in the long term. Improvement of infrastructure could improve human rights because there is a known link between increased state capacity and improvement of human rights (Bader 2015b, 4; Bader and Daxecker 2015, 777). Infrastructure can also have a positive effect on trade and the growth of the local economy. It increases mobility and reduces costs of transporting goods (Martuscelli 2020, 293). Some estimates have

found that Chinese aid and investments account for up to 20 % of reconstruction of the African infrastructure sector between 2008 and 2011.

The donor country China is not completely absent from contributing to the social sectors either. In their 2014 white paper, the Chinese government claims to prioritize education, building schools, and providing scholarships and ramped up free medical care for local populations in various countries (Brautigam 2011, 762; Morgan and Zheng 2019, 1293; White Paper 2014). And while China has focused a lot on infrastructure, the OECD for the past 30 years focused more on capacity building and social sectors (Martuscelli 2020, 294; Morgan and Zheng 2019, 1296). Even if Chinese development assistance is an instrument to access natural resources in a developing country, which has been the charge in Angola, the net effect could be positive as investments in roads, bridges, railways, power grids and hydropower is useful to reduce poverty and promote development (Bader and Daxecker 2015, 778).

4.2. Problematic characteristics

But why should Chinese foreign aid allocation be so detrimental compared to development assistance from the DAC countries? While Western donors have put emphasis on conditionalities for aid, the Chinese government have been criticized for ignoring such conditions. The conventional recipient merit perspective posits that DAC donor countries will allocate aid to reward developing countries that governs well institutionally, economically, and democratically, based on the assumptions that aid is more effective in such environments (Dreher and Fuchs 2015, 994). But as have now been discussed in some detail, China is often assumed to be allocating aid based on recipient self-interest.

4.2.1. Main characteristics of Chinese foreign aid

There are generally two characteristics scholars emphasize stand out with the Chinese foreign aid program. First, China adheres to a principle of non-interference in the recipient countries internal affairs. Second, the bilateral agreements are based on mutual benefit, which means that developmental projects also must be beneficial for the Chinese economy. (Kragelund 2008, 571).

The first characteristic, non-interference, is elaborated in the Chinese governments 2014 white paper. China explicitly stipulates that no political conditionalities are required in exchange for providing foreign assistance (White Paper 2014). The principle of noninterference has been the guiding principle of Chinese aid, thus a pronounced and official position of not interfering in

the internal affairs of other countries. McCormick pointed out that the hypothetical negative effects of Chinese aid with regard to governance is largely based on the assumption that having a partnership with the Chinese might encourage other types of institutional norms and will supersede the Western pressure for good governance (McCormick 2008, 87). Some African leaders might prefer Chinese cooperation exactly because of the lack of conditionalities (Tan-Mullins, Mohan and Power 2010, 875).

The noninterference policy has put China in closer cooperation with repressive and neopatrimonial regimes like the governments of Angola, DR Congo, Zimbabwe, and Sudan. Chinese steadfast assistance to these countries has by some scholars been mentioned as an explanation for these countries' refusal to reform (Martuscelli 2020, 288). But as mentioned, there is a condition China has been known to expect potential recipient's honor: the acceptance of the One China policy and requirement of no formal diplomatic connections to Taiwan (Bader 2015a, 25).

China has justified the non-interference policy as mutual respect based on "South-South cooperation". The touchstone of South-South cooperation has rather been horizontal cooperation among equals where mutual advantage and non-interference are the principal norms (Gulrajani and Swiss 2019, 353; de Renzio and Seifert 2014, 1861). It is framed as the antithesis to perceived paternalistic Western aid regime. The Chinese government explicitly states that their foreign aid program "adhere to the principles of (…) fully respecting their right to independently choosing their own paths and models of development" (White Paper 2014). It therefore does not matter whether if the recipient government is repressive or attained power through a coup. The non-interference doctrine is useful in this way, because the Chinese will always do official dealings with the winning coalitions in a state, regardless of whether they attained power through undemocratic methods (Bader 2015c, 14). The Chinese also often underscore a shared history with Africa, through historical Sino-African relations dating back centuries, as well as a shared history of Western mistreatment. Cooperation with Africa then, is what former Premier Zhou Enlai called 'the poor helping the poor' (Tan-Mullins, Mohan and Power 2010, 865-866).

The second major characteristic of Chinese foreign aid that has been deemed exploitative is the economic cooperation agreements with win-win implications. Foreign aid must favor China as much as (if not more than) the partnering recipient countries. China's strategy is reminiscent of how the Japanese used to apply its foreign with China as recipient. The Japanese aid practice was a 'quid pro quo approach' where large credits in Chinese goods and services generously

were offered, with the possibility of repayment through oil and natural resources (Bräutigam 2009, 307). Central to this are these so-called infrastructure-for-resources swap agreements mentioned earlier, exemplified by the Chinese assistance to Angola in the early 2000s. Part of such agreements was that Chinese SOEs would be awarded the lion share of construction and engineering contracts. In some cases, as much as 50% of procurement materials had to originate from China. Credit granted or loaned would kick back to the Chinese economy while very little spilled over to the recipient's domestic economy (Martuscelli 2020, 297; Tan-Mullins, Mohan and Power 2010, 869; Yushi et al. 2020, 7).

The often-cited horror case of these two characteristics is Angola. When the Angolan civil war ended in 2002, Western donors imposed conditionalities on the Angolan government, urging it to adopt an IMF staff-monitored programme (SMP) in order to demonstrate that the country implemented reforms and was becoming a safe environment for investment and trade. But the Chinese offered an alternative source of revenue for the Angolan government in the form of oil-backed credit lines with no such political strings attached. The dos Santos regime turned to the Chinese EximBank, which offered greater loans than the IMF with more generous repayment plans. But the agreement tied in commitments to the oil supply and future contracts. As a result, China received 10,000 barrels per day, and the Angolans received huge loans with over a decade to pay back with generous interest rates. In implementing and constructing huge and ambitious infrastructure projects, only 30% of contracts went to domestic firms while the rest was taken by Chinese contractors, thus Angolans benefited less from these Chinese funded projects (Tan-Mullins, Mohan and Power 2010, 868; Taylor 2006, 947).

Broadly speaking, it is mainly derived from these donor characteristics that form the Western assumptions that Chinese foreign aid being self-interest based that this thesis is going to scrutinize. China pays no heed to democracy or good governance. They consider aid as more economic cooperation intended to kick back to the Chinese economy rather than development assistance helping recipient countries become sustainable. Critics of the Chinese aid program therefore assume self-interest to guide the donors' intentions. Furthermore, there are several traits with African countries that makes financial assistance not taking account of institutional vulnerability, horizontal accountability, and rent seeking, potentially detrimental to long-term development. Institutional quality is particularly important if the recipient countries of interest are abundant with natural resources. And as have widely recognized among scholars, potential oil import is the most important energy source for China (Lee 2019, 577).

4.2.2. Chinese aid and the resource curse

There is an established link between management of natural resources, poor governance and corruption. These developmental quandaries have plagued several African countries for decades. The link between resource abundance and poor growth and governance, particularly in sub–Saharan Africa, is a fundamental issue in the resource curse literature. And it is important for the purposes of research because poor institutional functioning is prevalent across Africa (Martuscelli 2020, 291; Ross 2015, 250). The concern is that increased Chinese influence under the guise of non-interference will make some oil abundant countries vulnerable to rentierism and increased corruption. This would consequently undermine the Western strategy of improving conditions inhibiting development and self-sustaining growth (Zafar 2007, 106). There is of course an obvious hypocritical aspect of the most hardline Western rhetoric berating Chinese policies as "exploitative",

Corruption has widely been referred to as the exercise of public power for private gain. This definition is often reserved to cover corruption conducted by public officials, or people in government that abuse their positions for private gain (Cuervo-Cazurra 2006, 808). Countries dependent on resource extraction have often resulted in poor governance and authoritarian rule. In Sudan for instance, where Chinese firms have been quite involved, some analysts believe governance became worse because large-scale Chinese involvement incentivized the government only to enhance capacity in the natural resource extraction sectors, while neglecting to improve institutional quality or democratic principles (Kaplinsky et al. 2007, 41). An inherent fear of several OECD donor countries is that the absence of reform and improved polices with regard to governance and accountability institutions will incentivize the recipient countries to postpone needed reforms in these sectors. A patron state only interested in the resource extraction sectors risk leading to deteriorating institutions and is in the long term a setback for economic development. There is an inherent dependency and asymmetry in this situation. The dependency is unreciprocated in that the donor country can terminate the flows without direct costs, while termination might have large negative consequences for the recipient country. It also implies that the donor country has a degree of control over the recipient country (McKinlay and Little 1977, 63).

Pessimistically viewed, the nonrestrictive conditions of Chinese developmental assistance could be normalized. The incentive to improve functions like the state's infrastructural power,

ability to collect taxes, and control over corruption, will be weakened because natural resources might be a available and reliable source of revenue. Ruling elites have no reasons to improve these sectors, and patron states might indulge them further (Manning 2006, 381). The state is not funded by taxation made possible through institutions, but through oil rents. Government responsiveness to its citizens is poor because the state is not dependent on them as taxpayers (Bader and Daxecker 2015, 776). Only extractive institutions are developed. They risk being the only sectors susceptible to institutional learning and productivity. The incentives to diversify the economy are also weakened. This is an unfortunate ramification because growth in extractive sectors often does not link with growth in the local economy, only within the oil sectors (Kolstad, Wiig and Williams 2008, 20; Martuscelli 2020, 298). When the Chinese allocate foreign aid to such countries with without any conditions for improving governance and the functioning of institutions, it risks exacerbating trends associated with the resource curse thesis (Taylor 2006, 956). Even though the concept of the resource curse is contested, the existence of it seems only valid when natural resource abundance appears simultaneously with a country having low quality institutions. Social scientists in general share a consensus that natural resource abundance leads to more corruption and rent seeking (Brunnschweiler 2008, 404). If the institutions in a resource abundant country are deficient and weak, the discretion actors have over petroleum and mineral endowments is not confronted by fundamental checks and balances. Constraints designed to remove the incentives for patronage and rent-seeking are not present (Kolstad, Wiig and Williams 2008, 22).

Proponents of OECD-DAC and western aid policies would say conditionalities and requirements for institutional reform, control of corruption, and democratization is the antidote against such ramifications and that Chinas non- interference doctrine is negative in indulging it. In Baders (2015a) view, a principle of non-interference only holds while the political actors in the recipient country have equal access to political power. Non-interference policy in practice only favors actors that mange to monopolize power by repressive and authoritarian means (Bader 2015a, 25). Collier accused China of making African prospects for development worse with their blatant disregard for good governance and democracy, because the high prices for natural resource exports will result in the resource curse unless institutions are robust and constraining (Collier 2007, 86). But in the case for the poorest countries with petroleum endowments, they rarely are.

5. Theoretical expectations from a donor self-interest perspective

So far perspectives and concerns from scholars, pundits, and government spokespeople have been discussed. They underscore an inherent suspicion of Chinese intentions in Africa. Aptly put to its extreme; they are afraid that the Chinese seek to exploit resource rich countries in Africa. The assumption is that China is attempting gain a competitive advantage in order to attain this by also cultivating poorly governed regimes which possess oil. Based on what have been discussed on the characteristics of Chinese foreign aid, their justifications for non-interference, and the institutional vulnerability of developing countries possessing vast natural resource reserves, this section theoretically argues for which determinants with African recipients might attract a donor with opportunistic intentions.

The question of donor intent and motives from a self-interest perspective typically postulate that the presence of natural resources in a recipient country will draw an opportunistic donor country to allocate more there. As mentioned, China is in a phase of energy transition and need for foreign oil imports. Today, China along with the United States are the largest net importer of foreign oil in the world. Most of it comes from the Middle East or Africa (Lee 2019, 571). This is in line with the expectation several academics have raised when researching emerging donors. China's energy consumption has its origin mostly from foreign suppliers, which means China have to cultivate and maintain good bilateral relationships with countries rich on natural resources in order to sustain a healthy economy and ultimately political order (Lee 2019, 570). Some empirical evidence supports this. While researching outward foreign investments, Cheung et al. (2012) found that Chinese investors had a preference for targeting African countries with an abundance of oil and mineral resources. But this effect dwindled when traditional FDI determinants were introduced (2012, 217). Lee found that countries' oil production is positively associated with receiving Chinese bilateral partnerships and state visits (Lee 2019, 584). In this sense, energy security seems to influence Chinese official state visits. For the Chinese, these are strategic measures to protect their energy supply from market volatility and foreign rivals in African countries. Taking these facts into consideration, the expectation should be that China will allocate more towards countries with abundance of oil endowments. Even though aid is not directly tied to energy sectors, it will still foster a bilateral cooperation and good relationship between China and the oil producing country (Lee 2019, 573). Hence, attain Chinese self-interests.

5.1. DAC circumvention

As have been mentioned, China famously adheres to a policy of non-interference, rejecting "Western lectures about governance and human rights". (Dreher et al. 2011, 1951). No strings attached assistance from China can enable developing country governments to turn down Western aid with tied demands. It removes incentives to improve fiscal policy, governance, human rights, environmental protection, and democracy. With alternative assistance, the fear is that developing countries will neglect working towards improving their institutions like the World Bank and OECD have incentivized. Western donors perceive this supply of new emerging donor aid as circumvention of their developmental policies (Woods 2008, 1210-1211). China is accused of furthering its own economic self-interest and short-term profit at the cost of institutional development and sustainability. This is considered as undermining of imposing much needed reforms on illiberal and poorly governed regimes (Barma and Ratner 2006; Pehnelt 2007, 11). While the DAC conditionality regime dictating governance in developing countries has lost some credibility, the Chinese government claim they respect recipient's countries national sovereignty. But they are accused of causing detrimental effects on development by rejecting incentives with demands for institutional reform. Recipient governments that seek to maintain status quo will undoubtably find the alternative of no-strings-attached Chinese aid far more appealing than rigid conditional western aid (Li 2017, 206). The cynical view posits increased Chinese foreign aid allocation where democracy, governance and human rights are poor and that Chinese activity in these countries will lead to further deterioration (Dreher and Fuchs 2015, 995). But from the recipients' point of view, China will not meddle in their systems. Bilateral cooperation with the Chinese serves as an opportunity for increased trade and investment. And from China's point of view this can be a strategic way to gain international support from African countries in competition with western powers and they have easier access to the oil markets. As mentioned, justified as South-South cooperation, both parties are viewed as benefactors of this win-win foreign aid policy. Win-win approaches free from conditionalities is exemplified by Chinas alleged "aid for oil" strategies already mentioned, where foreign aid contributes in constructing large infrastructure projects in exchange for access to oil outputs (Alden 2005, 153; Kjøllesdal and Welle-Strand 2010, 7; McCormick 2008, 85).

But the fact that the Chinese are open to assist even in countries the West deem ineligible is a statement. Assuming the availability of alternative sources of foreign aid makes African countries refuse to comply with Western conditionalities and DAC aid consequently dissipate,

a reduction of DAC aid should mean an increase in Chinese aid. Competition between donors is not a new hypothesized argument. There have been instances in the past where China has been the favored partner over Western institutions like the World Bank. For instance, the Nigerian government preferred in 2006 cooperation with the Chinese government and Chinese engineering SOEs in rebuilding of their railway system (Chen 2018, 2; Li 2017, 207; Naím 2007, 96). Some analysts have therefore hypothesized that China will allocate to countries where DAC have withdrawn its activity. This could potentially be countries refusing to comply with conditionalities (Morgan 2018, 220). That is, when a regime is isolated from the DAC and they withdraw their assistance, one might expect the Chinese to allocate more to this country the following year to fill the vacuum and exploiting a window of opportunity when Western presence is weakened.

There is debate among scholars to what extent aid from one donor can affect allocation from another donor to the same recipient. Situations where donor countries are in competition with one another for influence can occur. An increase by one donor might make the competitor follows suit, or a decrease could signal a power vacuum ready to be filled (Davies and Klasen 2019, 252). This is reminiscent the so-called Bandwagon effect, in which any given donors aid allocation to a recipient country was thought to increase in function as response to other donors increasing aid to the same country. Such response aid is regarded as a self-interest factor (McGillivray and White 1993, 24). It is based on information learning among donors. Just the signal of more allocation to one particular recipient by certain donor countries might signal to other competing donor countries that allocating to this recipient could have profitable implications. Bandwagon effects where donors allocate more to other donors' "darlings" or "orphans", either based on good experience or the assumption of privately kept information that this recipient is a rational selection (Davies and Klasen 2019, 251). Assuming the Chinese foreign ministry seek to fill vacuums left by decreasing Western support in African countries, one could expect this to influence Chinese aid allocation. Davies and Klasen found that a country will increase its concessional aid by almost 0.46% if all other countries increase theirs by one percent a given year, particularly to so-called favored "recipient darlings". However, this effect was also bigger for the largest donor countries, suggesting that the more resourceful donors also possess the best information and does make such calculations to a larger extent (Davies and Klasen 2019, 271-272). If the assumption is that China seeks to fill vacuums left by DAC retreating its activity, whether because of not acting in line with conditionalities or need being perceived as reduced, a decrease in DAC aid should be responded by an increase in

Chinese aid. To answer whether China circumvent DAC strategy by allocating to countries the western countries have decreased its funding, the first hypothesis is:

H1 – Chinese aid increase after DAC assistance have decreased

Put another way, the hypothesis to be tested is therefore whether China allocate more where DAC have withdrawn and allocate less towards. If it does not affect foreign aid, this would it suggest that the Chinese view the OECDs efforts in Africa with indifference. If China allocates more, it might be an indication of the China aim to fill the power vacuum.

5.2. Rogue aid, governance, and special preferences for cooperation

As have been discussed in detail by now, the problem with Chinese aid to developing countries is widely considered to be that the lack of conditionalities disincentivize recipient governments improvement of institutions and democracy. Their aid program supposedly does not aim to boost economic development in the recipient country, but rather stimulate the Chinese economy. But while this is viewed as undermining of the OECD strategy of development assistance, the more severe accusation is that China actually prefers poor governance and democracy in the recipient countries.

This is connected to the so called 'rogue aid' perspective. The suspicion is that China applies foreign aid as an instrument to strengthen autocracies and sabotage Western efforts of institution building and democratization in developing countries (Dreher et al. 2018, 185). China is also accused of targeting its foreign aid to resource cursed autocracies as means for easier access to natural resource exports. Foreign aid is posited to gain the allegiance of the recipient countries, and the fewer institutional checks in place the better. The Chinese supposedly then, prefer authoritarianism and actively counteract spreading of Western institutionalism and counteract democracy promotion (Naím 2007, 95).

The more conventional and nuanced views condemning Chinese activity in Africa, as discussed earlier, are more concerned with the way China disincentivizes African recipients to democratize and implement developmental policies. But the rogue aid perspective goes even further and accuses China of targeting and exploiting of authoritarian and corrupt states and actively disrupting the OECD-DAC agenda (Furuoka 2017, 378). Pehnelt concludes that China has gained access to markets and natural resource endowments in African countries partly by this deliberate strategy, fragile pariah states like Sudan and Angola (Pehnelt 2007, 10). If

countries find themselves isolated from the international community, as has occasionally been the case for recipients like Sudan, Zimbabwe, and Angola, their reliance on alternative donors might be substantial and the permissiveness in accommodating them lenient.

Critical views widely fearing Chinese intentions of promoting authoritarianism are only exacerbated by the fact that China is an autocracy and has both domestically and internationally counteracted democratic movements and institutions. Democracy is a rivaling axiom of governance. Some experts fear it could be rational for China to disrupt and sabotage the spread of liberal and democratic practices as democratization is viewed as an external threat to the Chinese order (Broich 2017, 182). Authoritarian regimes like China, by this understanding, have an incentive to support similarly governed states and prevent them from "falling into the democracy camp" (Brand, McEwen-Fial and Muno 2015, 8). There are also instances of China struggling to maintain control in African countries possessing democratic institutions, like stronger press freedom and vibrant civil society organizations like workers' rights unions (Michel 2008, 45). There have for example been instances of popular inputs toward governments in Zambia and Senegal in the form of protests and grass roots movements demanding regulation and oversight of Chinese projects. And closer to mainland China, Bader found that they were more successful influencing autocracies with a small ruling elite like Burma and Cambodia (Bader 2015b, 7). Some scholars further argue that geopolitical patrons will have an easier time bribing loyalty of autocratic regimes because the elites in these countries face less accountability and fewer checks and balances on their power than in democratic regimes. Powerful geopolitical patron states, like China and the United States, might have an incentive to support autocracies if a democratic transition could jeopardize an existing agreement between the respective countries. In that case, the durability of authoritarianism with few veto players and a limited decision echelon is desired for a continuation (Bader 2015a, 24). Democratization scholars call this external influence "black-knight support", where powerful counter-hegemonic actors, like Russia, China and Iran, use their substantial political, military, and economic leverage to take advantage of weaker states with aid dependent economies (Levitsky and Way 2010, 41). The external influence models, when applied to autocracies, suggest that autocrats use external linkages and rents to exert influence in other countries in order to strengthen their own position and regimes durability (Bader 2015a, 24).

Notwithstanding, Vanderhill, questions these assumptions because there is no evidence of the Chinese government actively supporting any coalition of autocrats seeking to seize power as part of their foreign policy strategy. The Chinese disregard for democracy and governance might consolidate authoritarian regimes, but their goal is access to energy resources like petroleum and minerals, not autocratization. The Chinese governments means might spread authoritarianism, but the ends are strictly economic. China is therefore not like Russia, Iran, and Venezuela, all of which do have policy of supporting authoritarianism as an effort to prevent the spread of democracy and US friendly regimes (Vanderhill 2013, 6). The active preference for autocracy seems only to be valid to China in regard to their neighboring countries. The most verbose contemporary actor in destabilizing aid is widely accepted to be Russia. Under Vladimir Putin, the Russians have particularly in eastern Europe provided technical assistance, monetary and material funding to insurgents, and support for opposition parties and pro-Russian groups (Markovtis, Strange and Tingley 2019, 609).

And even though there are examples of China promoting authoritarianism and actively counteract democracy in regimes of interest, this has mainly been the case with regard to Chinas neighboring countries. Closer to home, the Chinese government is more concerned with bordering countries democratic movements and spillover effects. That is particularly concerning to the autonomous regions of Tibet and Xinjiang, which are more threatening because of their substantial ethnic and religious minorities still opposed to the communist party (Kaestner 2010, 2). Today, the most infamous example of Chinese black knight support through foreign aid is the provision of substantial humanitarian assistance to North Korea. However, this maintenance of the status quo of this totalitarian regime is a measure to prevent mass starvation, state collapse and a mass exodus of refugees journeying to the border and entering Chinas north-east provinces Liaoning and Jilin (Markovtis, Strange and Tingley 2019, 605). This is a notable distinction from foreign aid provided to countries on the African continent, thousands of miles away. It is therefore unlikely that China will have a fierce preference of non-democracies over democracies in Africa.

There are however theoretical and empirical indications that certain determinants with non-democratic regimes could influence the aid allocation behavior, such as corruption. The widespread corruption in Africa has not discouraged Chinese investors from engaging in economic partnerships in several African countries while their western counterparts have been cautious in such unpredictable environments. This is according to surveys of Chinese commercial actors (Gu 2009, 578). Some researchers explain this with the smaller institutional

gap between African countries and China. Chinese state-owned enterprises (SOEs), which are the main implementers of foreign aid projects, have an easier time steering in such environments compared to Western actors (Ado and Su 2016, 49). Some schools of thought actually posit corruption as a positive mechanism in order to put "grease in the wheel of commerce". By this understanding, corruption facilitate transactions and businesses. It speeds up the processes by circumventing rigid bureaucratic checks and misguided regulation (Cuervo-Cazurra 2006, 808; Cremer 2008, 18).

Theories that postulate that corruption and bribery can speed up otherwise slow and inefficient bureaucratic processes are not new. Corruption, according to these theories speed up the decision processes reducing the costs of waiting periods and implementation of projects. Supposedly then, Chinese SOEs, directed by the Chinese government, face less difficulties in environments typically associated with poor institutions and patronage networks based on personal connections unconstrained by regulation is the norm. The Chinese should by this understanding have a preference for entering markets, investing and developing in less institutionally regulated regimes where trust is based on "who you know" rather than rational-legal institutional norms (Child and Rodrigues 2005, 406). The similarity of institutional environment is how scholars describe this. It is based on the concept of "psychic distance" between recipient and donor countries, that is the distance regarding language, culture, education, business practices, industrial development, and regulations, all of which may enable or constrain the transfer of information. Actors who are used to bribery and rent seeking have experience with conducting business in corrupt environments. They are used to paying bribes in order to secure permits and win contracts (Cuervo-Cazurra 2006, 811). And in fact, conventionally risky determinants like a high degree of corruption and societies weakness with respect to law and order have actually been found to encourage increasing Chinese investment to Africa (Cheung et al. 2012, 217). Overly corrupt business environments are not a particular high cost for them.

The rentier statehood of many African countries is familiar territory for Chinese SOEs and policymakers. Potential bilateral relationships can be mutually beneficial because the political culture is easily accommodated. In this sense, it's easy to promote sovereignty for countries where sovereignty and capacity is lacking to begin with. Institutional environments as such are exploitable. And where corruption is rampant and horizontal accountability is lacking, natural resource access can never be safe from rent-seeking. Taylor observed that the oil rich states

China are dealing with are not well functioning institutionally. Even though they can promote sovereignty and non-interference of the recipients' internal affairs, they can act relatively unimpeded in these countries (Taylor 2006, 955). Pehnelt therefore conclude that Chinas non-interference approach to developmental aid in Africa has given them a "historical comparative advantage" with rogue and isolated states western donors are reluctant to aid (Pehnelt 2007, 8-9). However, Dreher and Fuchs (2015), when investigating rogue aid, found that bilateral exports, Taiwan non-recognition and UN voting alignment were important factors for Chinese aid allocation between 1996 and 2006. What they did not find, was evidence that the Chinese were targeting autocracies or corrupt countries (Dreher and Fuchs 2015, 1019).

The rogue aid perspective has by many critics, perhaps not surprisingly, been deemed reductionistic and facile. But despite its pro-western bias, it is emblematic of a perception of Chinese foreign policy as aggressive and threatening to liberal democracy in the post-cold war era. The rogue aid proponents have been criticized for ignoring that many developing countries welcome Chinese foreign aid as a flexible alternative to the DAC aid programs. And as have been discussed, there are reasons to posit that further financing of in infrastructure and stimulation of the local markets promote modernization in the developing countries (Yushi et al. 2020, 2). Moreover, China was never a member of DAC and are therefore not bound to conduct foreign aid allocation in accordance with the OECD rules (Chahoud 2007, 2; Sears 2019, 137). Being a non-member, China is exempt from accede to the strict reporting system and standards DAC donors must satisfy. But non-members cannot be expected to conform to this regime. Emerging donors were never part of the process of establishing the existing development assistance system and were never included in the committee processes establishing it during its inception. The system is considered exclusive, and emerging donors have not been integrated and welcomed into it (Woods 2008, 1212).

The concern over supposed Chinese 'rogue aid' is not a new one. Such charges are reminiscent of fret reports of Chinese communist influence in the third world during the cold war (Strange 2019, 260). And oil dependent economies in the developing world supplying powerful donors is nothing new. It is a phenomenon that predates Chinas emergence as a major actor in Africa (Bader and Daxecker 2015, 774). Several Western countries (also meaning DAC members) have been accused of similar strategies. The United States has cultivated close relationships with several unsavory and repressive regimes in the Middle East to ensure its energy security (Lee 2019, 573). Pundits from the west should be aware of potential hypocrisy when condemning Chinese policies in the developing world. Donor countries like France and the

United States have supported with oil rich countries themselves, without taking democracy and human rights into account (Taylor 2006, 953). There are in fact few studies that have found a robust relationship between US developmental foreign policy and democracy promotion (Bader and Daxecker 2015, 779). Its support with arms and aid to Saudi Arabia is an infamous example. The hypocrisy of The United States and the European Union is certainly present, in that both these actors have provided aid to authoritarian regimes themselves (Bader 2015a, 23). France have provided massive foreign aid to several oil producing countries in Africa, particularly to its former colonies (Lee 2019, 574). French governments have in the past helped maintaining authoritarian regimes that support their geopolitical interest, like in Cameroon and Gabon during the 1990s and the 2000s by steadfast support for the ruling elites amid popular opposition protests (Levitsky and Way 2010, 258). There is therefore nothing spectacular in itself that China might apply its external assistance to oil rich countries or autocracies. Russia and Iran have strategically utilized such targeting, and the United States have favored autocratic powers they find geostrategically important for decades (Bader 2015b, 4).

But while cynical perspectives on Chinese intentions are rightly contested, it warrants further empirical investigation. The rogue aid perspective is often laid on Chinas door, but as Woods point out, there are scarce evidence to the allegations. Some evidence could even suggest positive effects of Chinese foreign aid, with higher growth rates, better terms of trade, and increased export volumes (Woods 2008, 1208). Also, while there is a Chinese demand for foreign suppliers of oil imports, it was during the 1990s China became a major net importer of oil. Given the fact that China has entered the global oil market only relatively recently, this assumed systematic dependence on the Chinese might not have fully been embedded in the global oil market (Bader and Daxecker 2015, 777). But derived from these debates and the fact that there are obstinate claims both from Western pundits and Chinese officials, the second hypothesis to be tested is:

H2 – Chinese aid allocation is increase toward countries with abundance of oil endowments

Oil abundance is tested with four different measures. This will be elaborated on later when discussing the data. A third expectation derived from the discussion, is that China could find poorly governed countries more manageable and more easily influenced.

Put another way, strong institutions in countries possessing large abundance of oil can have a mitigating effect on Chinese aid allocation. Therefore, the third hypothesis is:

H3 – Chinese aid allocation decrease if countries abundant on oil endowments also have strong institutional quality

The Chinese will by this expectation not allocate more where institutional quality is strong and prefer poorly governed states. If institutional quality had increased Chinese aid, one could interpret China as acting as a conventional donor country seeking economic partnerships in Africa, where effective institutions are a conduit and stimulant to increasing economic activity because it lowers uncertainty and raise predictability (Ross et al. 2019, 575). In this case, assuming the Chinese merely seek to enter the market of the recipient country, corruption would be viewed more conventionally as "sand in the wheels of commerce", scaring away implementing SOEs and government officials (Cuervo-Cazurra 2006, 808).

The three hypotheses are derived from the donor country self-interest perspective in the conventional aid literature discussed in detail. Expectations are also based on the vehement debate around the characteristics of Chinese foreign aid. Based on the three theoretical perspectives (recipient need, recipient merit, and donor country self-interest), the goal of this thesis empirical analysis is to make models with three blocks of variables based on the three schools of thought: recipient need, recipient merit, and donor self-interest. The hypotheses focus on the long debate of scholars and pundits alike postulating that Chinese foreign aid is being allocated to African countries based on self-interest. With respect to recipient merit, it is interesting if there is a difference between western and Chinese foreign aid in allocation to countries with good governance. Whether China disregard recipient need comparison would aim to find a difference in altruistic aspect of foreign aid between China and OECD countries.

The models therefore analyze three donors. With the most focus on China, models with the same assumptions are applied on foreign aid amounts from DAC countries in total and from the United States. Chinas foreign aid level is not substantially large compared to that of western donors (Bräutigam 2009, 307). Nevertheless, comparison is important in social science, and as will be discussed, the data applied is tailormade for comparing Chinese and Western flows. The three perspectives must be represented by variables corresponding to the concepts, but for the block measuring recipient merits (control of corruption) the idea is to interact this variable

with presence of oil abundance. As Schraeder, Hook and Taylor underscore, a common theme for aid allocation studies has been that competing paradigms dismiss alternative explanations and they recommend minimizing the competing perspectives in regression analysis (Schraeder, Hook and Taylor 1998, 299). But it is important to integrate several perspectives of explaining a phenomenon. If important explanatory variables based on central background insight are not included the robustness of cross-country statistical findings are insufficient (Kittel 2006, 651). As pointed out by McGillivray and White, donor country motives cannot be directly observed, but the means donors apply to pursue their motives can be. Explanatory models therefore mainly seek to explain characteristics with the developing country receiving the aid. The donor countries judge by these characteristics which developing countries they allocate their foreign aid toward (McGillivray and White 1993, 2-3). But before any empirical analysis, sufficient understanding of the phenomenon's complex nature has to be acquired. The concept of foreign aid needs to be clear.

6. Concepts, measures, and data

The large concept of foreign aid is vulnerable to validity issues. The concept of foreign aid has to be considered in relation to the operationalization and measurements the data apply to represent the phenomenon. A common definition of foreign aid is as development assistance. OECD-DAC defines this as Official Development Assistance (ODA), "flows of official financing to developing countries provided by official agencies which have a clear development or anti-poverty purpose with a grant element is at least 25%" (Lum et al. 2009, 1). ODA is most frequently used as the dependent variable because, broadly speaking, it is the decision variable for the donor (McGillivray and White 1993, 30). Therefore, the flow has to be a substantial subsidy from the government. This is also called a concessional flow. For non-concessional loans and grants like export credits, foreign direct investment or military aid, the OECD uses the term Other Official Flows (OOF), which have a grant element of less than 25% (Brautigam 2011, 204; OECD glossary). The OOF category was articulated exactly to differentiate the grey areas between concessional from quasi-concessional flows, that "are developmental in character", but fails to meet every ODA criterion (Oh 2020, 225).

This definition is narrow and is already in danger of excluding other activities China conducts in Africa that apart from the major OECD donors would be considered development assistance.

The Chinese aid program is today a mixed bag of several instruments, which for the Chinese, is considered aid but not necessarily in line with the DAC definitions (Strange 2019, 261). Many analysts therefore believe the actual number of Chinese development assistance is much larger, but due to the narrow and rigid OECD definition, what is actual aid is measured as foreign direct investment rather than ODAs. This is why the numbers at our disposal must be interpreted with caution, and its limitations have to be thoroughly discussed (Lum et al. 2009, 3). It is also important to distinguish between bilateral aid, between two countries, and multilateral aid, from international organizations like the World Bank. Parts of donor countries' aid budgets go to these multilateral agencies (Yushi et al. 2020, 6). This analysis is therefore clearly limited to bilateral aid and does not seek to establish generalizations about multilateral development assistance.

6.1. The difficulty of Chinese foreign aid as a concept

One problem is Western countries and China understand the concept of foreign aid inherently differently. The Chinese will, for example, count export credits as foreign aid. OECD-DAC will not. It is sometimes difficult to see the distinction between Chinese aid, trade, and FDI, and aid is for example channeled through Chinese corporations thus blurring the line between concessional program aid and investments the Chinese government might be involved in (Kragelund 2008, 573; Sears 2019, 138; Tan-Mullins, Mohan and Power 2010, 863).

Another problem in methodology that aims to resemble DAC standards is the large focus on monetary forms of foreign aid, like the value of grants and loans. However, many new donor countries have put a larger emphasis on non-monetary forms of foreign aid (Sears 2019, 141). The problem is that several aid projects with developmental intent from emerging donor countries are not registered in the data and not counted as foreign aid, which can be a problem. Medical aid and technical assistance for instance, would according to OECD definitions, not be counted as foreign aid. What constitutes as aid for the Chinese government is uncertain, but they certainly do not apply the same definitions as the OECD. What the OECD calls ODA is for the Chinese not distinguished from economic cooperation between Chinese firms and recipient firms, or some FDI projects, as long as the intent is to build projects in the receipt country (Tan-Mullins, Mohan and Power 2010, 863). China's bilateral aid program is not in line with the standards and requirements the World Bank operate by. It gets even more complicated given the secrecy of their foreign aid program (Woods 2008, 1211). Chinas aid is mostly non-concessional, at least if seen through the OECD definitions, aimed at generating

returns for the Chinese government (DiLorenzo and Cheng 2019, 125). However, the Chinese government does not publish aid data like the donors of DAC are committed to doing (Bader 2015b, 141). Therefore, comparing different donors is not unproblematic. Chinese aid activities are quite distinct from concepts of western aid, and inconsistency of what different donors understand as aid can make it hard to make comparisons (Markovtis, Strange and Tingley 2019, 611).

As will be discussed in the data part, scholars worry that a too broad concepts of Chinese foreign aid risk of including projects too liberally and ultimately leads to questionable conclusions. The warnings of Giovanni Sartori should be heeded. There are always tradeoffs when dealing with social phenomena between adding attributes to a concept which increase its validity but reduces the number observations applicable; and reducing attributes which increase the number of cases but increase the level of abstraction and risk of clouding the concepts internal validity. In the worst cases it can harm the credibility of a research design (Sartori 1970, 1041). Moving up the ladder of generality, which is done here with use of a wide definition of Chinese foreign assistance, extends membership for more cases. However, in doing so, the cases lumped together in the same category might be so different that the comparisons are imprecise from the outset that they are unfit to represent the actual phenomenon in question (Collier and Mahon 1993, 846). Lack of transparent measures makes the Chinese numbers difficult to compare with those of the OECD countries. Nevertheless, in the absence of official data, there are few other alternatives. China has not given out any official definitions of what their aid flows mean or how the Chinese government delineates what they define as foreign aid. The Chinese does not make a clear distinction between development assistance and economic activities like investments (de Renzio and Seifert 2014, 1866). There is always a danger of overestimation and underestimation, depending on the amount of undisclosed information that is counted as concessional and included in datasets. According to Bräutigam, Chinese government financed development assistance falls into the grey area OOF, which is primarily export credits. Chinas main instruments for ODA are grants or loans with generous or zero interest rates (Bräutigam 2011, 204-205).

Another problem is Chinese state-owned firms' involvement in the aid program which makes it hard to distinguish the official finance from private group finance, and since project level data is classified by the Chinese government, there is no way to know for certain (DiLorenzo and Cheng 2019, 136). Involved are also several government ministries, like the Department of Foreign Aid and the Department of Commerce, controlling the budgets. The State Council

and the Ministry of Finance are responsible for the allocation. Nevertheless, there is no uniform or transparent policy on reporting (Strange et al. 2017, 7; Tan-Mullins, Mohan and Power 2010, 864). Nevertheless, despite the involvement of several actors, the official policy is still very much under the control of the Chinese Communist Party (CCP) and the Politburo Standing Committee. Chinese companies might be the implementers in recipient countries, but they tend to ask the Chinese government for direction and instructions to act in accordance with Chinese foreign policy (Brand, McEwen-Fial and Muno 2015, 11-12).

The Chinese White Papers from 2011 and 2014 were the first pieces of official information on the Chinese foreign aid program (Kitano and Harada 2016, 1051). In the 2010-2012 period the Chinese government claim to have provided grants, interest-free loans, and concessional loans adding up to USD 14.41 billion. Activities mentioned are instruments like technical assistance, building materials, project aid, disaster relief humanitarian aid, medical assistance, and debt relief (White Paper 2014). But some scholars have speculated that the White papers only consider aid what originates from the Chinese Ministry of Commerce and the EximBank, leaving out development assistance from other government agencies (Kitano and Harada 2016, 1052). Other notable attempts to quantify the actual number and amount of Chinese aid include Kitano and Hadada's estimation, which combines concessional and non-concessional figures. They estimated the total Chinese foreign aid to be US$ 32.8 billion between 2011 and 2013 (Kitano and Harada 2016, 1057). Dreher et al. (2017), the data used by this paper, have also found an estimate for the Chinese aid level. The number for total Chinese foreign assistance between the years 2000 and 2014, to 140 countries across five different regions, also including commitments, amounts to US$ 877.65 billion in their data. The total number of projects amounts to 5,466 (Dreher et al. 2017). This figure has been accused of being inflated; later this will be touched upon in more detail.

6.1.1. Application of a liberal definition of foreign aid

To capture the extent of the Chinese involvement in Africa it is vital to include concessional and non-concessional Chinese aid flows. The baseline definition of foreign aid in this thesis is therefore the wide concept presented by Arvin and Lew, who broadly define foreign as "the transfer of financial or other resources from richer countries to poorer ones that is intended to serve, first and foremost, the recipients' interests, but which may also be used to pursue other objectives with political, strategic, or commercial imperatives" (Arvin and Lew 2015, 1). Most of China's development assistance does not fall under the OECD-ODA category, therefore any

analysis on Chines foreign aid must also include OOF-like flows (Broich 2017, 184). The imprecise measurement of Chinese foreign aid is a problem and relies on the number of projects completed in a specific year and particular country. When measuring Chinese foreign aid, only small portions can be considered under the DAC definition of development assistance, which is why a comparison between Chinese foreign aid and western foreign aid has been considered very complicated (de Renzio and Seifert 2014, 1866).

7. Data on Chinese aid

There are data concerns with Chinese foreign aid. The preceding section makes this clear. There have been some attempts to collect data on foreign aid from emerging donors not conducting official reporting. Seeing as donor governments rarely declassify information of their foreign aid programs, alternative solutions to data collection have been applied.

7.1. AidData's Tracking Underreported Financial Flows

The most promising dataset available is AidData's Tracking Underreported Financial Flows (TUFF), collected for the period between 2000 and 2014. This data allows the researcher to differentiate between the repertoire of economic activities China might apply. Flow types are classified as "ODA-like activities" (Official Development Assistance), "OOF-like activities" (Other Official Flows), and for grey areas "Vague official flows" (Strange et al. 2015). The TUFF-dataset uses the term ODA-like flows for all grants, technical assistance and scholarships, loans with large grant elements, debt relief, and military aid with developmental intent (Sears 2019, 139; Strange et al. 2017, 10-11). This categorization of different types of aid makes it possible for researchers to make a more accurate analysis of the data and more fruitful for comparisons with OECD donors. Until this data became available, the studies on Chinese foreign aid had been mostly case studies, with some exceptions.

The data collector used a media-based approach to compile Chinese aid projects. It is an open-source methodology. The data collection strategy and triangulation processes are open for scholars, researchers, journalists, and experts, to scrutinize and improve. It is supposed to be replicable (Strange et al. 2017, 4). Earlier attempts to assemble data on Chinese aid using media-based data collection methodologies are Lum et al. (2009) and Wolf, Wang and Warner (2013). They depended on individual sources, did not have a transparent open methodology

approach, and did not take the same care with triangulation processes and input from other sources (Strange et al. 2013). But like Strange et al. (2017), their definition of aid was lamented for being too liberal and inclusive, which is similar to the criticism that the data of Strange et al. (2017) have received. The collection itself has used sources like aid information administrative services in the recipient countries; Chinese embassies, consulates, and commercial foreign economic offices; IMF reports; and a media database that analyzed "approximately 33,000 media outlets worldwide in 23 languages". Such media-based approaches are popular in studies of events for which the data foundations are lacking. The raw data is usually relatively easy to acquire, and the replication methods are transparent, and with more sophisticated machine learning techniques, the field has been developing. Biases and miscounting occur with media approaches, as in any other data collection strategy. The danger of unstable data foundations increases as longer time periods are covered. Matching data sources is a popular solution to such issues, but if the variance between datasets is significantly large enough the flaws in the one dataset is reveal the flaws of the other (Woolley 2000, 171). Be that as it may, since there are no official numbers, there are only least-worst solutions to this estimation. However, media-based data methodology approaches as this have come under scrutiny.

Since the focus of the TUFF data from the onset was based on commitments rather than disbursements the danger of overvaluing aid ever present (Kitano and Harada 2016, 1052). Bräutigam has criticized this data with what she describes as a "dicey" methodology using media sources that can lead to faulty conclusions. She takes issue with AidData's TUFF-project not being based on expert opinions on China and that the assessment of what is aid must be done qualitatively by academics on the ground in Africa (Bräutigam 2013). The criticism is related to a central criticism of quantitative research; can it establish causal mechanisms, and does it fail to incorporate country-specific contextual factors? If so, it can skew the results. The main fallacy to avoid is to ontologically draw strong causally homogeneous inferences based on associations from this aggregated data. That is, one can be fairly certain that strong associations between variables are real and worthy of further research and investigation, but one also has to be extremely careful not to commit ecological fallacies. Moreover, this echoes what qualitative researchers have warned against regarding data on the macro level (Kittel 2006, 648). Proponents of case-study approaches to foreign aid would point out that information researchers get from observations of causal processes and mechanisms largely gained from intensive qualitative studies are superior to establishing sequential causal

inferences and depend less on assumptions of independence between units (Mahoney 2010, 124). However, notwithstanding these positivistic discussions' importance for this field and the social sciences in general, it is beyond the scope of this paper to assess which approach is "the best".

Bias in media sources can originate for two reasons. First, it can be an error with the sources themselves, mistakes or just misinformation. The researcher disseminating and collecting this information can ultimately do nothing about this on each individual source, but they can for the sake of transparency map out where the source is uncertain and make assessments on omission. This thesis has taken this into account and made such an assessment. Second, the coding process applied to systemize the data will have huge implications for the validity. One challenge with media sources across several different countries is that operational definitions of a concept will have contrasting meanings depending on where it is applied. While getting this right provides comparability, the issue of validity persists (Huxtable and Pevehouse 1996, 14-15; Sears 2019, 137). As mentioned, Bräutigam has criticized the TUFF data for both these pitfalls: for defining broad deals of bilateral economic cooperation as loans; and for overvaluing projects, specifically megadeals in Angola, Equatorial Guinea and Ghana among others. The crux of the critique is that applying far too liberal definitions of Chinese foreign aid, simply includes all activities where the Chinese government is involved (Bräutigam 2013). This predicament of overly wide definitions is common in the social sciences, as discussed in the concept part. All research designs need to keep issues like conceptual stretching in mind and be cautious in interpreting the results of empirical analysis. Nevertheless, since the Chinese do not define or understand aid the same way as the OECD, there are some justifications for operationalizing concepts liberally. Markovtis, Strange and Tingley recommended avoiding too narrow definitions of foreign aid allocation, and rather apply definitions that cover several sectors. They also warn against not including non-ODA flows, particularly from new donors, because not doing so risk not fully capturing full donor intentions (Markovtis, Strange and Tingley 2019, 612). Kragelund agrees with such perspectives, stressing that it is important to map out the characteristics of emerging donors aid allocation when comparing them to DAC donors, even if the definition of aid is wider than the OECD concepts. This is because it matters how it affects the recipients as much as aid from traditional donors (Kragelund 2008, 576-577).

The authors of the TUFF-data do try to increase the reliability of their data by matching them with other sources through a triangulation process that attempts to falsify the existence and

status of projects and ensure the accuracy of the data. This triangulation uses search engines; media reports; government documents; IMF, World Bank and African Devolvement Bank documents; and press briefings. This cross-referencing is useful to omit unreliable project sources, uncover major deviations from other sources, bridge gaps in the data, and to investigate each project deeper. There are also several computational filtering procedures and personal vetting processes to eliminate duplicate records and weed out miscategorizations. The TUFF-methodology track flows from Chinese agencies and ministries, provincial governments, embassies, the China Development Bank, EXIM Bank, state-owned commercial banks, and state-owned firms (Strange et al. 2017). This research design takes these concerns to account and is therefore relatively conservative when applying the data for research, which will be elaborated on later.

The project's funding has to originate from the government. The units of analysis are Chinese projects in African countries between the years 2000 and 2014. The data cover both Official Development Assistance (ODA) and Other Official Flows (OOF). So-called umbrella projects are projects where a bilateral agreement has been reached, but no funds have been transferred on the agreed-upon date and disbursement comes later. These projects have been excluded from the analysis because these flows often actually befall at a later point in time and might have been captured by coding as other registered projects earlier. For example, flows from large mega deals might not arrive at the original date agreed upon, and the actual disbursement of funds might arrive years later than the commitment (official agreement of aid). It can also be compartmentalized into several subprojects. This is potentially a problem since China has also been known to rehabilitate former abandoned projects later than the commitment agreements are planned (Kragelund 2008, 574). One project might therefore be captured several times. Their inclusion raises the danger of double-couniting (Strange et al. 2017, 5). Rehabilitated projects are hard to track. Umbrella projects are therefore not included in our data.

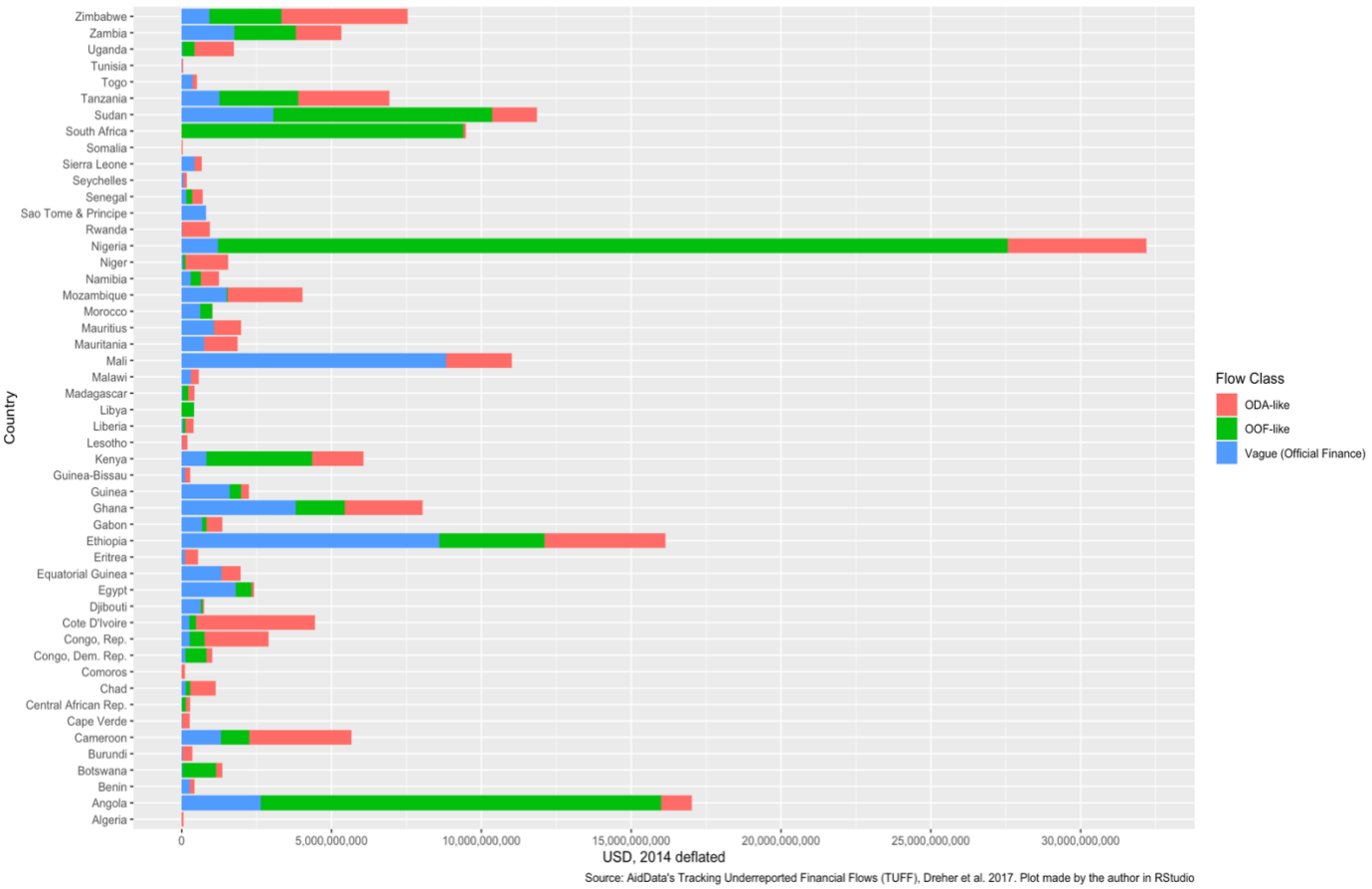
7.2. Case selection

The units of analysis are 52 African countries, and observations are country-years for their aid allocation. The data has been aggregated from 1372 Chinese developmental assistance projects in Africa after removing umbrella projects, and the remaining units marked not recommended for research. Some observations have multiple countries as recipients, which have been removed. Countries that do not show up in the TUFF data have been added in the linear probability model. These are Burkina Faso, Gambia, and Eswatini. They have been marked

with the value zero on the binary aid variable. That the aid from China was zero to these countries is considered a safe assumption, which will be touched upon later. This leaves the number of observations at 773 for the linear probability model and 471 country-years on the second step OLS models.

The data are commitments, excluding pledges and canceled or suspended projects. The flows of Chinese aid are put into amount of the deflated monetary equivalent value in 2014 US dollars, and each project has been aggregated for each year for each country. When specifying that the data are commitments, it means excluding pledges, canceled or suspended projects. For aggregation, it is therefore important that only the agreements that have reached the official commitment stage are counted, and not merely pledges that can be cancelled. That means only officially committed projects (usually pipelines), completed projects, or projects under implementation (Dreher et al. 2017, 2; Strange et al. 2017, 13). Cancelled, suspended, and the mentioned umbrella projects are excluded. In other words, this aggregated data is official commitment aid. In other words, this aggregated data is official commitment aid. The countries and the amount allocated to them is shown in Figure 2. There is a skewed distribution of aid values. As Figure 2 shows, while there is quite a variation in the distribution, Chinas aid is highly skewed toward a few countries. Since there is a skewed distribution of countries receiving large and smaller amounts of development assistance, the aid variable will have to be log-transformed to avoid disturbance from extreme values. In foreign aid studies, aid distribution might be highly skewed towards a few countries while others receive none.

FIGURE 2 - Chinese foregin aid to Africa 2000-2014, USD 2014 deflated value amount by countries
(sum of all ODA-like + OOF-like + Vague offical projects by country)



Source: AidData's Tracking Underreported Financial Flows (TUFF), Dreher et al. 2017. Plot made by the author in RStudio

It has been a dispute among researchers of whether aid commitments or disbursements are the most cautious and best way to measure the phenomenon. Disbursements are actual international transfers of financial resources from donor to recipient, while commitments are obligations expressed in an agreement concerning the funds intended for transfer from donor to the recipient (McGillivray and White 1993, 32). On the one hand, the aid commitment variable better reflects the donor decision. Commitments should represent donor decisions better because governments have direct control over their commitments, as opposed to disbursements which depend on the capacity and ability of the recipient country to administratively receive the money (Berthélemy 2006a, 180-181; Berthélemy and Tichit 2004, 244). Furthermore, commitments are usually not affected by shocks like natural disasters or political crisis. Disbursements can be affected by this. Often the donor will give more during disasters, or less in case of a political crisis if certain conditions are not sufficiently being met (McGillivray and White 1993, 33). But on the other hand, since commitments are plans for projects over multiple years, it is not safe to treat what happens a year isolated from what happens next year. Commitments are the donor committing financial support and the recipient committing to meet

certain demands, and the actual disbursement of flows is contingent on this (Davies and Klasen 2019, 256-257). For example, if a recipient hypothetically recognizes Taiwan post-commitment, it is safe to assume China would cancel all disbursements regardless of what the bilateral agreement originally entailed. However, if the interest is donor intent like in this thesis, it matters how much the donor measures its commitment to allocate in gross terms, which is what commitment is. Disbursements are the outcome of the commitment (McGillivray and White 1993, 32). Therefore, aid commitments are preferred for these purposes.

7.3. The dependent variable: Chinese foreign aid

The dependent variable for this analysis is therefore the amount of Chinese aid commitments, including ODA-like, OOF-like and vague official flows. ODA-like flows are those that would qualify as Official Development Assistance and must be official financing. It also has to be administered with the intent of promoting economic development in developing countries and its grant element has to be at least 25% concessional. This includes grants, technical assistance, interest-free loans, in-kind contributions of goods and services and debt relief (Strange et al. 2017, 10). In the strictest sense, this is the only variable one can call developmental aid, at least according to the OECD definitions. This echoes the concerns Bruätigam and others have raised about too inclusive concepts. However, if one wants to capture commercial as well as humanitarian aspects of Chinese financial assistance to Africa, the less concessional, and as we have seen, increasingly prevalent category of other official flows should also be included.

OOF-like flows are official finance that does not adequately meet the ODA criteria of concessionality. The grants to developing countries are mainly commercial rather than developmental. The grant element is less than 25%. This often includes export credits, acquisition by government institutions of securities, subsidies to the private sector, and funds that support private investment (Strange et al. 2017, 10).

The Chinese amount of aid flows have been deflated in constant US dollars with 2014 as the base year and has also been adjusted for local currency fluctuations and unstable exchange rates (Strange et al. 2017, 5). The amount has been displayed in thousands in order to make the estimates more interpretable and to counteract the problems caused by skewness. The variable being skewed means that Chinese foreign aid to Africa is very unbalanced in allocation toward recipients receiving large amounts of aid compared to those receiving nothing or very little. This is displayed in the Appendix B. A skewed value on the outcome variable is a huge problem for model assumptions and fitting and can lead to faulty results (Russell and Dean 2000, 167).

Therefore, the even bigger step to mitigate these issues of skewness on the dependent variable, the most appropriate solution is to transform it to not bias the slope but ensure a more normal distribution. This can reduce problems of heteroskedasticity and improve model fitting. The choice is to take the logarithmic function of the positive values of Chinese foreign aid, which assumes no values are zero or below (Stolzenberg 2004, 195). The interpretation of this variable is straightforward, where the logarithmic function only on Y can be read as Y's percentage increase by a one unit increase on X. This variable is for an elementary Ordinary Least Squares (OLS) regression analysis of the monetary amount of Chinese foreign aid run in three different models. But this is a two-step approach, so before the models on the positive amounts are put to use, a model with the binary value of aid-no aid is presented in a linear probability model (LPM).

In the first step of the empirical analysis, for the LPM-model Chinese aid will be coded as a binary variable, determining if China allocate aid or no aid a given year. This is the first step in the two-step approach of this analysis, following what Berthélemy (2006a) applied in respect to western countries. Some projects in TUFF from Dreher et al. (2017) have multiple sources and detailed information and are deemed recommended for research, but the monetary amount is missing. The coding rules decided by the author and applied assume the years not having registered any aid commitments by the TUFF data triangulation collection methodology are years with no aid allocation in reality as well. The assumption is that the data will have registered all commitments a given year, even though the USD amount is missing. For this binary aid variable, a year with no commitments recorded is coded as zero, while all years with a commitment registered are coded as 1.

For the second step-model with the positive aid amounts' variable, only the observations with a monetary amount a given year and that is marked as recommended for research are included. The years where no aid commitments have been recorded and the years where aid commitments *were* recorded but are missing USD amounts, are not coded as a year with zero amounts of aid. They are coded as a non-applicable (NA). Put simply, the commitments that have recorded aid amounts and are recommended for research are the units of analysis. The assumption made about the data is that non-recorded aid flows are missing at random, meaning that missing or non-missing values are mostly dependent on observed values of variables and not unobserved values on variables being missing (Sorens and Ruger 2012, 430). The probability that the value of an observation being missing is therefore assumed to only depend on available information.

If the values are missing at random it is relatively safe to code them as non-applicable. It is even safer in logistical models where the researcher can code observed cases as 1 and non-observed cases as a 0 (Gelman and Hill 2007, 530). This is what will be done for the first step in the linear probability model, while in the second step with series of OLS models the units of analysis are only positive aid amounts in USD. Non-recorded cases which could be considered zeros are coded as NA. The first step of the analysis aims to observe how the variable determines receiving aid or no aid at all. But this first step and the binary values of aid cannot say anything about how much aid is allocated in monetary amounts. To show the association between the amount of aid allocated and the independent variables selected for this analysis, the second step model with the positive aid amounts is presented.

7.4. The explanatory variables

The independent variables are selected to be representing the three major perspectives of donor allocation behavior that have been discussed in detail: recipient need, recipient merit and donor self-interest. The variables are categorized under these three perspectives, while it is essential to note potential overlaps between perspectives, particularly when it comes to China. Control of corruption and democracy are traditionally associated with recipient merit, as discussed, they are oft cited conditionalities recipients have to perform well under. But some theories assert it is in Chinas self-interest to be biased against good governance and democracy. There is a western bias in this research framework, but it systemizes these concepts adequality, so with this in mind the variables are summarized hereunder.

7.4.1. Variables representing donor self-interest

The first independent variable is for the first hypothesis (H1) and is *DAC aid three-year decrease*. For OECD-DAC aid the data has been excerpted from OECD statistics databank. For total aid commitments, the OECD database defines "A commitment is a firm written obligation by a government or official agency, backed by the appropriation or availability of the necessary funds, to provide resources of a specified amount under specified financial terms and conditions" and "are considered to be made at the date a loan or grant agreement is signed or the obligation is otherwise made known to the recipient" (OECD Glossary 2015, 340). This variable represents the response aid leading to H1, where a long-term decrease in development assistance from DAC should signal to Chinese policymakers that the west has been withdrawing and the recipient is open to receive aid from alternative donors. If China seeks to fill a potential power vacuum, more Chinese aid is expected to be allocated under long-term

DAC aid decrease. The variable DAC total aid commitment number is an aggregate measure of ODA-activities like grants, as well as OOF-activities like associated financing, technical cooperation, loans, and other long term capital investments. It is displayed in thousand and in constant USD with 2019 as the base year. This is the same measure that will be used as the dependent variable on analyzing DAC aid to Africa, and bilateral US aid to Africa, after analyzing the data from TUFF. The assumption is that three-year differences are sufficient and appropriate as a measure of whether DAC members are considerably long-term subsiding its activity in a country. To make the result more interpretable, DAC aid three-year difference is coded a as dummy variable. If DAC aid to a recipient shows a three-year decrease it is coded as 1, and if there is a positive change it is zero. Earlier studies like Morgan (2018) controlled for this with counting number of DAC projects, but this thesis choose to take account on the amounts of USD of DAC assistance instead of number of projects. It is aid commitments from OECD statistics that in the final part of the empirical analysis will be employed as the dependent variable on the same models applied to Chinese aid, although these will have its original continuous values and will be from the total of DAC countries and from the United States.

The second independent variable is oil abundance, and four different proxies have been used to represent it. One as the selected main explanatory variable, and three more as robustness checks. First, *Oil production* is the selected main measure to represent oil abundance in a country. It is measured as oil production in metric tons and is from the dataset of Michael Ross, although the raw data mainly originated from the US Geological Survey (USGS) and the World Bank. The weight varies depending on the quality of the crude oil. The data is mainly from the US Geological Survey (USGS) and the World Bank. Missing values for certain countries and years was filled from sources like the statistical yearbooks from the British Petroleum Company (BP) and the U.S. Energy Information Administration (EIA) (Ross and Mahdavi 2015). Because of this variable's inherent skewness, it has been transformed into a binary threshold variable. This will be elaborated further after all measures representing oil abundance have been presented and visualized in FIGURE 3 and FIGURE 4. This is the variable introduced in the first models and the only one subject to the interaction effect. The subsequent three measures for oil abundance will be used as robustness checks on Hypotheses 2.

The first alternative measure is *Crude oil reserves*, in billions and including lease condensate. The data originate from the EIA statistics. Reserves means that the oil is considered to be a

recoverable asset at the year recorded, therefore it is understood as a country's potential oil abundance in the future. China might cultivate a good relationship with countries that might become petrostates in the future (Lee 2019, 582) Crude oil (including lease condensate reserves) is defined as "A mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities" (EIA Glossary 2021). Crude oil can be refined into several petroleum products, like gasoline, diesel, jet fuel, propane, asphalt, and heating oil among many others. One issue related to endogeneity is that a country's energy production can be affected by increased Chinese influence. However, Lee points out that China is relatively new in the global energy market and gaining substantial influence is unlikely (2019, 582). Crude oil reserves is also transformed into a benchmarked variable with a threshold. This will be detailed further below.

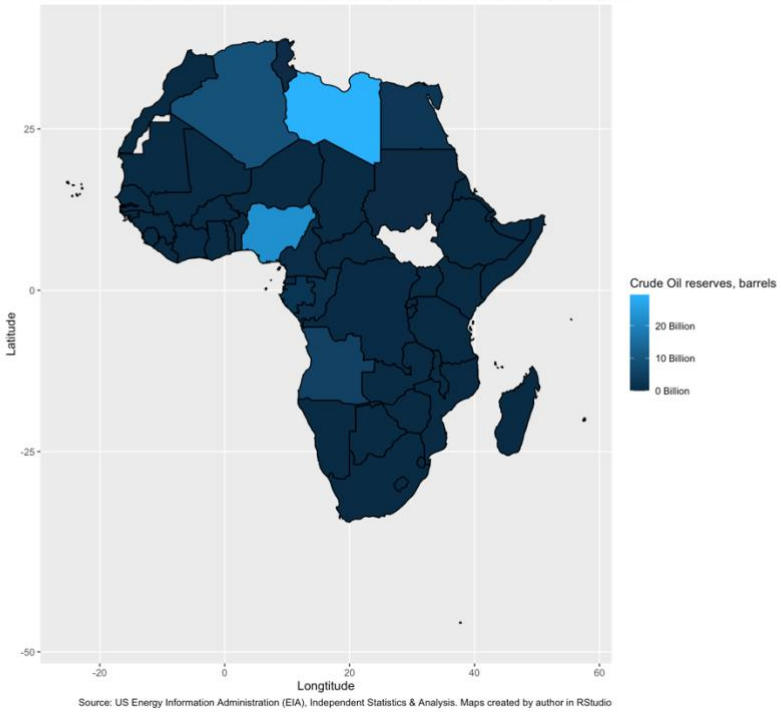
As a second alternative measure, also *Oil production value* in 2014 US dollars has been included. This has by Michael Ross been computed from BP Statistics to its nominal value and adjusted for inflation with 2014 as its base year (Ross and Mahdavi 2015). It is straightforwardly understood as representing the monetary value of the oil. To mitigate skewness, this also transformed to the values annual change.
The third alternative measure for oil abundance is *Oil rents* as a percentage of GDP. It is from the World Development Indicators (WDI) and measures 'the difference between the value of crude oil production at regional prices and total costs of production'. This estimate of rent differences is between the price of the oil and the average cost of its production, relative to the physical quantities of countries extraction or harvest as a share of nominal GDP (World Bank, World Development Indicators, 2020). Oil rents are therefore understood as the weighted average efficiency of the oil sector in monetary terms.

To summarize, oil abundance is consequently tested in total with four different measures. *Oil production* is the weight of the production output; *Crude oil reserves* is the amount of extricable barrels in the ground; *Oil production value* as the monetary value of the country's oil production; and finally with *Oil rents* monetary efficiency by the estimated difference between domestic production cost and the value on the global market. All the variables representing oil abundance have been lagged by one year to reduce the dangers of reverse causality. Current aid flows cannot be a function of current variables that are known to be time dependent (McGillivray and White 1993, 62). Lagging the explanatory variables is a widely applied and

relatively safe solution in order to avoid reverse causality and endogeneity. The methodological problem with petroleum endowments, however, is skewness and lack of normal distribution, with some countries having enormous quantities and others having nothing. This is displayed geographically with *Crude oil reserves* on FIGURE 3 and with *Oil production* on FIGURE 4. The lighter areas being the oil abundant countries in Africa

FIGURE 3 - Crude Oil reserves (billion barrels) in Africa 2000-2014

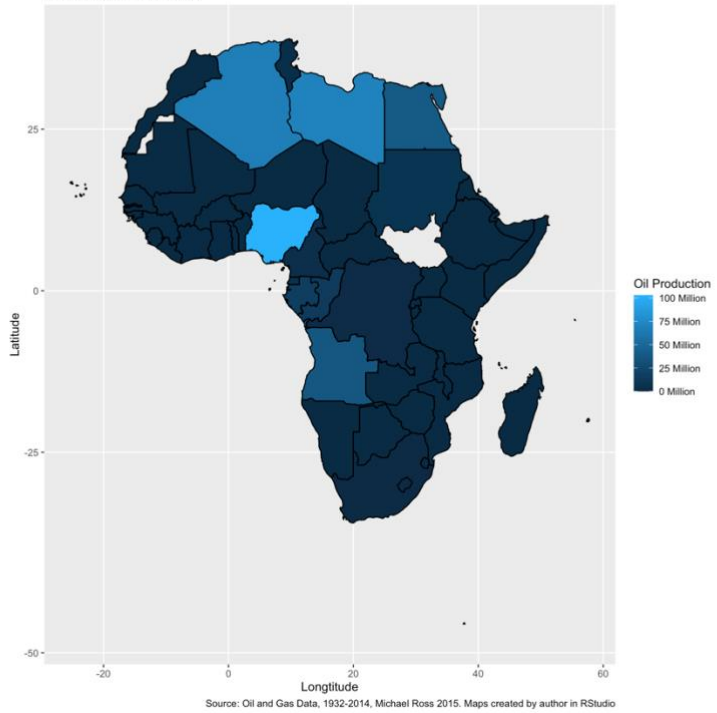
Crude oil reserves including lease condensate reserves. A barrel is a unit of volume equal to 42 U.S. gallons



Source: US Energy Information Administration (EIA), Independent Statistics & Analysis. Maps created by author in RStudio

FIGURE 4 - Oil Production in Africa 2000-2014

Oil production in metric tons



Source: Oil and Gas Data, 1932-2014, Michael Ross 2015. Maps created by author in RStudio

Several countries having the value zero also means that the variables cannot be logged. The solution to this is to make a benchmark for the countries having a lot of oil with a dichotomous measure. Borrowing the solution from Bader (2015b, 146), the variables measuring the amount of oil have been transformed into binary benchmark variables for the sample of African countries' 70th percentile. For *Oil production* this corresponds to countries on or above the level 298800 million metric tons per year having the value 1, and for *Crude oil reserves* the value 1 is assigned for all observations on or above 15.000.000 barrels per year. It increases the standard errors of the variables and deprive the estimates of much information, but it solves the issue of skewness on the dependent variable. The choice has been made to let the monetary proxies of oil abundance stay continuous and let the benchmarks only apply to the proxies measuring *Oil production* and *Crude oil reserves*. In Appendix B, the comparison of the skewness between the non-transformed variables and the distribution after the benchmark makes them binary is displayed.
The remaining variables presented are control variables, as well as Control of corruption which will need additional elaboration. Variables representing self-interest, recipient merit and recipient need are follows hereunder.

Self-interest has also often been represented by voting alignment with the donor country in the United Nations General Assembly (UNGA), assuming China reward African countries voting in alignment with them (Dreher et al. 2011, 1951; Morgan 2018, 220). This *UNGA voting alignment agreement score* is a dyadic measure of the ideal point distance between countries preferences in the general assembly and is also adjusted for temporal agenda changes from the cold war till the 21st century in order to "consistently capture the position of states vis-à-vis a US-led liberal order (Bailey et al. 2017, 438). The logic dictates then that China favors those counties voting in line with them in the UN General assembly. United Nations preference similarity have during the last few years been recognized as important predictors for Chinese aid allocation. Dreher et al. found that Chinese concessional ODA aid flows had a strong positive relationship with UN voting alignment and recipient not recognizing and did not find evidence that their ODA-like flows targeted natural resource rich countries nor any relationship with institutional quality (2018, 191). Unlike Dreher et al. restrict voting alignment on resolutions deemed important by the US State Department. This analysis makes no such exclusions.

Another variable associated with donor country self-interest is to proxy bilateral strength of trade between the recipient country and donor country. The allocation will here be directed more heavily towards those countries with a trade relationship with the donor country and might be even stronger if the aid is tied which imply more imports (Berthélemy and Tichit 2004, 257). The trade interest of the donor country can be important in the way that growth enhancing measures like financial aid can alleviate economic difficulties in the developing country. The assumption here is that aid that for instance build or modernize infrastructure would strengthen the profitability of export trade (Lee 2019, 578; Maizels and Nissanke 1984, 884). Aid has in the literature and in research been found to be an apparent stimulant for increased investment and trade (Kragelund 2008, 579). Liu and Tang found that both bilateral imports and exports have a clear positive effect on Chinese foreign aid (2018, 63). More trade linkages with the donor country should promote more foreign aid to the recipient. The proxy representing bilateral trade chosen is export. Exports from China to African countries are measured using data from the Comtrade Word Integrated Trade Solution (WITS) database. Its value is displayed in thousands and measured in constant USD. Since this variable is very skewed, it is also transformed to the yearly change of export value for a more normal distribution.

7.4.2. Variables representing recipient merit

What is regarded as Chinas only official conditionality to its potential pool of recipients is whether or not the country recognizes what is officially named the Republic of China (ROC) – and more commonly known as Taiwan, and it seems to be the only condition in which China discriminates in bilateral cooperation in the event of non-compliance (Kaestner 2010, 3). *Taiwan recognition* is a binary variable, being 1 if the country has formal diplomatic relations with the Republic of China (ROC) – Taiwan, and 0 if it does not recognize Taiwan. The data on which countries recognize Taiwan and those that do not up till 2007 was emulated from Bräutigam (2011, 209-210), and gaps or time periods after this rest was coded by the author from various sources, but mainly supplied from Rich (2009, 168) and Rich and Banerjee (2015, 147).

The preferred proxy to represent good governance is the *control of corruption* index by Daniel Kaufmann as part of the World Banks' World Governance Indicators (WGI). Higher values on this index indicate that the there is a higher degree of control of corruption in the country. WGI indicators for political and governmental institutional quality are common to employ in studies

of foreign aid allocation surveying recipient's background conditions (Brunnschweiler 2008, 404; Yushi et al. 2020, 14). The control of corruption estimates measures "perceptions of corruption, conventionally defined as the exercise of public power for private gain". It is ideal for measuring misuse of public power appropriation of public goods for private gain (World Development Indicators, The World Bank). It measures computed values of data from several sources, ranging from perceptions of how to get things done by bribes or corruption in business and politics. The weighted average of the different measures for corruption are combined into one unique index and the final estimate is computed by the variance in the distribution in order to further precise this measure (Cuervo-Cazurra 2006, 812; Mungiu-Pippidi 2015, 45-46). The advantage is that it employs a survey-based unified metric on perceived corruption from a wide variety of countries, which makes several cases comparable, while some contextual information is still lost (Gerring 2012, 185).

In almost every foreign aid study there is a problem with reverse causality. Poorer countries might receive more foreign aid, but this does not mean that aid causes poverty, but that the poor countries are being targeted. The same goes in regard to institutions: more foreign aid to countries with poor institutions does not mean that this causes poor institutions, but that that they try to improve the recipient's institutions. However, regarding corruption, it is different. As Alesina and Weder point out "it is hard to argue that aid should go to more corrupt countries to help reduce corruption. Therefore, if one finds that governments that are more corrupt receive more foreign aid, one could safely interpret this finding as a failure in the decision process allocating aid amongst developing countries". As discussed earlier in the debate on DAC conditionality-tied aid, donors are supposed not to incentivize corruption in recipient countries, requiring them to commit to establishment strong institutions of horizontal accountability. High degrees of corruption then should by conventional wisdom mean less foreign aid. A weakness with corruption proxies, however, is that they often are correlated with many other characteristics with countries (Alesina and Weder 2002, 1127-1128). There are also pitfalls with the validity of the index. There is a danger that an index for institutional quality put together by six different indicators with different questions might obscure the conceptual clarity, and by implication the validity of the measure. Since these phenomena could correlate it is hard to determine whether the answers are mutually independent (Gerring 2012, 185; Heywood 2015, 140). The surveys, computation methods and conceptual baselines used are from a World Bank standard and does have an inherent goal in uncovering private sector corruption and growth inhibiting patronage networks (Gerring 2012, 186). That is problematic

given that corruption by OECD and World Bank standards is not universally applicable. What western analysts would characterize as "deviation from the norm", are practices that are quite common in developing countries to a varying degree. However, western standards (or any standard) are a necessary, if imperfect, point of departure for studying such phenomena. After all, while different enforcement of rules depends on government, all countries does have a distinction between private and public, and all countries have a standard somewhere on what is legitimate activity or not (Cremer 2008, 58).

Another traditional merit variable is *Democracy*. To distinguish if the African country in question is a democracy, the Boix-Miller-Rosato dichotomous measure of democracy is employed. Even though one loses some information with dichotomous measures, it does solve some issues regarding inference on how to assess increases compared to decreases, and it also makes sense if the assumption is that China has an interest in favoring non-democracies. This keeps the measure simple and easily interpretable. There are two concrete standards that require fulfillment: a country gets coded as 1, meaning democratic, if both contestation and participation are sufficiently fulfilled, otherwise it gets coded as 0, meaning it is non-democratic (Boix, Miller and Rosato 2013, 1528).

7.4.3. Variables representing recipient need

Recipient need in monetary terms has often been proxied with GDP per capita where the poorer countries will receive more than the richer countries (Berthélemy 2006a, 184; Schraeder, Hook and Taylor 1998, 304). The variable *GDP per capita* applied here originate from the United Nations Statistics Division and covers all countries for the period covered in this study. The values have by the author been adjusted for inflation through average CPI with 2014 as the base year. The direction of GDP per capita is theoretically ambivalent. Developing countries can have quite free economies and show potential for future returns, but Chinese enterprises will also want to invest in predictable and safe environments more associated with developed countries (Bader 2015b, 146). This is also true with respect to foreign investments, separate but related to the foreign aid literature. Researchers focusing on Chinese FDI have found that the partner countries market size and GDP growth are highly significant determinants for the Chinese to invest in the country, but also the larger the size of ethnic Chinese population in the partner country attract Chinese investors (Buckley et al. 2007, 512; Cheung et al. 2012, 217). Yushi et al. 2020 found that Chinese aid flowed more toward African states with higher per capita GDP implying the Chinese allocate more to economically well performing countries

(Yushi et al. 2020, 17). China themselves, in their 2014 white paper, claims to target low-income developing countries in an effort to achieve The Millennium Development Goals (MDGs) (White Paper 2014), suggesting that they consider low GDP per capita as an indicator for the neediness of a potential recipient. This is corroborated by Dreher and Fuchs (2015), who also found that the Chinese partly target countries with low per capita income (Dreher and Fuchs 2015, 1019).

A second proxy representing recipient need is the *Infant mortality rate* of the recipient country, and the measure reveals particularly the performance of social policies. As a proxy for recipient needs, the infant mortality rate in the recipient country is used, which is an orthodox measure of the performance of social policies that has been used in similar research earlier (Berthélemy and Tichit 2004, 260). The infant mortality rate is the most widely available indicator for the general health status of a country's population, in the absence of data on the prevalence of diseases. It is also a reliable measure of a country's socioeconomic development that is arguably the best suited for comparison across countries. A high rate of infants dying relative to the population implies low priority or cuts in the health and social sectors. Also, failing a rudimentary task in ensuring the survival of infants serves as an indication of low fiscal capacity and ineptitude of provision of services beyond these sectors (Shandra, Shandra and London 2012, 197). Infant mortality rate from the World Development Indicators (WDI) is measured as the weighted average of infants per 1000 live births dying before reaching the age of one in a given year (World Development Indicators, The World Bank 2021). Its usefulness lies in the fact that it is a non-monetary measure of poverty and recipient need, but it is also a measure for state capacity, institutional quality, and inequality of social policies (Acemoglu and Robinson 2009, 678; Costanza et al. 2015, 286).

7.4.4. Alternative variables and western aid

As a robustness test, some alternations on the dependent variable are required. There is a question of whether a larger population means a higher degree of recipient need which could warrant more aid allocation (McKinlay and Little 1977, 65). In the late 1960s, the so-called small country effect/bias was first discovered (McGillivray and White 1993, 15-16). Population size is usually assumed to mean more aid allocation as it both can be a need as populous countries are often poor, and self-interest as it can mean there are potential for large and stimulating markets to invest in (Bader 2015b, 146; Maizels and Nissanke 1984, 881). There are other ways to control for population, mainly by computing it into an aid per capita

variable. Since population can both be interpreted as recipient need for aid, and donor self-interest in the recipient's presumptive political importance, it is an ambiguous measure. To address these concerns then, total aid per capita should be interpreted more as a measure of recipient need when one adjusts the total aid level for the population of the receiving country (McGillivray and White 1993, 10). The dependent variables transformation into Chinese aid per capita will be tested as an extra robustness check.

Because the models will also be applied to western and US aid, some alternative variables are also used. Bilateral variables like UNGA agreement scores and export data from WITS for the United States have also been integrated into these models, so the tests done on Chinese aid will also be done on US aid. As a substitute for the binary conditionality that is for China represented by African countries stance on Taiwan recognition, the either-or-situation of whether the recipient country has signed the Rome Statute of the International Criminal Court is introduced. Signing the treaty recognizing the legitimacy of the International Criminal Court (ICC) is a conditionality that the United States and western liberal democracies in general have encouraged African countries to in order to strengthen human rights and enhance accountability for a continent plagued by civil war and human rights infringements (Gilligan 2006, 942; Johansen 2006, 305). Since United States (while refusing to sign themselves) and western democracies have pressured African countries to sign this treaty, this is here considered as the closest western equivalent to a binary conditionality like the Taiwan recognition variable is. Signatory countries receive the value 1, while non-signatories are coded as 0. TABLE 1 summarizes the variables this thesis will be using.

TABLE 1 – Measurements of variables

Variable	Mean	Standard deviation	Min	Max	Source
Chinese aid (2014 deflated)	248,395,828.000	513,868,675.000	8,007.735	3,580,909,087.000	TUFF, AidData
Crude oil reserves (untransformed)	1.942	7.048	0.000	48.470	Energy Information Administration (EIA)
Oil Production (untransformed)	8,197.613	23,115.600	0.000	131,000	Michael Ross
Oil value (2014 dollars)	4,411,405.000	13,874,846.000	0.000	107,935,820.000	Michael Ross
Oil rents	5.653	13.192	0.000	78.541	World Development Indcators (WDI)
Infant mortality rate	61.837	27.028	11.800	141.900	World Development Indcators (WDI)
Democracy dichotomous	0.310	0.463	0	1	Boix, Miller & Rosato
Control of corruption	-0.625	0.594	-1.869	1.217	Worldwide Governance Indicators (WGI)
GDP per capita (2014 CPI)	2,338.982	3,356.121	96.614	25,229.960	United Nations statistics
UNGA, agreement score	0.887	0.151	0.000	1.000	Bailey, Strezhnev, and Voeten 2017
Taiwan recognition	0.103	0.304	0	1	Bräutigam 2011; Rich 2009
DAC Total Aid commitments	584,816,859.000	778,988,340.000	0.000	12,028,560,000	OECD Statistics
Exports, WITS	757,967.300	1,823,587.000	0.000	16,830,776.000	The World Integrated Trade Solution (WITS)

8. Methodology

As mentioned, the preferred models are those incorporating variables from several schools of thought. For example, models separating recipient need and donor self-interest are methodologically flawed because they suffer from specification errors due to the omission of relevant variables. If one accepts the consensus that both altruistic and self-interest reasons motivate the allocation of foreign aid, then one also accepts that separated models are misspecified (McGillivray and White 1993, 36-37). Case studies of foreign aid have the weakness of being unable to generalize across several donors. A case study would also be in the danger of making the particular case depend on one particular theoretical perspective

(Schraeder, Hook and Taylor 1998, 301). As have been discussed throughout, the purpose of this thesis is to not be limited to one school but incorporate three conventional perspectives systematizing the schools of thought of the foreign aid allocation literature while also tailoring this framework to what can be expected if the donor country is China. The most appropriate and preferred way to do this is through a time-series-cross-section regression analysis, or what is also called panel data. There are several advantages with applying a panel data structure. It can mitigate problems tied to confounders and heterogeneity and it is a practical method if the interest are general trends over time and space (Dougherty 2016, 529; Imai 2017, 60; Petersen 2004, 331).

8.1. Two-step solution to the empirical analysis

This analysis aims to not be deterministic, for example in claiming that oil endowments necessarily lead to more Chinese aid. It does aim to make probabilistic claims in the sense that the expectation is that more petroleum endowments increase the likelihood of more Chinese aid to African countries (Lieberson 1991, 309). What needs to be acknowledged, is the inherent danger that measurement errors or theoretical indeterminacy between the concept and the phenomenon which might introduce empirical deviations. Therefore, deterministic statements are inappropriate in this case. The statistical inferences that are drawn here are therefore of associations between Chinese aid and determinants, not of causality. The analysis follows the footsteps of Berthélemy (2006a). That means this will be conducted in a two-part approach, two different stages employing two different regression models. While Berthélemy focused on Western donors of foreign aid, the two-step procedure resembling his approach will be applied to Chinese foreign aid. The upside with this solution is that it analyzes foreign aid allocation through two different operationalizations on the dependent variable: first with a binary aid-no aid variable focusing on all countries that received some form of aid and those that received nothing, before the second step analyze the positive monetary USD amounts which include only on the allocation to the recipients that actually received foreign aid. In this thesis, step one is a linear probability model (LPM) with a binary dependent aid variable. Step two are OLS models only using the values of the Chinese aid variable that are continuous and positive.

8.1.1. Step one: Linear probability model

Step one will employ a binary dependent variable of Chinese aid. Countries either receive aid, and are coded as 1, or receive no aid, and are be coded as 0. All 15 years for all 52 countries will be represented in this model because the sample is simply based on aid or no aid. Instead

of a probit-model, which Berthélemy applied, this analysis uses a linear probability model (LPM). That means that a linear regression model employs a dependent variable that is dichotomous and regression estimates vary between 0 and 1 and it is interpreted as a probability estimate of an outcome occurring. The output can be negative probabilities, and there is a debate whether negative probability values are valid, because the concept of a negative probability is undefinable. (Aldrich and Nelson 1984, 13). This is due to the linear relations of the predictors to the binary variable. In cases of negative probability, the estimate is commonly interpreted as zero. The probability of this outcome, receiving foreign aid from China, are in these kinds of models assumed to be a linear function of the explanatory variables. The model aims to determine linearly what the probability of receiving foreign aid from China is.

There are defects with the linear probability models, most notably with the disturbance term of the outcome variable (Y) have just two specific values. The distribution is therefore not normal and stands at risk of being heteroskedastic (Dougherty 2016, 369). The error terms, the difference between the observed and predicted estimate, in models using dichotomous variables are not normally distributed which in principle is a violation of regression analysis assumptions (Knoke, Bohrnstedt and Potter Mee 2002, 298). Simply put, the assumption of linearity is not realistic for predictor values. For these reasons the LPM model will only be applied in the first step of the analysis, but it is preferred here due to its simplicity.

Problems with LPM notwithstanding, even critical researchers concur that linear probability models are very useful in gaining an insight of trends and direction of the variables at the early stages of an analysis (Amemiya 1981, 1487). What Beck, Katz, and Tucker call cross-section data with a binary dependent variable (BTSCS) essentially is grouped event history data of an occurrence or no occurrence, like aid allocation or no aid allocation. In logit and probit-models it requires the correct assumption of temporal independence, otherwise statistical tests might fail or be misleading (Beck, Katz, and Tucker 1998, 1261). The assumptions for linear probability models are less restrictive. Linear probability models can in some cases also be more appropriate if the dummy variable represents group membership, and logit and probit-models are unsuited to estimate observations of groups making the same choice (Caudill 1988, 426; Caudill 1987, 381).

8.1.1.1. LPMs solution to the issue of perfect separation

With respect to the Taiwan recognition variable which theoretically is supposed to be a disqualifying action (thus a zero) for any potential recipient, the LPM in this analysis model takes account of this. Taiwan recognition showed to be difficult to implement in a logit model because the outcome of interest, whether aid is allocated or not, is completely separated from the explanatory predictor variable. This is called the problem of separation (Gelman and Hill 2007, 104), and in the case here it is the linear predictor Taiwan recognition is completely aligned with the non-outcome of the dependent variables, meaning recognition of Taiwan is aligned with the country not receiving Chinese aid. The problem is that it is a perfect predictor of aid or no aid allocation from China. This problem of separation is displayed in more detail in the Appendix B.

8.1.2. Step two: Positive aid values in pooled, random and fixed effects models

The second step of this analysis are OLS models but only including positive aid amounts. This reduces the number of observations from to 773 on LPM to 471 African country-years. The binary Taiwan variable proved to be a problem for these models, being a perfect predictor for whether a country receives aid or not. Since there is no variation in this variable for countries that receive aid, and it does not predict how much amount aid a country receives, it is consequently excluded from the second series of models with the positive amounts of aid. Only the countries recorded in the TUFF methodology and deemed fit for research, meaning that years recorded but are without amount or deemed unfit for research by the Dreher et al. 2017 are treated as NA's. This is an assumption of the country-years not recorded are missing completely at random and not absent due to coding errors. Alternative solutions are to treat non-recorded cases as zero, which could be defended by avoiding only picking cases based on positive outcomes on the dependent variable. Selection on the dependent variable risk producing results leading the researcher to draw misplaced inferences because the cases chosen for the sample all share an extreme value on the phenomenon under scrutiny. In the worst-case scenario, this may establish relationships that do not exist in reality (Geddes 2003, 129). But forcing in zero values of aid on gap years is also extreme values, and this case it is a potential pitfall because the data does not originate from official sources. It is derived from media-based data collocation methodologies, which the preceding discussion about the data have made abundantly clear has its problems and requires being treated cautiously. The only cautious way to treat this variable is to use the actual positive values recorded.

The analysis on the positive aid values will be presented in three series of panel models, each using a different method: complete pooling, random effects, and fixed effects. In addition, the interaction test will be exclusively tested under fixed effects. To mitigate skewness issues, the variable has been logged. The interpretation of logged Chinese aid amounts is straightforward, where the natural logarithmic function on Chinese aid is being read as its percentage increase by a one unit increase on X.

Pooling is a basic method of OLS. In practice it ignores the central panel data attribute of the data, meaning that it does not treat countries as the same observation on different years. It is therefore an inherent assumption that the error term is independent of the independent variables (Petersen 2004, 336) pooling regressions are therefore a good starting point for getting the sense of the effects, but inadequate for hypothesis testing. Random effects models estimate the regression based on the data being grouped and makes the assumption that the individual and idiosyncratic error terms are independent of each other. The assumption that the unmeasured and constant over time variables captured by the error term is independent of the values of the variables measures is a weakness with random effect, while an advantage is that both time-constant effects and time-varying effects are represented (Petersen 2004, 340-341). Heterogeneity among recipients might also be a problem. There will always be determinants with the recipients not taken into account by the explanatory variables. To mitigate issues of this nature, the model will employ fixed (also called within) effects as the final hypothesis testing model, where the country effect is constant, and the effect natural resource endowment interacted with good governance have one foreign aid will be observed. The variation is therefore sacrificed for the sake of controlling for constant effects in time (Dougherty 2016, 533-534; Petersen 2004, 338).

As the purpose of this thesis is to treat the variables carefully and interpret them conservatively, the final model hypothesis testing model with fixed effects treats the country-specific variables time-invariant. Each country is treated as a group, the effect of the measured and unmeasured time-constant variables are represented, while the idiosyncratic error term and total error term of the model are assumed to be different for the measured country-specific variables (Petersen 2004, 337). It treats the values as grouped dummies. The question with fixed effects is whether it is the appropriate method if there is a probable low variation at the country level over time. Fixed effects will take this variation away. Perspectives put to use in this framework focus on the determinants with African countries that often are time constant, at least within the short snapshot of time analyzed here. There is a debate among social scientists whether random or

fixed effects are the appropriate solution for panel data. Fixed effects often have been recommended should the coefficient at the group or country be the interesting part, while proponents of using random effects recommend its use if the interest is variance in the underlying population (Gelman and Hill 2007, 245). The worry critics have regarding the use of fixed effects is that it controls away heterogeneous effects and interesting variation between groups. These effects are harder to capture within a fixed effects model. Random effects might capture the variation better. Some social scientists disagree that fixed effects solve issues of correlation between the coefficients and residuals adequately. Bell and Jones argue that random effects are desirable if the researcher understands the context of the scrutinized phenomenon and calibrate the estimates accordingly (Bell and Jones 2014, 17; Bell, Fairbrother and Jones 2019, 1069). Further, using fixed effects means omitting time-constant variables. But phenomenon corresponding with the fixed effects assumptions of long-lasting time-constant effects are rarely found in the social sciences. Critics worry that this dynamic misspecification potentially causes more bias than keeping time variance (Plümper and Troeger 2019, 42). Nevertheless, given that assumed normality of the estimates is out of the question with this data, fixed effects do the job in limiting the bias presented by skewness, potential autocorrelation, and large error terms.

The number of biases introduced in fixed effect models are, despite everything, fewer than with the other models. Random effects also deploy its assumptions, for example of consistent exogeneity of the estimates, which fixed effects mitigate by removing the idiosyncratic means in the regression (Collischon and Eberl 2020, 292). And even though fixed effects might be disturbed by the 'incidental parameters problem', where a non-linear limited dependent variable creates consistency issues when the dataset has a substantial number of limited observations, solving this using random effects requires that the country effects are not correlated with the explanatory variables (Berthélemy 2006a, 182). Under fixed effects, the main source of bias is the time-varying variables that correlate with the treatment effect and the outcome effect over time. It imposes stricter conditions to the covariate effects and significance. The point of applying strict conditions here, is due to the pitfalls with the data and the need to be careful when applying it, which have been discussed in the concept and data parts. The strictest final validation for the hypotheses is therefore fixed effects for step two in the analysis. While not discarding significant effects under pooling and random effects, an association retaining significance under fixed effects are regarded as the most valid.

The models will be run in three rounds, first a pooled regression model, then with random effects, and finally the more conservative estimate with fixed effects controlling both for country and year differences. In addition, the interaction effect will be run in a fixed effects model.

To answer the third hypothesis, whether China prefers poorly governed states with oil endowments, the fixed effects model with an interaction effect between control of corruption and oil abundance is presented. The theoretical framework put to use here postulates that the effect of petroleum abundance will be affected by governance, more precisely put that control of corruption will weaken a positive effect oil endowments have on a country receiving Chinese foreign aid. This effect is therefore interactive. The effect the main explanatory variable (X^1), oil production, have on the outcome variable (Y), Chinese foreign aid allocation, will be dependent on the values of a second explanatory variable interfering (X^2), control of corruption, in interaction with X^1. This means, in the event that X^2 is 0, the marginal effect on Y is X^1 (Dougherty 2016, 219). It is important not interpreting the figures and critical values of interaction terms alone as unconditional effects. What is also needed is to understand the marginal effect of the interaction terms, even though the coefficients in the regression table might be insignificant. Marginal effects therefore should be visualized to fully comprehend the interaction term (Brambor, Clark and Golder 2006, 74).

The final part of the empirical analysis will present the same models on aid commitments from the DAC in total and from the United States. Since the constant on Chinese aid and the constant of western aid are not the same, meaning that the starting point for aid allocation, everything else being zero, are different to begin with. Therefore, Western aid cannot be comparable to Chinese aid as part of hypothesis testing. Furthermore, it is also a question of different levels of validity. The data from OECD Statistics are official figures as opposed to the Chinese aid which, as discussed, have been compiled through media-based data collection. That being said, the framework for the models on Chinese foreign build on conventional foreign aid allocation theories and expectations, mixed in with bilateral effects that are specific to Chinas foreign policy. The data is supposed to also be compatible with DAC allocation, and it is an appropriate finale of this thesis empirical analysis given that the crux of debate around Chinese aid largely revolves around comparing the emerging donor with the established donors. Since total DAC aid is multilateral, the inherently bilateral variables describing connections between individual

countries, like exports, have been excluded and only the recipient country-specific variables are applied. That is why the final model using data on US aid is introduced at the end, where UNGA voting alignment and export links can be introduced as well.

Some parts of the data on the independent variables were missing. To solve this problem and avoid suffering a severe loss of observations multiple imputation methods were applied. Fully conditional specification, or as multivariate imputation by chained equations (MICE), as it is more widely called, is a data simulation method where missing values on observations are filled by randomly matching it with values from units whose predicted values are most similar to the predicted value of the missing data. There multiple iterations of this imputation method, meaning that it imputes the missing values several time and combine the results to land on the most appropriate substitute for the missing data point. With the assumption of data being missing at random, the mice-package and the 'Classification and regression trees' method were used for the multivariate imputation process to mitigate the missing data problem (van Buuren, and Groothuis-Oudshoorn 2011; Schenker and Taylor 1996, 425). The specifics of this imputation process can be found in Appendix A.

The models have been tested for multicollinearity and heteroskedasticity. This is detailed further in Appendix C, with tests for heteroskedasticity, autocorrelation, and the Hausman test attached. The robustness tests applied take account of these issues. The cross-section time series models apply robust estimators for the standard errors clustered by the dimension time. This White covariance matrix estimator mitigates the effects of heteroskedasticity and residual biasing the estimates, but it does not mean inferences can be drawn with any less care (Croissant and Millo 2008, 31; White 1980, 818). The robustness estimate type assumes low correlation between groups errors but allows the presence of heteroskedasticity.

9. Results

The first model will be the linear probability model with a binary Chinese aid variable. With the assumptions of missingness at random in mind, this will serve as an indicator for what determines China to allocate or give nothing at all. As mentioned, the LPM-model serves as an introductory component of the analysis. Following this simple presentation of dichotomous aid, the second step is to regress monetary amounts of aid aggregated by year on the

hypothesized determinants are using pooled, random, and fixed effects models. Accordingly, the models with the interaction of control of corruption on oil abundance will be displayed. Finally, the same models are used with western aid commitments flows, first from the entire DAC and finally from the United States. The decision to include US aid is to make a more precise comparison since several of the explanatory variables are bilateral in nature and DAC is multilateral. It would for example be meaningless to present DAC's agreement score with other countries in the UN. As a reminder, the hypotheses of this thesis are summarized:

H1 – Chinese aid increase after DAC assistance have decreased

H2 – Chinese aid allocation is increase toward countries with abundance of oil endowments

H3 – Chinese aid allocation decrease if countries abundant on oil endowments also have strong institutional quality

All the models using pooled, random, and fixed effects in the second-step regression models using the logged positive aid amounts in 2014 USD are used in the hypothesis testing, but it is the coefficients retaining significance with two-way fixed effects that will be considered the most robust.

9.1. Step one – Linear probability model – binary Chinese aid

The results from the first step of the analysis, the linear probability model, are displayed in Table 2. It is a pooled liner model with robust standard errors taking into account the inherent heteroscedasticity in LPM-models. All the models have a wide layout, they will therefore be displayed vertically and turned to be read.

TABLE 2 - Regression table - Linear Probability Model (LPM) - Binary dummy variable of Chinese foregin aid to Africa 2000-2014 - Random effects LPM model

	Dependent variable:
	Chinese foreign aid, binary
Oil Production t-1, benchmarked	-0.00000**
	(0.00000)
DAC aid, negative growth	-.034
	(.025)
UNGA agreement score, t-1	-.341
	(.310)
Exports, annual difference	0.000
	(0.00000)
Taiwan recognition	-.837***
	(.058)
Control of corruption	-.047
	(.039)
Democracy dichotomous, binary	.015
	(.040)
Infant mortality rate	-.0003
	(.001)
GDP per capita (2014 CPI)	-.00001**
	(.00001)
Constant	1.187***
	(.293)
Idiosyncratic effects:	0.10678
Individual effects:	0.01097
Observations	773
R^2	.235
Adjusted R^2	.225
F Statistic	233.755***
Notes	Chinese foreign aid, binary - This is a dichotomous measure of Chinese foregin aid between 2000 and 2014 for 53 African countries. The value 1 is assigned if a country received foreign aid from China a given year. Value 0 is assigned if country did not receive aid from China a given year. Years not recorded by the TUFF data (Dreher et al. 2017) are considered as years with zero aid. Only years recorded deemed reccomended for research are coded as 1. ### Models use robust standard errors clustered by time applying heteroscedasticity-consistent (HC) White estimators. *p<0.1; **p<0.05; ***p<0.01

As can be seen on Table 2, the peculiarity of the LPM-model is apparent in that there exist negative probabilities. It does clearly illustrate the likelihood of receiving Chinese foreign aid given certain country specific determinants are significantly close to 0. The coefficient on Taiwan recognition is strongly negative -0.837 and highly significant on the 0.01 level, with a standard error of 0.58. This means that it is a -0.84 chance of receiving Chinese foreign aid if the potential recipient country has recognized Taiwan. Oil Production have a negative 0,000 coefficient and is significant at the 0.05 level, making clear that the receiving Chinese aid is not determined by oil abundance. DAC negative growth is having a negative effect but is not significant. GDP per capita has effectively a zero-effect significant at the 0.05 level. While Control of corruption is a weak negative it is insignificant. DAC aid decrease displays a weak negative value and is not significant. A country being in the democracy category is not significant.

These results serve as a clear indication of the importance of Taiwan recognition for the Chinese foreign aid programme. It is the only significant variable with a strong effect, the other two significant variables ultimately having zero effect. It seems clear that the commitment or non-commitment of receiving development assistance highly depends on honoring the One China policy, other attracting determinants like oil abundance are less important in comparison. The standard errors are relative to the dependent variable being dichotomous. The adjusted R-squared of the entire LPM-model is at 22, meaning the model accounts for 22% of the variance of the dependent variable. To sum up, TABLE 2 shows a strong association between receiving Chinese and compliance to the One China policy. If a country has formal diplomatic connections to Taiwan, there is a strong negative linear probability that China will commit to allocate aid to this country. However, this does not say anything of how much aid China disburse to its recipients and that is what the second step in the research framework will answer with the positive amounts of Chinese aid.

For the second part of this analysis, TABLE 3 displays Chinese aid in USD amount. These models use an aid amount variable that is logged to mitigate the issues of this variable's skewness. Again, as a reminder, the logarithmic function of the transformed coefficients must be interpreted as the function of amount of Chinese foreign aid's percentage increase, by one unit increase on the independent variable, all other variables being constant.
Taiwan recognition is not in these models because it is a perfect separator, or perfect predictor, to receiving aid and none of the countries that received aid value recognized Taiwan. The

models in TABLE 3 are presented as MODEL 1 with pooling; MODEL 2 with random effects, MODEL 3 with fixed effects; and then finally MODEL 4 which is fixed effects with benchmarked Oil Production interacted with Control of Corruption. MODEL 4 therefore tests the third hypothesis (H3). MODEL 3 and 4 are using fixed effects and tests the residuals of the cross-section dependence two ways, both for country and time effects. It is the strictest model applied and is therefore the final model to test. Taking time trends into account is important, since there are several important events during this time frame that might affect the aid levels, like in 2002 when China officially embarks on its 'go out' policy, and the effects after the 2008 financial crisis. Recalling fluctuations in FIGURE 1 that displays the total Chinese aid amount to Africa in years, and FIGURE 2 that displayed its variation by countries, controlling for these factors should be justified.

TABLE 3 - OLS regression table of Chinese foreign aid to Africa 2000-2014 - (1) Pooled, (2) Random, (3) Fixed, and (4) Fixed with interaction effect with Control of Corruption

	Dependent variable:			
	Chinese foreign aid, amount (2014 USD), logged			
	(1)	(2)	(3)	(4)
Oil Production t-1, benchmark	.927***	.883**	.978	1.517
	(.264)	(.396)	(.914)	(1.067)
DAC aid, negative growth	.425*	.376*	.210	.201
	(.222)	(.208)	(.201)	(.202)
UNGA agreement score, t-1	-1.298	.113	1.286	1.108
	(2.729)	(2.805)	(2.728)	(2.754)
Exports, annual difference	0.00000*	0.00000	-0.00000	-0.00000
	(0.00000)	(0.00000)	(0.00000)	(0.00000)
Control of corruption	-.512*	-.628*	-.356	-.679
	(.262)	(.350)	(.555)	(.638)
Democracy dichotomous	-.018	-.037	-.557	-.529
	(.258)	(.340)	(.459)	(.461)
Infant mortality rate	-.015***	-.024***	-.053***	-.054***
	(.006)	(.008)	(.012)	(.012)
GDP per capita (2014 CPI)	-0.00000	.00002	.0001	.0001
	(.00004)	(.0001)	(.0001)	(.0001)
Oil Production t-1, benchmark * Control of corruption				1.218
				(1.157)
Constant	18.642***	17.750***		
	(2.532)	(2.627)		
Idiosyncratic effects:		4.3018		
Individual effects:		0.9968		
Observations	471	471	471	471
R^2	.091	.214	.090	.093
Adjusted R^2	.075	.200	-.035	-.035
F Statistic	5.756*** (df = 8; 462)	116.286***	5.125*** (df = 8; 413)	4.681*** (df = 9; 412)
Notes	Chinese foreign aid, amount (2014 USD) is an aggragte figure (ODA-like + OOF-like + Vague official) between 2000 and 2014 for 50 African countries. Years not recoreded are coded as NA. Years with makred not Recommended for research are coded as NA's and have been omitted. Data is from AidData's Global Chinese Official Finance Dataset (TUFF), by Dreher et al. 2017. Models use robust standard errors clustered by time applying heteroscedasticity-consistent (HC) White estimators. *p<0.1; **p<0.05; ***p<0.01			

The pooled model, MODEL1, in TABLE 3, shows that the benchmarked variable Oil Production is significant at the 0.01 level. The coefficient has a positive value of 0.927. Since the dependent variable is on the logarithmic scale and oil production has been transformed into a binary variable, this means the coefficient on average, oil production in metric tons on or above the 70th percentile benchmark is associated with a 152% increase in Chinese foreign aid holding all other variables constant. In the random effects model (MODEL 2), coefficient estimate is also positive at 0.883, which means that aid increased by 141% for countries above the oil threshold. This is significant at the 0.05 level. When fixed effects are introduced, the coefficient value increases but it is no longer significant. H2, which expected China to give more aid to oil abundant countries, holds for MODEL 1 and MODEL 2, but does not hold once fixed effects are introduced.

Negative DAC aid three-year growth is positive and significant for MODEL 1 and MODEL 2. Under random effects, if an African country's aid commitments from the DAC have a negative trend in a three-year period, there is a 45% increase in Chinese aid. This effect is significant at level 0.10 However; this positive effect is not significant under fixed effects. H1 is confirmed in MODEL 1 (pooling effects) and MODEL 2 (random effects), but under fixed effects it appears not to be an association between Chinese aid allocation and a three-year trend of DAC withdrawing its activity and commitments. Control of Corruption is significant at the 0.10 level strongly negative in MODEL 1 and 2. Under Random effects in MODEL 2, Chinese aid is associated with a decrease of 46% for a one unit increase on the control of corruption index. This means that a country that has strong checks and balances against corruption receives less Chinese aid. This effect does not survive the test under fixed effects where it stays negative but loses significance.

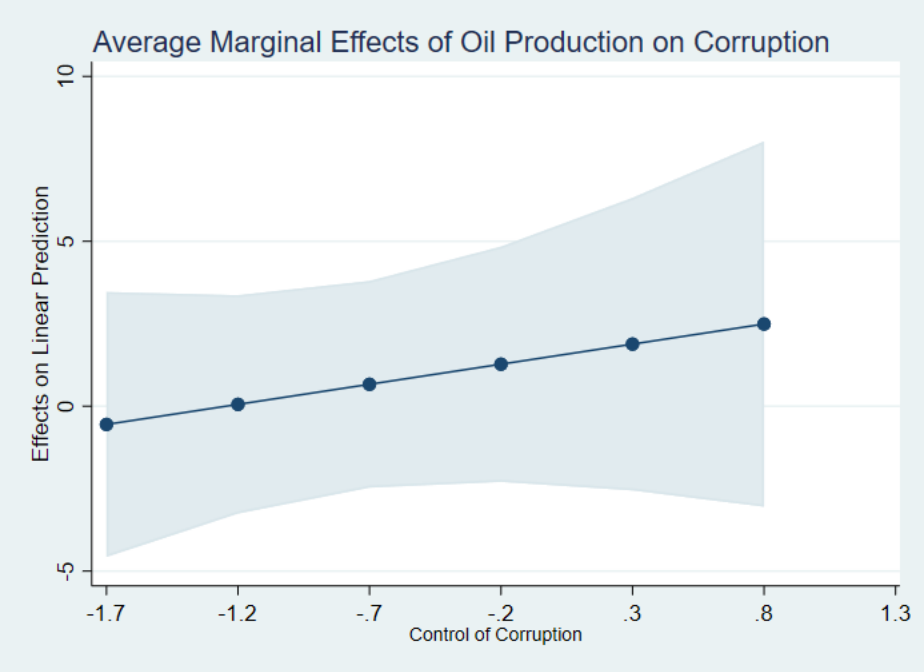
UNGA voting alignment is not significant in any of the models and has a consistently large standard error. Being a democracy is negative for receiving aid but not significant in any model. Growth in bilateral exports is consistently zero across models. GDP per capita shows now strong effects and is not significant on any of the models.

Infant mortality rate is consistently negative and strongly significant at the 0.01 level across all models. In MODEL 3, under fixed effects the effect is even stronger than under pooling and random effects, and it shows that Chinese aid decrease by 5% for an increase of 1000 infants' deaths in a year. It is the only significant effect in the strictest MODEL 3, and it also displays the lowest standard error of the variables with substantial coefficients. Even though this goes against expectations if one solely considers infant mortality rate as recipient need, it can also

be a measure for state capacity. This is an interesting and consistent finding that shows that China gives less aid to countries with higher infant mortality.

In MODEL 4, the effect of oil production, corruption and their interaction are not significant. When control of corruption has the value zero, the positive effect 355% increase of Chinese aid by oil production above the threshold is not significant. As for the effect of control of corruption, its effect on Chinese aid allocation is -49% when oil production is zero. If the effect of Oil production is conditioned by control of corruption, the interaction effect is 1.218, which can be interpreted as a 238% increase of aid in terms of the logged dependent variable. The positive effect of Oil production is slightly reduced when conditioned on a recipient's good governance. However, the effect is not significant, it stays positive, and it has a large standard error. Therefore, H3 can be rejected. To show the interaction in more detail, FIGURE 5 plots the marginal effect of oil production conditional on variation values of control of corruption. The figure shows also no significant interaction effect across the range of control of corruption, since confidence intervals cross zero.

FIGURE 5 – Marginal effects plot of interaction effect, TABLE 3



The plots show the difference between the base, countries below the threshold for oil production at value 0, and countries above the oil production threshold at value 1, over different levels of control of corruption. It shows how the allocation of aid changes based on different levels on control of corruption for oil rich countries, but this difference is not significant at any

level of control of corruption. The 95% confidence intervals cross zero, and are generally quite large.

In sum, the effects in TABLE 3 are confirm the second hypothesis in MODEL 1 and MODEL 2, but not in MODEL 3 under fixed effects. TABLE 3 has four different models. Pooled and random effects confirm H1 and H2, while fixed effects do not. H3 is not confirmed. MODEL 2 random effects display the highest adjusted R-squared, accounting for 20% of the variance in the dependent variable. The number is negative in MODEL 3 and 4 and must be interpreted as zero. Given that the degrees of freedom are low, it is not a surprise the explained variance is low, especially when fixed effects are introduced which punish smaller N models. This is not uncommon when degrees of freedom are low. But as have been mentioned, these models are restrictive and conservative, which is important taking the model assumptions and discussed data limitations into account.

9.2. Robustness checks

The measure applied in the main models has so far been the benchmark of a country being on or above the 70th percentile in Africa in oil production in metric tons. But as discussed earlier, it is also appropriate to alternate the dependent variable since there are other ways to measure oil endowments. TABLE 4 displays the models alternating the proxy for oil abundance with crude oil reserves (including lease condensate) in billion barrels (equal to 42 US gallons). *Crude oil reserves* is understood as a measure of future potential oil abundance. This is also a binary benchmark variable with a threshold on the 70th percentile in the African countries in this sample (0 below this threshold and 1 at or above). TABLE 5 uses another measure of oil, the annual growth of *Oil production value* in 2014 USD in thousands. TABLE 6 applies the one year lagged oil rents as percentage of GDP as the estimate for oil abundance. As mentioned previously, this measure is the efficiency of oil extraction in a country. These alternative measures serve as robustness checks of the results and are interesting theoretically.

TABLE 4 - OLS regression table of Chinese foreign aid to Africa 2000-2014 - Alternative measure of oil abundance: Crude oil reserves (EIA) - (1) Pooled, (2) Random, (3) Fixed

	Dependent variable:		
	Chinese foreign aid, amount (2014 USD), logged		
	(1)	(2)	(3)
Crude oil reserves, benchmark	.998***	.946**	.311
	(.261)	(.393)	(.851)
DAC aid, negative growth	.407*	.353*	.190
	(.221)	(.208)	(.201)
UNGA agreement score, t-1	-1.149	.009	1.149
	(2.719)	(2.794)	(2.726)
Exports, annual difference	0.00000	0.00000	-0.00000
	(0.00000)	(0.00000)	(0.00000)
Control of corruption	-.503*	-.608*	-.346
	(.259)	(.348)	(.558)
Democracy dichotomous	.004	-.028	-.534
	(.258)	(.340)	(.461)
Infant mortality rate	-.014**	-.023***	-.054***
	(.006)	(.008)	(.012)
GDP per capita (2014 CPI)	0.00000	.00001	.0001
	(.00004)	(.0001)	(.0001)
Constant	18.421***	17.805***	
	(2.526)	(2.616)	
Idiosyncratic effects:		4.3122	
Individual effects:		0.9841	
Observations	471	471	471
R^2	.095	.214	.088
Adjusted R^2	.079	.200	-.038
F Statistic	6.056*** (df = 8; 462)	116.627***	4.987*** (df = 8; 413)

Notes: Chinese foreign aid, amount (2014 USD) is an aggragte figure (ODA-like + OOF-like + Vague official) between 2000 and 2014 for 50 African countries. Years not recoreded are coded as NA. Years with makred not Recommended for research are coded as NA's and have been omitted. Data is from AidData's Global Chinese Official Finance Dataset (TUFF), by Dreher et al. 2017. Models use robust standard errors clustered by time applying heteroscedasticity-consistent (HC) White estimators. *p<0.1; **p<0.05; ***p<0.01

TABLE 5 - OLS regression table of Chinese foreign aid to Africa 2000-2014 - Alternative measure of oil abundance: Oil production value (2014) - (1) Pooled, (2) Random, (3) Fixed

	Dependent variable:		
	Chinese foreign aid, amount (2014 USD), logged		
	(1)	(2)	(3)
Oil value (2014), annual difference	.0001*	.0001	.00005
	(.00003)	(.00003)	(.00004)
DAC aid, negative growth	.442**	.367*	.201
	(.224)	(.209)	(.200)
UNGA agreement score, t-1	-2.354	-.315	1.394
	(2.731)	(2.795)	(2.713)
Exports, annual difference	0.00000*	0.00000	-0.00000
	(0.00000)	(0.00000)	(0.00000)
Control of corruption	-.820***	-.884***	-.372
	(.252)	(.340)	(.554)
Democracy dichotomous	-.108	-.124	-.535
	(.260)	(.340)	(.458)
Infant mortality rate	-.018***	-.027***	-.055***
	(.006)	(.008)	(.011)
GDP per capita (2014 CPI)	.00004	.0001	.0001
	(.00004)	(.0001)	(.0001)
Constant	19.781***	18.406***	
	(2.533)	(2.612)	
Idiosyncratic effects:		4.2950	
Individual effects:		0.9997	
Observations	471	471	471
R^2	.075	.209	.092
Adjusted R^2	.058	.195	-.034
F Statistic	4.649*** (df = 8; 462)	113.894***	5.214*** (df = 8; 413)

Notes: Chinese foreign aid, amount (2014 USD) is an aggragte figure (ODA-like + OOF-like + Vague official) between 2000 and 2014 for 50 African countries. Years not recoreded are coded as NA. Years with makred not Recommended for research are coded as NA's and have been omitted. Data is from AidData's Global Chinese Official Finance Dataset (TUFF), by Dreher et al. 2017. Models use robust standard errors clustered by time applying heteroscedasticity-consistent (HC) White estimators. *p<0.1; **p<0.05; ***p<0.01

TABLE 6 - OLS regression table of Chinese foreign aid to Africa 2000-2014 - Alternative measure of oil abundance: Oil rents (% of GDP) (WDI) - (1) Pooled, (2) Random, (3) Fixed

	Dependent variable:		
	Chinese foreign aid, amount (2014 USD), logged		
	(1)	(2)	(3)
Oil rents, t-1	.028**	.027*	.065**
	(.011)	(.015)	(.030)
DAC aid, negative growth	.400*	.357*	.186
	(.224)	(.209)	(.199)
UNGA agreement score, t-1	-2.424	-.211	1.664
	(2.740)	(2.817)	(2.720)
Exports, annual difference	0.00000**	0.00000	-0.00000
	(0.00000)	(0.00000)	(0.00000)
Control of corruption	-.536**	-.638*	-.309
	(.271)	(.360)	(.553)
Democracy dichotomous	-.048	-.068	-.539
	(.260)	(.342)	(.457)
Infant mortality rate	-.016***	-.025***	-.054***
	(.006)	(.008)	(.011)
GDP per capita (2014 CPI)	-.00002	.00001	.0001
	(.00005)	(.0001)	(.0001)
Constant	19.907***	18.291***	
	(2.543)	(2.633)	
Idiosyncratic effects:		4.2751	
Individual effects:		0.9906	
Observations	471	471	471
R^2	.078	.210	.097
Adjusted R^2	.062	.197	-.027
F Statistic	4.900*** (df = 8; 462)	113.905***	5.572*** (df = 8; 413)
Notes	Chinese foreign aid, amount (2014 USD) is an aggragte figure (ODA-like + OOF-like + Vague official) between 2000 and 2014 for 50 African countries. Years not recoreded are coded as NA. Years makred not Recommended for research are coded as NA's and have been omitted. Data is from AidData's Global Chinese Official Finance Dataset (TUFF), by Dreher et al. 2017. Models use robust standard errors clustered by time applying heteroscedasticity-consistent (HC) White estimators. *p<0.1; **p<0.05; ***p<0.01		

TABLE 3 showed that oil production had a positive effect on Chinese aid allocation only under pooling and random effects. As can be seen on TABLE 4, crude oil reserves is strongly positive and significant at the 0.01 level in MODEL 1 with a 171% increase if the country is above the 70th percentile benchmark for reserves in the ground, and in MODEL 2 it shows a 157% increase. However, in MODEL 3 under fixed effects the positive effect weakens, and the significance disappears. TABLE 4 therefore does not strengthen the credibility of H2. The standard errors are also fairly large for the oil variable. The only other consistent significant effect on all four models is infant mortality rate, on MODEL 3 showing negative -5% of Chinese foreign aid per increase of infant deaths per 1000 in a year. Again, the explanatory power is best for random effects in MODEL 2.

TABLE 5 shows that the annual change of oil production value displayed in thousands is positive and significant only for MODEL 1 under pooling effects, showing weak 0.01% increase of Chinese aid for a unit increase in production value in USD thousands amount. It loses significance and is even slightly negative in under fixed effects and interaction. Once again, infant mortality rate is consistently negative. Under fixed effects infant mortality shows a -5% decrease of Chinese aid allocation significant at the 0.01 level. None of the hypotheses are confirmed by the models in TABLE 5.

Finally, TABLE 6 displays the one-year lagged oil rents. MODEL 1 and MODEL 2 show a positive and significant effect on Chinese aid. The effect is even larger and more significant under fixed effects: a 7% increase in Chinese aid allocation with a one unit increase in the difference between cost of production and value in crude oil. TABLE 6 therefore strengthens the credibility of H2 of the Chinese favoring oil rich African countries. It implies furthermore, that Chinese aid flows to African states that are efficient in their oil production. Once again, infant mortality rate has the significant effect of a 5% decrease of Chinese aid across all four models and maintains low standard errors. The explanatory power is again most promising under random effects. These three sets of models included alternative measures of the independent variable representing oil endowments. This is interesting for a number of reasons. With respect to H2, it shows that there is an apparent benchmark effect since crude oil reserves, like benchmarked oil production, had a strong significant association on aid allocation under pooled and random effects. Despite not being confirmed under fixed effects, there is an apparent association between physical weight of oil and Chinese aid allocation. On the first oil abundance in monetary value measure tested, the growth in annual oil value displayed no apparent effects. But the other monetary proxy, oil rents, has a consistently positive and

significant effect and confirms H2 even under the strictest conditions on fixed effects. Again, this implies a bias toward recipients that are oil producing and efficient in this regard.

9.3. Chinese aid per capita

A final test of the models will alternate on the dependent variable by controlling for recipient country population, thus transforming Chinese aid into Chinese aid per capita. As have been mentioned, controlling for recipient population is a common way to measure foreign aid alternatively. The estimates become much smaller when the number is adjusted for population, and it does little to mitigate the skewness of the non-transformed aid variable, which is shown in Appendix B. The results of the models with the dependent variable aid per capita are displayed on TABLE 7. Benchmarked oil production is actually strongly negative for per capita Chinese aid across all three models. Under fixed effects, it is actually a 97% decrease if the country is above the benchmark. It is not significant, maintains a large standard error. The only interesting effect is GDP per capita (2014 CPI) which is statistically significant at the 0.01 level and its positive effect increases from MODEL 1 until MODEL 3. Under fixed effects Chinese aid adjusted for the population of the recipient increases by 2% with increase in GDP per capita. Interestingly, infant mortality rate loses its significant effects in this model. The model explanatory power does not increase significantly for any of the models displaying alternative dependent or independent variables. again, since the skewness of the Chinese aid variable is not more normally distributed in this case, aid per capita is not the best way to measure Chinese aid, albeit an important control.

TABLE 7 - OLS regression table of the alternative dependent variable per capita Chinese foreign aid to Africa 2000-2014 - (1) Pooled, (2) Random, (3) Fixed

	Dependent variable:		
	Chinese foreign aid, amount (2014 USD), per capita		
	(1)	(2)	(3)
Oil Production t-1, benchmark	-19.734	-37.575	-3.829
	(25.019)	(51.808)	(34.179)
DAC aid, negative growth	22.810	-3.214	-5.346
	(20.730)	(10.786)	(8.009)
UNGA agreement score, t-1	55.389	-72.053	-111.311
	(235.428)	(139.458)	(105.256)
Exports, annual difference	-.00002	-.00001	-.00001
	(.00003)	(.00002)	(.00001)
Control of corruption	-13.520	22.087	16.912
	(26.078)	(24.870)	(16.083)
Democracy dichotomous	27.430	12.851	-2.838
	(26.435)	(23.052)	(17.573)
Infant mortality rate	-.464	-.372	-.005
	(.523)	(.573)	(.370)
GDP per capita (2014 CPI)	.015***	.018***	.021***
	(.005)	(.005)	(.003)
Constant	-33.109	175.890	
	(223.142)	(124.683)	
Idiosyncratic effects:		6728.14	
Individual effects:		45318.44	
Observations	471	471	471
R^2	.050	.066	.088
Adjusted R^2	.034	.050	-.038
F Statistic	3.061*** (df = 8; 462)	30.839***	4.959*** (df = 8; 413)

Notes: Chinese foreign aid, amount (2014 USD) is an aggragte figure (ODA-like + OOF-like + Vague official) between 2000 and 2014 for 50 African countries. It is adjusted for population in the recipient country. Years not recoreded are coded as NA. Years makred not Recommended for research are coded as NA's and have been omitted. Data is from AidData's Global Chinese Official Finance Dataset (TUFF), by Dreher et al. 2017. Models use robust standard errors clustered by time applying heteroscedasticity-consistent (HC) White estimators. *p<0.1; **p<0.05; ***p<0.01

9.4. DAC aid and American aid

Finally, the same models will now be applied but with data from the OECD databank as dependent variables. As briefly explained earlier in the methodology part, the purpose of this is to establish comparison between Chinese foreign aid and western foreign aid with the same models under the same assumptions.

The rather harsh criticism China has received has mostly originated from politicians and leaders in western countries, from the OECD-DAC, and from the United States government. There is no reason to assume absence of self-interest on the part of these actors. It is therefore appropriate to scrutinize aid flows from western countries in the same way Chinese aid have been scrutinized.

This is done first with the logarithmic values of aid commitments from all DAC countries, and then the aid commitments the United States have reported to the OECD between 2000 and 2014. The data on the independent variables and the control are the same the previous models, except with regard to bilateral connections on exports and UNGA voting alignment which is between the US and the respective Africans countries in the sample, and the binary conditionality is not Taiwan recognition but a country's signing or signing-refusal to the Rome statues of the ICC. As with the other models, the variables with large amounts are displayed in thousands and as a mitigation for skewness on the aid amount variable they are logged. The robust standard errors clustering by the time dimension is also taken, and as part of the White estimates the heteroskedastic errors are also controlled for. Total DAC aid to Africa is in TABLE 8. Aid commitments allocation of the United States are displayed on TABLE 9.

TABLE 8 - OLS regression table of Development Assistance Committee (OECD-DAC) foreign aid to Africa 2000-2014 - (1) Pooled, (2) Random, and (3) Fixed

	Dependent variable:		
	DAC foreign aid, amount (2019 USD), logged		
	(1)	(2)	(3)
Oil Production t-1, benchmark	1.039***	.115	.019
	(.098)	(.120)	(.125)
Infant mortality rate	-.007***	-.007***	-.008***
	(.002)	(.002)	(.002)
GDP per capita (2014 CPI)	-.0002***	-.00004***	-.00002*
	(.00001)	(.00001)	(.00001)
Control of corruption	-.031	.169**	.236***
	(.095)	(.083)	(.085)
Democracy dichotomous	.143	.189**	.197**
	(.101)	(.083)	(.083)
Rome Statute signatory	.346***	.281***	.264***
	(.085)	(.063)	(.064)
DAC aid commitments negative three-year growth, binary	-.335***	-.349***	-.356***
	(.081)	(.035)	(.034)
Constant	20.005***	19.983***	
	(.144)	(.213)	
Idiosyncratic effects:		0.2179	
Individual Effects:		1.0903	
Observations	821	821	821
R^2	.299	.186	.193
Adjusted R^2	.293	.179	.131
F Statistic	49.616*** (df = 7; 813)	184.799***	26.018*** (df = 7; 761)
Notes	DAC foreign aid, amount (2019 USD) is an aggregated figure of Total DAC aid Commitments consisting of ODA and OOF activities like Grants, Associated Financing, Technical Cooperation, Loans and Other Long Term Capital, between 2000 and 2014 for 53 African countries. Donor is all DAC member countries put together. Models use robust standard errors clustered by time applying heteroscedasticity-consistent (HC) White estimators *p<0.1; **p<0.05; ***p<0.01		

TABLE 9 - OLS regression table of United States foreign aid to Africa 2000-2014 - (1) Pooling , (2) Random, (3) Fixed, (4) Fixed with interaction effect

	Dependent variable:			
	US Foreign aid, amount (2019 USD), logged			
	(1)	(2)	(3)	(4)
Oil Production t-1, benchmark	.988***	.568**	.564*	-.425
	(.190)	(.272)	(.297)	(.336)
DAC aid, negative growth	-.320**	-.272***	-.290***	-.274***
	(.158)	(.080)	(.076)	(.074)
UNGA agreement score, t-1	.873	-.331	-.469	-.617*
	(.779)	(.384)	(.362)	(.354)
Exports, annual difference	0.00000***	0.00000	0.00000	0.00000
	(0.00000)	(0.00000)	(0.00000)	(0.00000)
Rome Statute signatory	.943***	.849***	.768***	.791***
	(.165)	(.160)	(.166)	(.161)
Control of corruption	-.126	.356*	.607***	1.177***
	(.185)	(.207)	(.221)	(.245)
Democracy dichotomous	.006	.175	.178	.098
	(.193)	(.203)	(.209)	(.203)
Infant mortality rate	-.002	-.012***	-.016***	-.013***
	(.004)	(.005)	(.005)	(.005)
GDP per capita (2014 CPI)	-.0004***	-.0001**	-.00002	-.00002
	(.00003)	(.00003)	(.00003)	(.00003)
Oil Production t-1, benchmark * Control of corruption				-1.891***
				(.377)
Constant	17.340***	17.961***		
	(.333)	(.465)		
Idiosyncratic effect:		0.9533		
Individual effect:		3.1645		
Observations	761	761	761	761
R^2	.285	.098	.122	.158
Adjusted R^2	.276	.087	.046	.083
F Statistic	33.212*** (df = 9; 751)	80.974***	10.809*** (df = 9; 699)	13.070*** (df = 10; 698)

Notes: US Foreign aid, amount (2019 USD), is an aggregated figure of total United States (as part of DAC) aid Commitments consiting of ODA and OOF activities like Grants, Technical Cooperation, and Loans and Other Long Term Capital Total Commitments, between 2000 and 2014 for 53 African recepient countries. Donor is The United States as a member of OECD-DAC. Models use robust standard errors clustered by time applying heteroscedasticity-consistent (HC) White estimators *p<0.1; **p<0.05; ***p<0.01

TABLE 8 shows that Oil Production benchmarked has a strong positive effect on DAC aid, increasing only by 182% if the recipient is above the benchmark. It is statistically significant at the 0.1-level. However, it only retains a significant effect for the pooled MODEL 1, not under random effects or fixed effects. Not surprisingly, DAC aid decrease the last three years shows a strong significant decrease, consistent with the three-year trend. This is included to display this variable's function. Infant mortality rate has a similar effect as with Chinese aid: the coefficient estimate is negative and significant across all three models, showing a -0.8 decrease under fixed effects. Control of corruption is under fixed effects significant at the 0.01 level in MODEL 3 where total DAC aid increases with 26% with increase on the control of corruption index. It implies a good score on Western governance indicators is positively associated for receiving DAC aid. Democracy is also positive, increasing aid by 22% in MODEL 3 if the country is in the democratic camp. If the recipient country has signed the Rome Statute and recognized the ICC, under fixed effects western aid increases by 30% and is significant at the 0.05 level. There is also a slight significant decrease in aid allocation by unit increase of GDP per capita, although these effects are small, -0.002 under fixed effects. The adjusted R-squared is higher than the models for Chinese aid. With the benefit of OECD data being more reliable reported in regular intervals compared to the Chinese aid data from media bases data collection, it reaches 13% under fixed effects.

On TABLE 9 the results of the US aid (as part of DAC) are shown with pooled, random, and fixed effects. In addition, MODEL 4 shows fixed effects and interaction Control of Corruption on benchmarked oil production. Oil production in metric tons has a strong positive association with US foreign aid under pooling, random, and fixed effects. On MODEL 3 it is a 75% increase in aid if the country is on or above the oil production benchmark. It is significant at the 0.10 level. On MODEL 4 Oil production has insignificant negative 34% effect on US aid when control of corruption is zero, and Control of Corruption has a strong positive effect of 224% significant at 0.01 level. Interestingly, when the effect of being above the Oil production threshold is conditioned by the value on the control of corruption index, US aid becomes strongly negative with an 84% decrease, significant at the 0.01 level. This is certainly the opposite of what US policymakers claim to be doing in Africa. In fact, it resembles the relationship the west has posited for Chinese foreign aid. The marginal effects of the interaction term are displayed on FIGURE 6.

FIGURE 6 – Marginal effects plot of interaction effect, TABLE 9

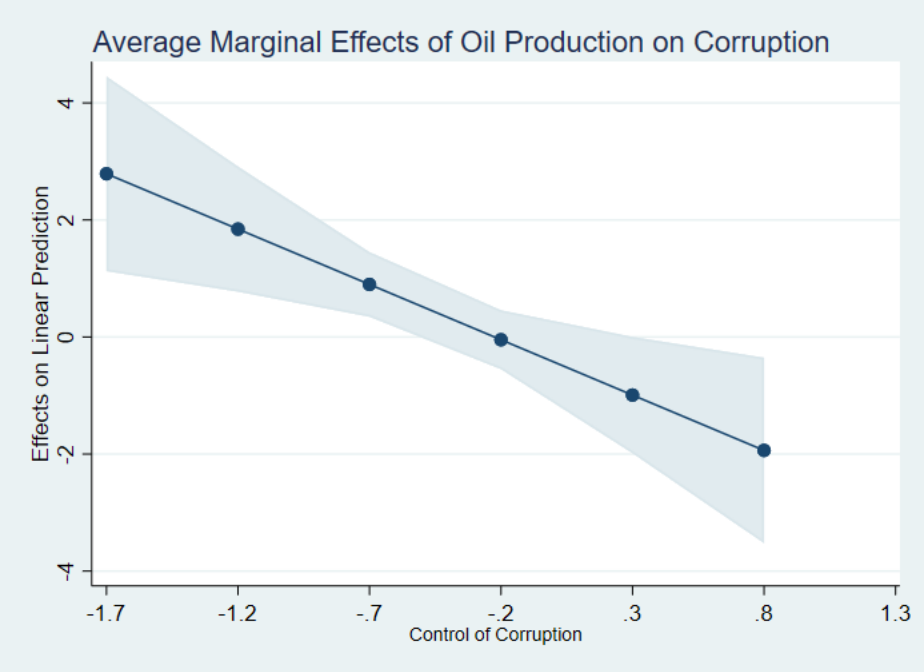


FIGURE 6 shows that US foreign aid decreases for large scale oil producing countries as control of corruption increases. The United States does follow the allocation trends of its fellow OECD members, with a significant 25% decrease of US aid when there is a three-year negative growth trend of DAC aid. Strangely, on MODEL 4 there is decrease of US aid with a unit increase of UNGA voting alignment score. This implies more aid when there was bilateral voting alignment a year before, albeit with the similar large standard error as it had with Chinese aid. Being a signatory of the Rome Statue recognizing the ICC gives a strong positive effect with 115 % increase of US aid on MODEL 3, significant at the 0.01 level. On MODEL 3 there is an 84% increase in aid with one unit increase on the control of corruption index, while democracy does not show any significant effects. Like with Chinese and total DAC aid, infant mortality rate is negative and significant even under strict conditions in MODEL 3, with negative 1.5% US aid with unit increase per 1000 infants dying. GDP per capita does show significant negative effect on aid, but the coefficients are small and not significant under fixed effects. The data on US aid also holds a higher explanatory power than the models with Chinese aid data.

10. Discussion of the results and conclusion

This analysis has tested three hypotheses regarding the determinants attracting Chinese foreign aid in Africa. In addition, the models tested on Chinese foreign aid has been tested on DAC and US aid for comparison. The results are mixed. H1 postulated an increase of Chinese aid with a three-year negative DAC allocation trend, which was significant in pooled and random effects models but not under fixed effects. H2 expected a positive relationship between Chinese aid and oil abundance. On benchmarked oil production there are significant and positive effects under pooled and random effects. The same goes for benchmarked crude oil reserves, which shows positive and significant effects under pooled and random effects, but not under fixed effects. For these two measures, on two models it implies more Chinese foreign aid is allocated toward countries above a threshold in oil production in metric tons and above a threshold on extractable oil reserves still in the ground. The measure of oil abundance that confirms H2 across all three models is oil rents, having positive and significant associations with Chinese foreign aid allocation. It implies a robust and positive association between Chinese aid allocation and African recipient countries that are efficient in oil production. H3 proposed that positive effects of oil abundance will change direction and turn negative when interacted with control of corruption. H3 was not confirmed. The results on Chinese foreign aid, compared to the DAC and US foreign aid, does however have interesting empirical and theoretical implications in need of elaboration in the context of the three schools of thought which has been the guiding baseline for this research framework.

10.1. Discission of the results

10.1.1. Recipient merit

Chinas only clear conditionality regarding Taiwan recognition was the only variable in the linear probability model that was significant and an effect large and apparent effect. It is not a determinant for Chinese aid allocation amount, but it is a decisive factor for whether an African recipient will receive foreign aid from China at all, showing that receiving Chinese aid has effectively zero probability if the recipient government still recognize Taiwan as a sovereign nation and consequently not honoring the One China Policy. While this is a principle of conditionality, aid allocation based on the policies the donor country prefers, it can also be argued as a factor representing self-interest. It asserts Chinas geopolitical strength compared to Taiwan. The aid allocation was clearly biased against the few remaining supporters of a sovereign Taiwan. This sends a clear message to governments that consider displaying idealistic stances in favor of self-determination for the Taiwanese island nation. The last

decades has shown that China does use scare tactics and sanctions against governments or actors who support Taiwan's cause or are critical of the Chinese regime. It is plausible that this is part of a self-interest strategy of stifling dissent in the international community.
The echoing binary variable used to proxy recipient merit on the Western aid models was whether recipient countries had signed the Rome Statue recognizing the International Criminal Court (ICC). This proved to be a strong and significant effect across models both for DAC and the United States. Similar to China, Western donors prioritize countries who support their policies.

Good governance has long been a prioritized conditionality for Western donors, and both DAC and the United States allocate more to recipients with better control of corruption. This effect was found to be strong and significant. This is in line with western claims of aid allocation and donor intentions, giving more to countries with the better polices under governance and institutional quality.
Chinese foreign aid, on the other hand, was consistently negatively affected by increase on the control of corruption index, albeit not significant under the strictest test with fixed effects. If the fixed effects models are to be considered as a final falsifying test in the assumption of whether China actively favors countries significantly not well governed (or are efficient in combating rentierism and widespread bribery), then one accepts that China are ambivalent to good governance in African recipient states. This is in line with the Chinese non-interference policy they officially promote, that they will not condition their aid flows on governance indicators.

As discussed in the data part, researchers should be acutely aware of governance indicators such as the one used here this having a western bias. On the one hand, this is problem because it ignores the contextual and institutional uniqueness of each recipient country and simplify it for quantitative scales. But on the other hand, the surveys, computation methods and conceptual baselines used by the World Bank do have inherent goals in uncovering private sector corruption and growth inhibiting patronage networks, serving as a tool for potential investors and governments (Gerring 2012, 186). The WDI measures have been accused of representing both state and private commercial interests, but equally The World Bank which possessed the resources to consistently systematize this data have an incentive for the indexes to be as reliable as possible. The validity is therefore more questionable for control of corruption when it comes

to Chinas preferences, because it is not a measure made by Chinese expert perceptions or designed with a baseline on Chinese institutions.

Democracy is another conventional Western conditionality, and it fulfills the expectations in this analysis of not having any importance for the Chinese in Africa. The African continent is far from Chinese borders, the risks of democratic proliferation and spillover effects are small with respect to countries not close to the Chinese border, which are the cases where China seems to have a preference for autocracy.
That western aid seems to be slightly biased towards democracies and countries having a larger degree of good institutional quality is also not surprising. The assumptions that China would favor countries with institutionally similar environments should apply for western countries also. Recipients fulfilling a democratic threshold and scores on quality of governance indices that are biased toward western institutional frameworks has to be considered a relatively valid indication of such institutional preferences based on familiarity.

10.1.2. Recipient Need

Recipient need in monetary terms, GDP per capita, only had weak effects for Chinese, DAC and US. Interestingly, for Chinese aid the effect was modestly positive and as the only significant variable when adjusting Chinese aid by recipient country population. This is hardly very surprising, as have been discussed few donor countries have been found to be guided by altruism in their aid allocation in studies integrating several schools of thought like this one.

Infant mortality rate had consistently a stable negative effect on foreign aid allocation for all donors in this analysis. Infant mortality would be expected to have a positive effect on foreign aid allocation if one sees this factor as an entirely recipient need driven determinant. In that case, increase in more infants per thousand under the age of one dying should lead to an increase in aid allocation because the donors see the dire need to alleviate this. But as have been mentioned, infant mortality rate is also a measure for state capacity and performance of the social and health policies of a country. High infant mortality rate can be an indication of poor government efficiencies in these sectors, and consequently financial assistance is money unwise spent in such countries. International organizations like the OECD and the World Bank have in the past been known to respond to high infant mortality rates with structural adjustment programs and management engagement, and it has in the last decades been a recognition that the solutions to developing robust health care infrastructures are more tied to governance and

less to financial resources (Andrews 2008, 391; Shandra, Shandra and London 2012, 196). It can also be a reduction of OOF flows to prevent rising infant levels of mortality. Cross-country studies have found developing countries under high levels of debt repayment also have higher levels of infant mortality rates (Frey and Field 2000, 229), thus making rising infant mortality rates a self-fulfilling prophecy as the result of large concessional loans provided.

10.1.3. Donor self-interest

Annual growth in total bilateral exports had no effects on aid allocation, neither for China nor the United States. This measure applied here only captured the short-term change from one year to the next and did not take into account total trade or trade over longer periods of time. UN voting alignment was not significant with respect to Chinese aid and had consistently a large standard error. While this goes against certain theoretical expectations it is also important to remember this dyadic agreement measure was for all resolutions in a session, not limited to what had special priority by policymakers in Washington. It had surprisingly a negative association with US aid. One explanation is the problematic nature of the variable, where even authors Baily et al. recommends interpreting its direction very cautiously for cross-country time series data (Bailey, Strezhnev and Voeten 2017).

While a decrease in aid was significant and positive for Chinese aid allocation in some models, the assumption of Chinese response aid to longer trends of DAC withdrawal was never robust under fixed effects. Response aid does therefore not appear to be a substantial factor for Chinese aid allocation. A three-year reduction in foreign aid in monetary terms should certainly be enough time for Chinese policymaker to take note of a power vacuum, but it presupposes that there are attracting determinants with the recipients to begin with. Alternative ways to test this could be interactive models where western donors reducing their involvement in country due to sanctions or noncompliance with conditionalities are also recipients China have a vital geopolitical interest in or where ideological friendships from the Cold War persist.

While oil abundance had strong positive significant effects in several of the models, their significance mostly dissipated under the strictest conditions with fixed effects.
The benchmarked binary effects of oil production in metric tons and crude oil reserves in the ground measured in barrels had strong effects under pooling and random effects but lost significance under fixed effects. The change in oil value had very small effects as well.

The oil measure that grants most support to H2 is oil rents as percentage of GDP, showing a highly significant effect 7% increase of Chinese foreign aid under fixed effects. This implies that China could be more interested in allocating aid to recipients that are efficient in their oil production in monetary terms., more than simply the quantity or the oil in the ground. It does make sense for China to be interested in oil sector efficiency if they seek stable flows of petroleum imports for consumption at home.

The third hypothesis aimed to test the accusations laid forward by the rogue aid thesis, but instead of postulating the interplay between of oil and non-democracy, the assumption was that governance proxied by control of corruption was important. This analysis found no evidence that China will allocate less to countries that are oil producing conditional on them having control of corruption. The effects did not change direction and were never significant. If Chinas interest in Africa expressed through foreign aid is oil abundance, good or poor governance does not seem to have an influence.

Interestingly, the analysis found an association between decreasing US foreign aid and large-scale oil production conditioned on control of corruption, after oil production had had a positive effect on US aid in previous models. This is however the interaction effect H3 assumes for Chinese aid. In other words, in this analysis US aid is more in line with the rogue aid thesis than the findings for Chinese aid, focusing on the effects good governance conditioning oil abundance have for foreign aid allocation. As Lee points, out China is relatively new in the global energy market and gaining substantial influence is unlikely given that the traditional large petroleum importers have established practice on the important oil fields and are better aware of the environments useful for extraction (Lee 2019, 582). If the assumption is that less control of corruption makes it simpler for powerful countries to take advantage of oil abundance in a developing country, there is no reason to assume this will not apply to the United States as well. The United States has a long history of supporting repressive and corrupt regimes that possess oil endowments, and their foreign policy have a longer history of cultivating such relationships through foreign aid than emerging donors like China (Taylor 2006, 953). This association must be interpreted with care, however. There is always a danger of endogeneity, where oil rich countries often are not well governed, and this interferes with the effect. It also an important reminder, that the data for the US aid flows are more complete and more valid than AidData and Dreher et al (2017) tracking of Chinese flows. Comparing the Chinese and American models serve as an intriguing point of departure for the debate of

whether it legitimate at all for western countries to accuse China of being the "chief villain" under donor self-interest.

10.2. Conclusion

This thesis focused on the determinants of Chinese aid allocation in Africa between 2000 and 2014. The point of departure is whether Chinese foreign aid is determined by donor self-interest which is what they have been accused of by the West. Running this through a two-step regression framework, in a linear probability model analyzing binary aid and then through OLS-models with aid amounts, three hypotheses under the donor self-interest assumption have been answered. The first clear finding is that countries recognizing Taiwan get no aid, suggesting Chinas one conditionality principle is vital for aid eligibility and selection. The thesis has found that Chinese foreign aid does bias countries performing efficiently in their oil production in the form of a positive association between aid allocation and oil rents. There is also an apparent threshold effect on oil production and crude oil reserves, though these effects are not confirmed under the strictest statistical tests. Chinese aid has a significant increase after long-term decreasing DAC aid across some models, indicating there can be interest in filling the vacuum after western withdrawal in some recipient countries. No findings indicate that China allocate less to oil abundant countries displaying good governance by having good control of corruption.

This thesis argued that this assumption of rogue aid does not makes sense with regard to democracy in Africa, but that governance is a more important intervening factor. This argument has not been strengthened by the results of the empirical analysis. However, there is an effect when running the same models and assumptions on the United States. The US aid allocation decreases significantly and strongly when oil abundant countries are well governed.

This thesis asked in the introduction how well Chinese foreign aid fits in a western framework of foreign aid allocation. The linear probability model indicates that Chinas most important conditionality, the recipient's stance on Taiwan recognition, determined whether a country receives aid at all. Recipient merit is therefore important for Chinese aid allocation. There is also an association between Chinese aid and oil abundance in African countries, which suggest that self-interest is also partly determining their allocation. On recipient need, infant mortality rate had a consistently negative effect for Chinese aid allocation, as well as for western aid allocation, which rejects the assumption of allocation being based on recipient need.

The larger question is how well the conventional models explain foreign aid allocation to begin with. As mentioned, the schools of thought applied here are overlapping, and though Taiwan recognition is defined as a Chinese conditionality, suppressing Taiwan is also part of their foreign policy and self-interest. This can similarly be said for the west: countries displaying the right policies like control of corruption and recognizing the ICC means also that developing countries follows Euro-American institutional standards and are rewarded. As intent goes it cannot be isolated from self-interest. As the Chinese understand development assistance so differently from the west, and the theories positing aid based on self-interest has lost credibility over the decades, interpreting donor intentions from their allocation patterns might not be the universally applicable exercise as scholars have intended. China might not fit into such a framework at all, as they to begin with is categorized as a "new donor", they were never a part of establishing the current aid system, and their development assistance resembles what western countries considers trade, investments, and loans. It is difficult to consider what the donor intent of China in Africa is, where what is clear self-interest traits by conventional understandings can be considered a 'quid pro quo'-situation for China. As discussed, the Chinese government often assists in building roads, railways bridges, dams and refineries in the recipient country for the supply of oil exports. By Chinas standards, distinguishing altruism from opportunism might not make sense at all. Foreign aid is supposed to benefit both parties. Further, if Western countries berating China is guilty of the same self-interested allocation behaviors, one could make the argument that categorizing types of allocation into general frameworks is unhelpful. But there is still a logic to the framework, given the allocation patterns clear inclination of favoring some determinants and open disinclination towards others. Given that the models have displayed that Western aid also have weak associations with recipient need, future research on foreign aid allocation need more assumptions inspired by the realist school and recognize foreign aid as a foreign policy tool. This will make comparisons to so-called rogue donors fairer and more intuitive.

Future research and academic work on Chinese foreign aid need to continue working on improving the data due to the lack of transparent reporting from the rising power. Case studies and process tracing can improve and broaden the understanding of Chinese activity in Africa, but qualitative research should also aim to improve datasets on Chinese aid flows. China is becoming more ambitious at the international stage, exemplified by the belt and road initiative and years of US dysfunctional leadership. The shift to renewable energy sources has been a priority for China. Counter to 'end of history'-paradigms also plaguing the DAC regime, liberal

democracy is certainly not the only game in town, and China is still admired in the developing world despite their disastrous handling leading up to the covid-19 pandemic. New developments justify more data collection and elevation in academic interdisciplinarity. China is becoming a major superpower, and like any superpower it extends and protects its geopolitical interests. Given that Chinese foreign influence will shape economics, politics, culture and development for decades to come, its influence on the poorest in world needs illumination.

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Appendix A

Data and variables

Chinese aid (2014 deflated)

Chine foreign aid amount, 2014 deflated (usd_defl_2014): Deflated monetary equivalent of reported monetary amount Chinese foreign aid (ODA-like + OOF-like + Vague official) in reported currency to 2014 U.S. Dollars

Crude oil reserves

Crude oil including lease condensate reserves (billion barrels) "Crude oil reserves, in billions": A reserve is that portion of the demonstrated reserve base that is estimated to be recoverable at the time of determination. The reserve is derived by applying a recovery factor to that component of the identified coal resource designated as the demonstrated reserve base. A barrel unit of volume equal to 42 U.S. gallons.

Oil Production

Oil production in metric tons (ross_oil_prod): Oil production in metric tons.

Oil value (2014 dollars)

Oil production value in 2014 dollars (ross_oil_value_2014): Oil production value in 2014 dollars.

Oil rents

Oil rents (% of GDP) (wdi_oilrent): Oil rents are the difference between the value of crude oil production at world prices and total costs of production.

Infant mortality rate

Mortality rate, infant (per 1,000 live births) (wdi_mortinf): Infant mortality rate is the number of infants dying before reaching one year of age, per 1,000 live births in a given year.

Democracy dichotomous

Dichotomous democracy measure (bmr_dem): Boix-Miller-Rosato Dichotomous Coding of Democracy, 1800-2010. This data set provides a dichotomous coding of

democracy from 1800 until 2015, however QoG data contains information from 1946 onwards. Authors define a country as democratic if it satisfies conditions for both contestation and participation. Specifically, democracies feature political leaders chosen through free and fair elections and satisfy a threshold value of suffrage

Control of corruption

Control of Corruption, Estimate (wbgi_cce): "Control of Corruption" measures perceptions of corruption, conventionally defined as the exercise of public power for private gain. The particular aspect of corruption measured by the various sources differs somewhat, ranging from the frequency of "additional payments to get things done", to the effects of corruption on the business environment, to measuring "grand corruption" in the political arena or in the tendency of elite forms to engage in "state capture".

GDP per capita (2014 CPI)

GDP at current prices: Gross domestic product (GDP) at current prices is GDP at prices of the current reporting period. From the United Nations Statistics Division. Variable adjusted for inflation by author, using Percent Change from Preceding Period, Seasonally Adjusted Annual Rate. BEA Account Code: A191RL

UNGA, voting agreement score

Score for voting alignment in UN General Assembly (Agree): Voting similarity index between ccode1 and ccode2 in a given session – computed using 3 category vote data (1 = "yes" or approval for an issue; 2 = abstain, 3 = "no" or disapproval for an issue.) - Abstention is counted as half-agreement with a yes or no vote. Vote choice: 1 – Yes, 2 – Abstain

Taiwan recognition

1 – country recognize Taiwan

0 – country does not recognize Taiwan

DAC Total Aid commitments

Aid commitments to countries and regions [DAC3a]: A commitment is a firm written obligation by a government or official agency, backed by the appropriation or availability of the necessary funds, to provide resources of a specified amount under specified financial terms and conditions and for specified purposes for the benefit of a recipient country or a multilateral agency. DAC total aid commitments (2019 USD) is an aggregated figure of Commitments consisting of ODA and OOF activities like Grants, Associated Financing, Technical Cooperation, Loans and Other Long-Term Capital.

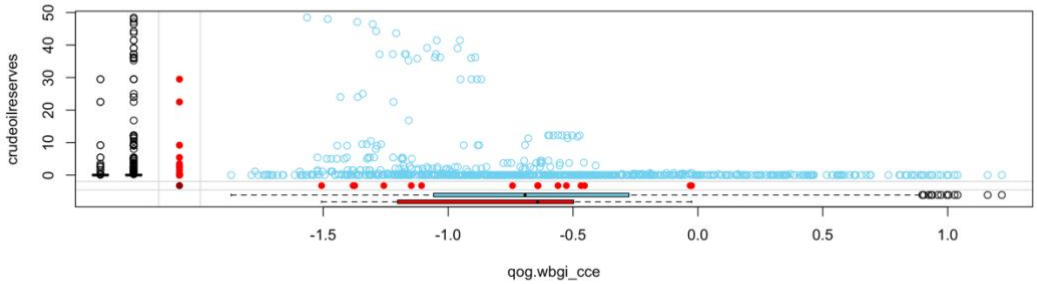
Exports, WITS

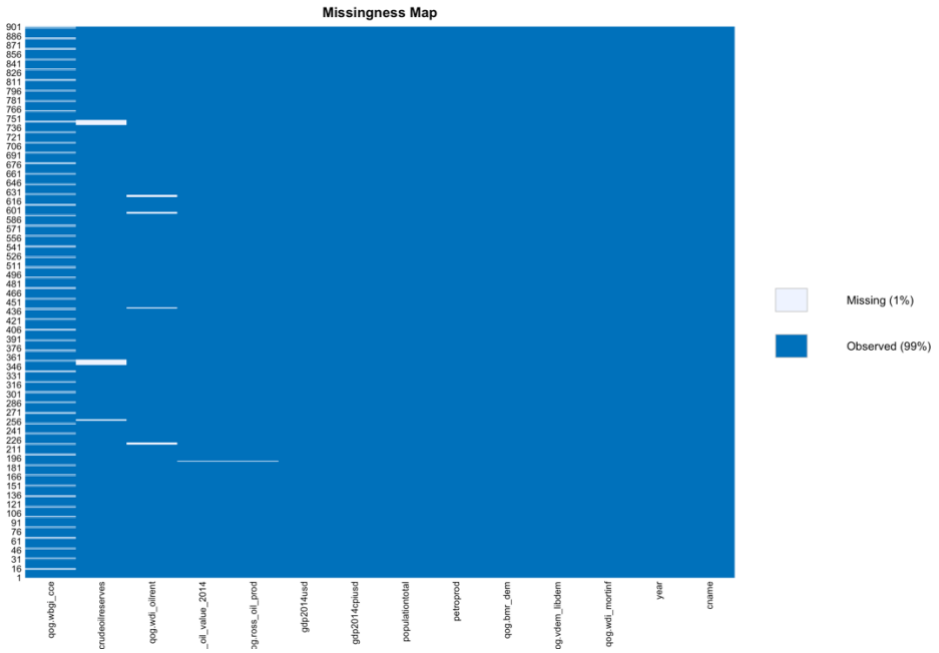
Export (US$ Thousand): China Exports to Africa in 2018 US$ Thousand. WITS-Comtrade provides bilateral import/export trade value in thousands of US dollar.

Percentage of missingness on central variables

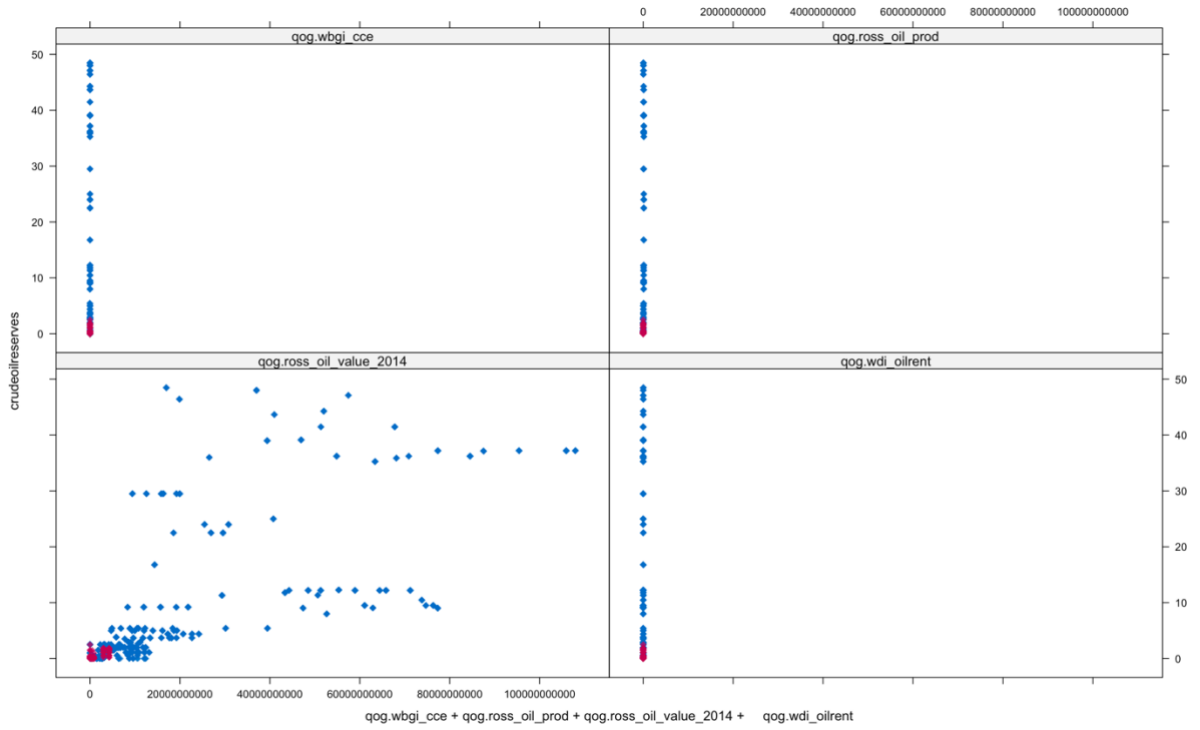
Control of corruption	*Oil rents*	*Infant mortality rate*	*Democracy dichotomous*	*Oil Production*	*Oil value (2014 dollars)*	*Crude oil reserves*	*GDP per capita (2014 CPI*
11.76	1.33	0.00	0.00	0.11	0.11	2,10	0.00

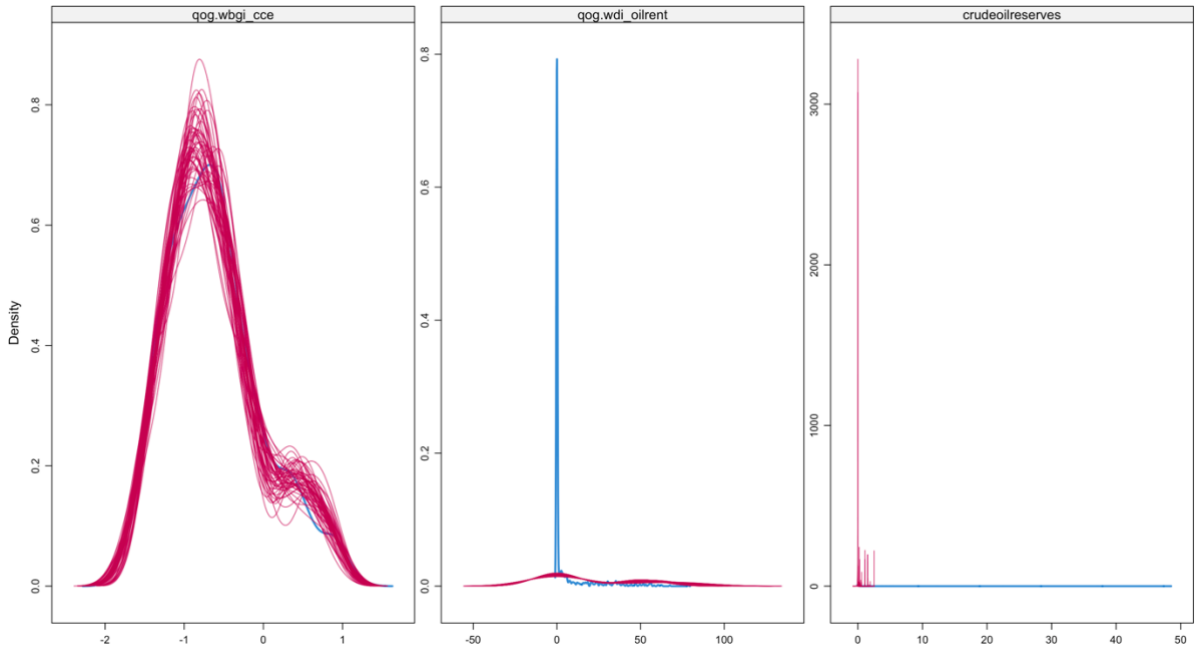
Missingness plots



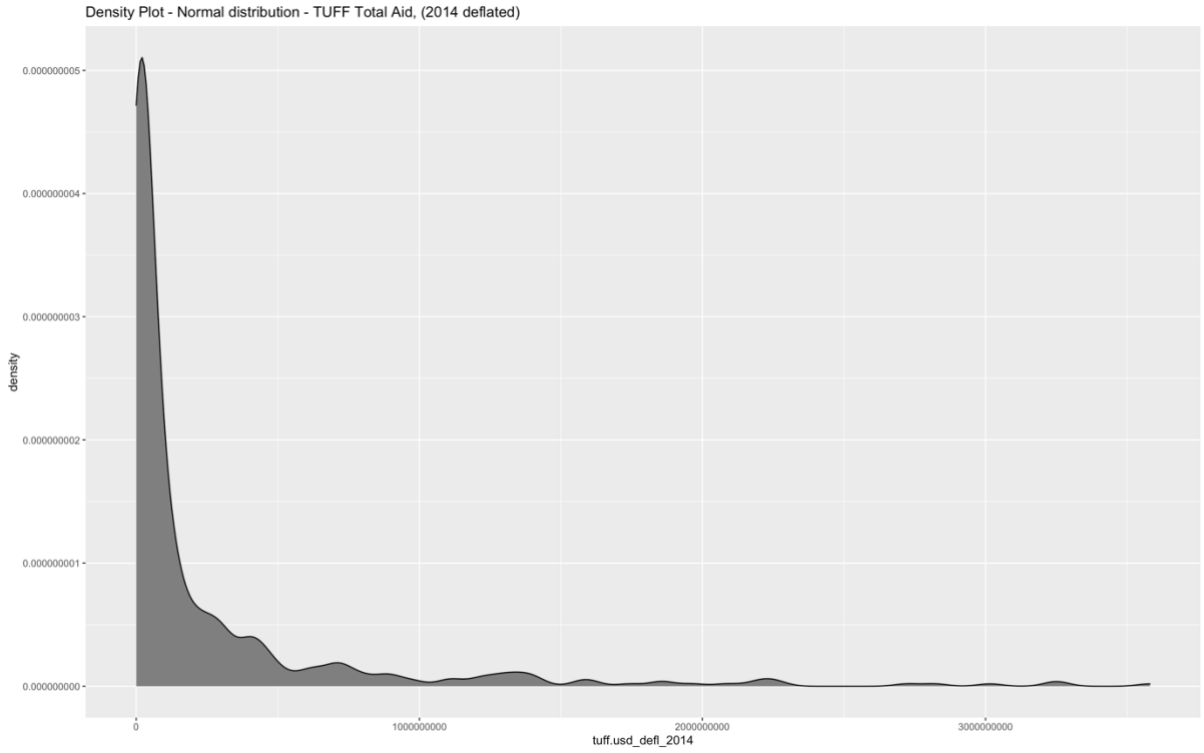


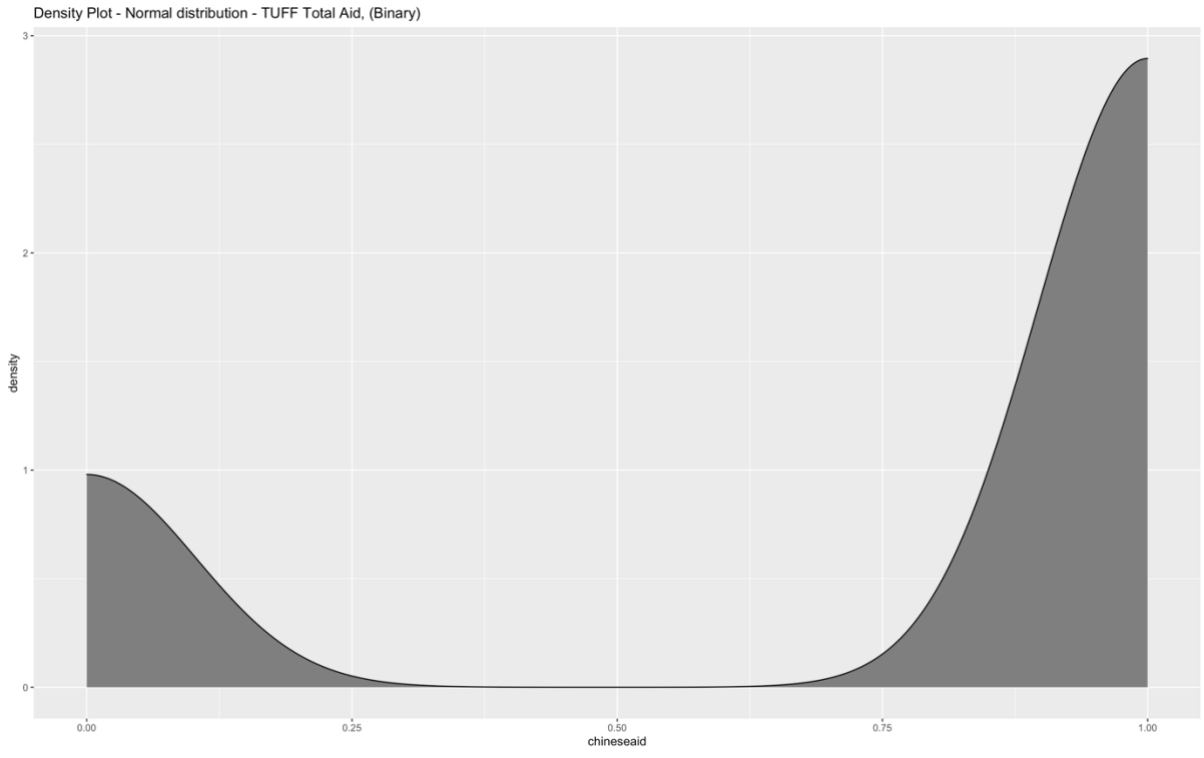
Imputation plots

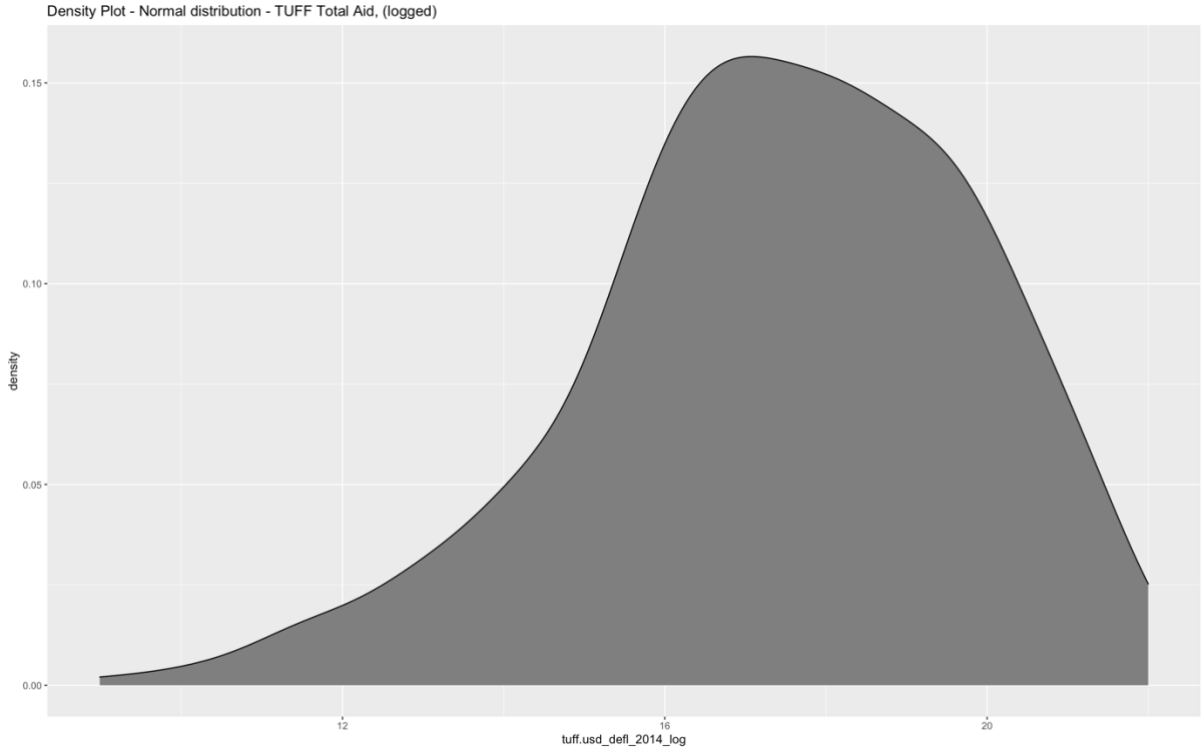

qog.wbgi_cce
qog.ross_oil_prod
qog.ross_oil_value_2014
qog.wdi_oilrent
crudeoilreserves
qog.wbgi_cce + qog.ross_oil_prod + qog.ross_oil_value_2014 + qog.wdi_oilrent

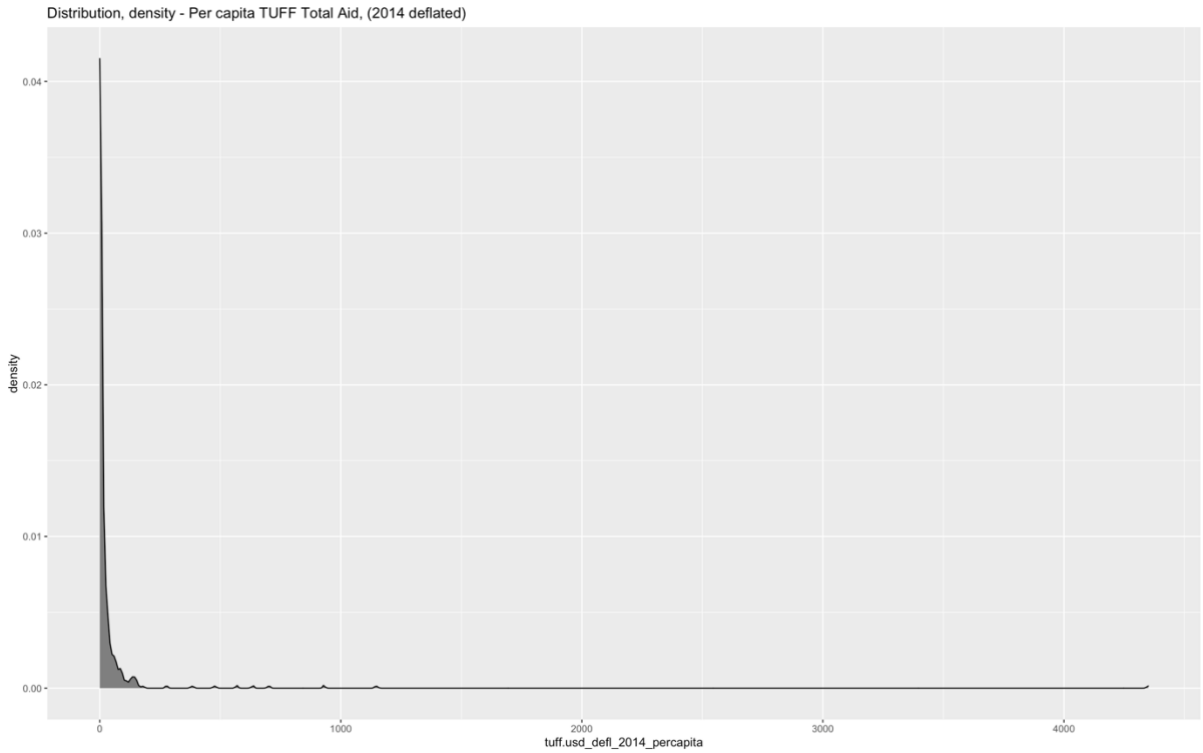

qog.wbgi_cce
qog.wdi_oilrent
crudeoilreserves
Density

Appendix B
Distributions on variables

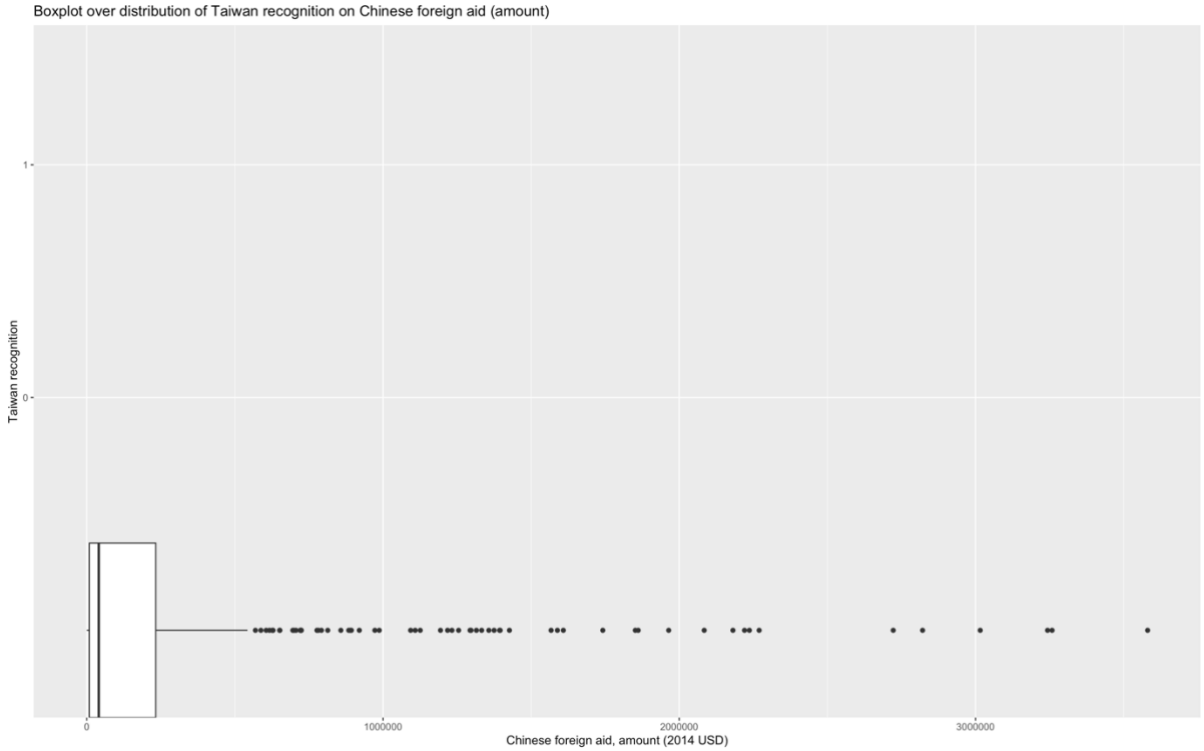





Density Plot - Normal distribution - TUFF Total Aid, (logged)
density
0.15
0.10
0.05
0.00
12
16
20
tuff.usd_defl_2014_log


Distribution, density - Per capita TUFF Total Aid, (2014 deflated)
density
0.04
0.03
0.02
0.01
0.00
0
1000
2000
3000
4000
tuff.usd_defl_2014_percapita

Boxplot of separation Taiwan recognition and Chinese foreign aid amount



Boxplot over distribution of Taiwan recognition and Chinese foreign aid (binary)

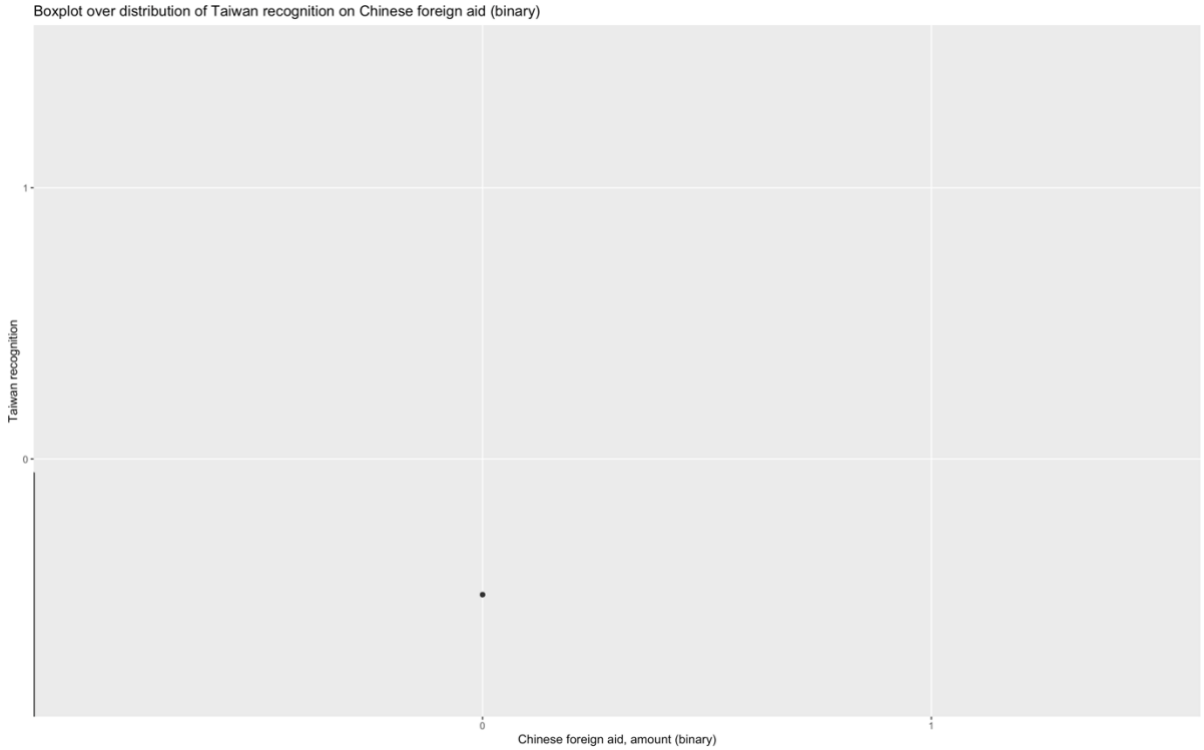
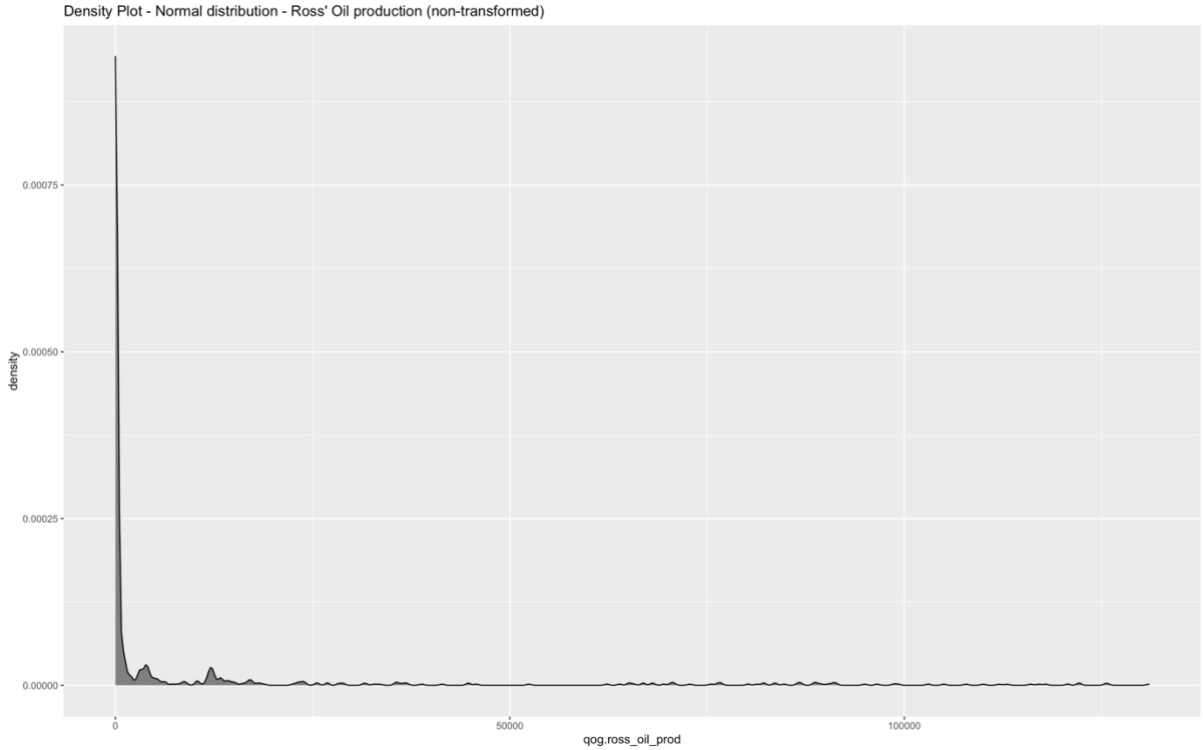
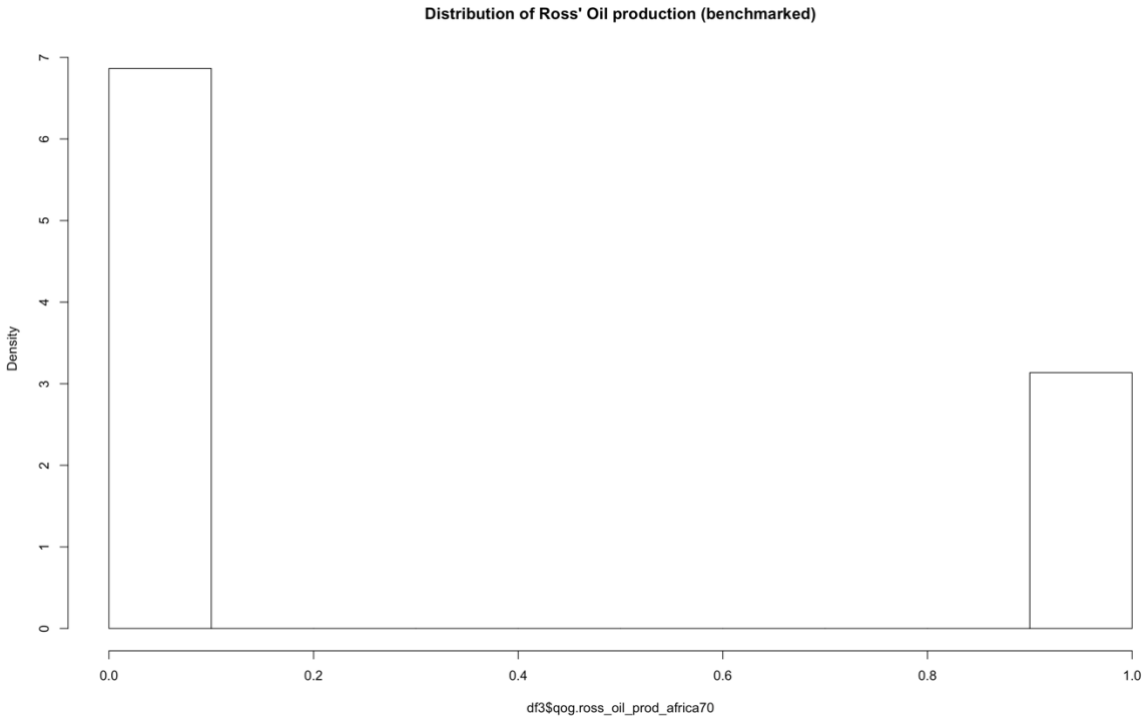


Table showing binary separation

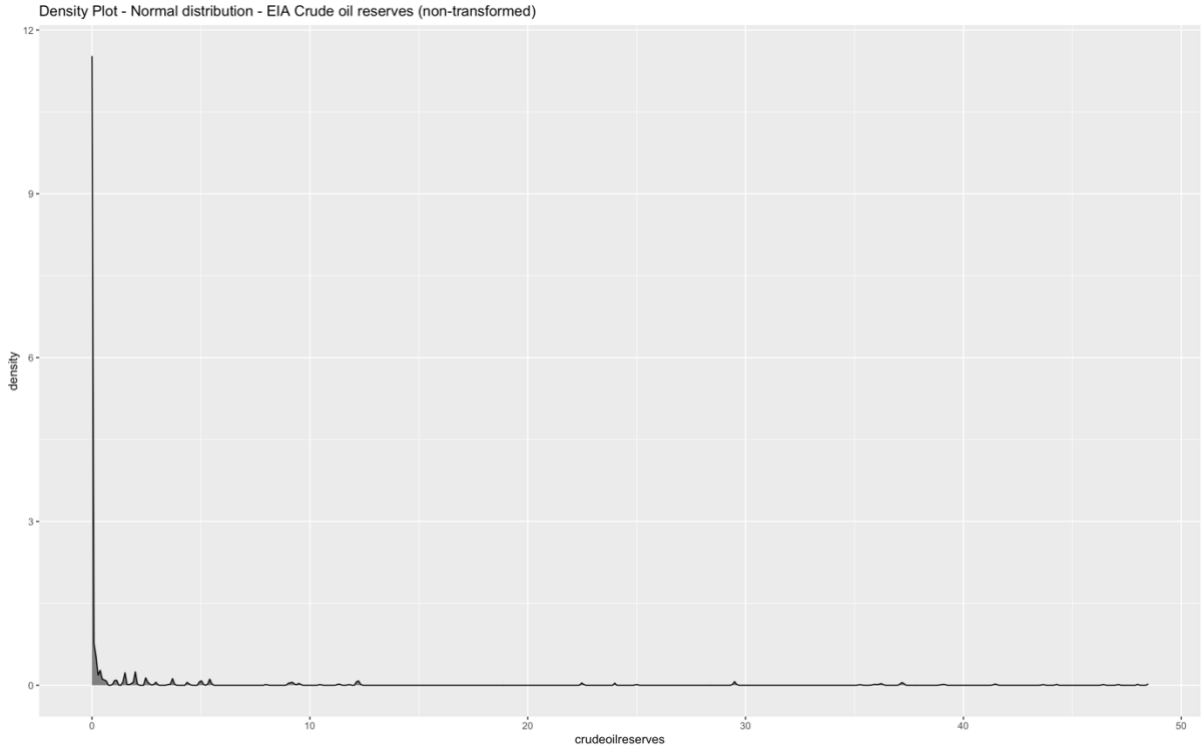
X= Taiwan recognition	Binary value		
Y = Chinese foreign aid (binary)		0	1
Binary value			
	0	118	75
	1	587	0

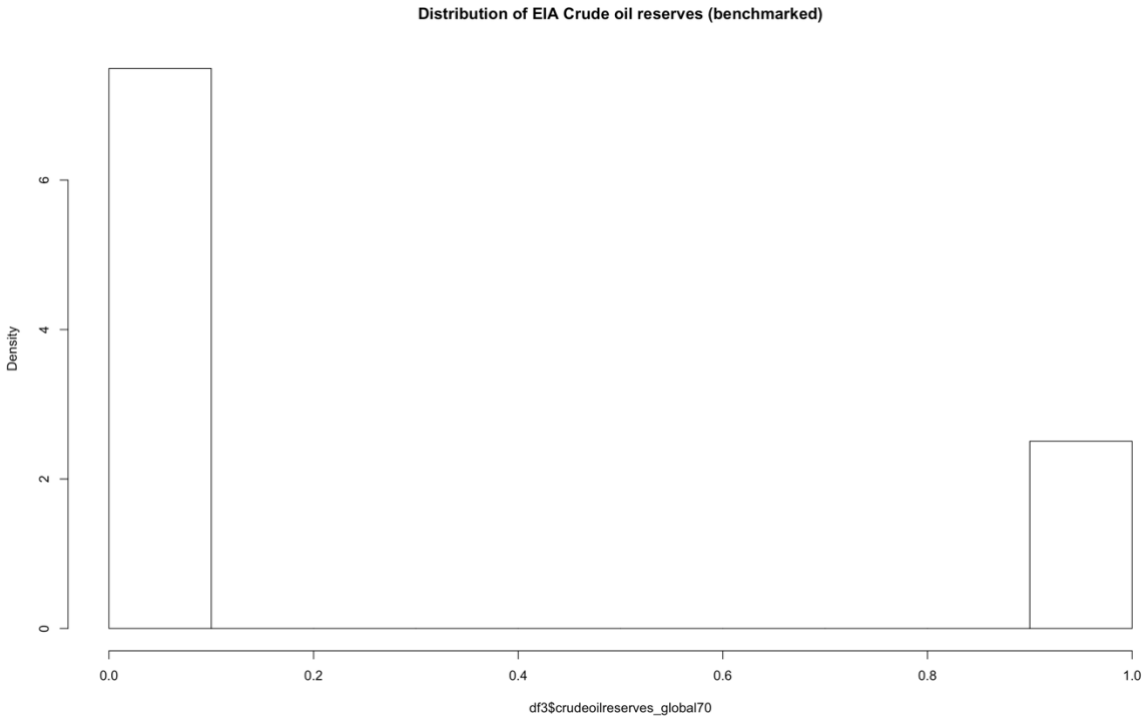
Distribution, oil production





Distribution, crude oil reserves





Appendix C

Studentized Breusch-Pagan Test against Heteroskedasticity – TABLE 3

Model:	Logged Chinese aid amount ~ oil production benchmarked
BP estimate =	8.7041
df =	8
p-value =	0.3679

Hausman Test for Panel Models – TABLE 3

Data:	Chinese aid amount ~ oil production benchmarked
Model:	Random effect MODEL 2, Fixed effects MODEL 3
chisq =	19.541
df =	8
p-value =	0.01222

VIF: Variance Inflation Factor – Variation inflation factors of all predictors – TABLE 3

Oil Production t-1, benchmark	***DAC aid, negative growth***	***UNGA agreement score, t-1***	***Exports, annual difference***
1.200981	1.044697	1.015666	1.022058
Control of corruption	***Democracy dichotomous***	***Infant mortality rate***	***GDP per capita (2014 CPI),***
1.621849	1.161011	1.573353	1.254006