Does Chinese Foreign Aid Giving Differ from Other Donor Nations?

by

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Abstract:
The aid allocation patterns of China are interesting because it is a new donor and because China combines a large economy with a small-coalition, authoritarian government. We investigate whether its aid-giving patterns are different from those of OECD donors? We use the selectorate theory to infer that Chinese aid complements its foreign direct investments but acts as a substitute for trade with potential aid recipients. To test these claims, we used aggregate data on aid from the AidData project and on regime characteristics from the Polity project and the Selectorate theory. We find that Chinese aid predominantly goes to countries with mineral resources rather than to oil exporting countries. We conclude that Chinese aid is different from Western aid in the goals it tries to fulfill but that its allocation-patterns dovetail with what we expect from rich, small coalition donors. Chinese aid behavior, like that of large-coalition donors, fits with the selectorate explanation of who is chosen to receive aid and how much they get.
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1. Introduction

China is now one of the world’s largest foreign aid donors. It used to be a net aid recipient and was controversially counted by the World Bank, along with India and a few others, as one of the Bank’s foreign aid success stories (Easterly 2002). Looked at in terms of its per capita income, however, China could still easily be viewed as a prospective aid recipient. In 2011, for instance, the World Bank placed China 114th in the world in per capita income.¹ Indeed, the World Bank reports that 170 million people in China; that is, one-eighth of its population, still live below the international poverty line of $1.25 a day. Yet China no longer seeks aid; it gives aid. Now that it has chosen to become an aid donor we have an opportunity to assess the logic behind its aid giving and to investigate whether as a non-democratic donor it behaves differently from the vast majority of democratic donors.

Since China is a relatively new member of the aid-giving club of nations, little rigorous research has been done to examine whether prior theoretical work on aid fits the Chinese case. The purpose behind this study is to do just that. Our focus is on answering two fundamental questions about China’s aid recipients: What are the characteristics of those who get aid from China and how does the amount they get relate to those characteristics? Our theoretical point of departure is the selectorate theory which we explain briefly in section 2. Prior applications of selectorate theory to foreign aid tested its implications for democratic, or in its parlance, large coalition, donors (Bueno de Mesquita and Smith 2007, 2009). Since the selectorate theory is applicable to all forms of regimes, we believe the theory can be naturally and productively

extended to aid giving by an autocratic, small-coalition regime such as the People’s Republic of China. Section 3 does just that while section 4 offers a brief narrative of the ways in which China seems to be an exemplar of a rent-seeking, private-goods oriented aid donor. Section 5 introduces the data sources, variables and estimation procedures we use to test the hypotheses about Chinese aid giving introduced in section 4 while section 6 presents the results of our statistical analysis. Section 7 concludes with a summary of key findings and a brief discussion of further research into small-coalition, autocratic-styles of aid giving.

2. Selectorate Theory of Aid

Selectorate models are premised on the idea that leaders are driven primarily to seek their political survival and secondarily to maximize their control over resources (Bueno de Mesquita et al 2003). These models assume that there are always challengers seeking to take the incumbent’s job, thereby compelling incumbents to make taxing and spending decisions in a manner that retains the loyalty of their coalition of essential backers, preventing them from being lured away by political rivals. Leaders allocate revenue between spending on public goods that benefit everyone at home and private goods that primarily benefit those in the winning coalition, doing so in the manner that enhances their own political survival prospects. A central theoretical result indicates that as the size of the coalition on which a government relies for its survival increases, the proportion of government spending oriented toward public goods increases. Conversely, the smaller the coalition on which a leader depends, the greater the emphasis of the regime on keeping coalition loyalty through private goods. Although never absolute – all regimes produce some public and some private goods – the relative mix is strongly shaped by the size of

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2 More recent expansions of the theory include the use of club goods to reward groups or blocs within the winning coalition. See Smith and Bueno de Mesquita 2012; Smith et al 2013.
the regime’s essential coalition of supporters. The empirical evidence for this relationship is strong and robust (Bueno de Mesquita et al 2003; Morrow et al 2008).

From the selectorate perspective, foreign aid is just another policy domain with which to help secure political tenure (Bueno de Mesquita and Smith 2007, 2009). This is true both for donors and recipients. Large-coalition (loosely, democratic) donors are shown to buy policy concessions from recipients who grant the concessions provided that the marginal gains to their government, in terms of funds with which to reward their core backers, outweighs the cost in terms of the policy sacrifices demanded of them. The amount of aid that is given is constrained in equilibrium to be small. This is so according to selectorate logic because aid will only be given if the marginal benefits in terms of leader survival that could be purchased at home by the donor government are smaller than the comparable gains from spending the money abroad. Since there are not many circumstances in which tax-payer money spent abroad yields larger political gains than the same money spent at home, the quantity of aid given is expected to be small.

In the selectorate accounts of foreign aid, the money used for aid comes primarily from rich democratic donors who seek to please some constituents at home through the policy concessions they extract abroad in exchange for aid. These deals, of course, may involve high-stakes policy issues (e.g., peace between Israel and Egypt; pursuit of extremists in Pakistan; preferential trade agreements sought by the Japanese government, etc.) but they may also involve more localized political benefits (e.g., increased sales of relatively expensive American food products as aid to starving people and as a benefit to American farmers). In the selectorate formulation, while too little aid is given to alleviate the poverty trap (Sachs 2005), just the right amount of aid is given to advance the political survival interests of donors and their recipients.
From the recipient’s perspective, the policy concessions sought by a donor in exchange for aid must not be so politically damaging that the incumbent jeopardizes his or her political survival. Hence, the greater the political cost in granting the policy concession sought by the donor, the more aid that the recipient must receive in compensation. Likewise, the larger the coalition of backers on which the recipient relies, the more aid that must be received since the larger the coalition the greater the risk that the concession will displease members of the winning coalition sufficiently that they will defect to a political rival. Enough extra resources must flow in through aid to offset that risk. Furthermore, the richer a prospective recipient is, the lower the probability that it will accept a modest aid deal and so the lower the probability that it will receive aid at all. But, if it does receive aid, it will need to receive a larger amount as compensation for the policy concession extracted from its backers. This follows because as the prospective recipient’s wealth increases, the marginal value of additional money decreases, meaning that more aid dollars must be spent to buy a given concession that is potentially available from a poorer recipient at a cheaper price.

In summary, the selectorate theory predicts that the probability of receiving aid is (1) decreasing as the size of the winning coalition in the recipient state increases; (2) increasing as the salience of the concession to the donor increases; (3) decreasing as the salience of the concession to the recipient increases; and (4) increasing as the poverty of the recipient state increases. Conditional on receiving aid, the amount of aid received is hypothesized by the selectorate models to be (1) increasing in the size of the recipient’s winning coalition; (2) increasing in the wealth of the recipient state; and (3) increasing in the salience to the recipient of the sought-after concession.

Although we focus here on aid as cheap money a recipient can use to shore up her or his hold on power, the theory applies to any source of such funds, including low-interest loans, preferential trade deals and the like (Bueno de Mesquita and Smith 2009; 2013).
3. Selectorate Aid and Small Coalition Donors

Earlier applications of the selectorate perspective to foreign aid emphasized aid-for-policy deals of a particular sort: donors sought policy concessions that were primarily public goods in nature although, as some of the examples above make clear, they could also be private rewards to individuals or groups inside the donor’s winning coalition (Smith and Bueno de Mesquita 2012; Smith et al 2013). Recipient governments overwhelmingly seek private benefits to reward the members of the winning coalition, ensuring their continued political loyalty. Thus, the research into foreign aid by Bueno de Mesquita and Smith (2007, 2009) looked only at a portion of the selectorate theory, that portion that focuses on public goods-seeking donors making deals with private goods-seeking recipients. Here we expand the focus to address expectations when the donor itself is dependent on a small coalition for political survival.

A good starting place to explore the logic of aid-for-private-goods deals is to reflect on how such aid deals differ from ordinary trade. In a trade arrangement a buyer and a seller enter into agreement simply because each has something the other desires and the goods or services in question can all be readily represented as having a monetary value. According to selectorate theory, all aid reflects this translation of what is “bought” and “sold” into monetary terms. With a private goods exchange, however, there seems to be a less compelling reason to denote the transaction as aid rather than simply as trade.

Probably few democratic leaders are content to state blatantly that they are bribing a government to alter its policy choices so as to satisfy the wishes of core constituents in the democratic donor’s state. Consequently, foreign aid is often dressed up as poverty relief, improvement in social conditions and the like even though substantial evidence points to aid’s
general failure in these domains (Alesina ad Dollar 2000; Easterly 2002, 2006; Hook and Zhang 1998; Schraeder et al 1998). Such an effort to disguise the true purpose of monetary transfers seems less pressing when the deal between governments is an exchange of private goods; money in the case of the recipient and some easily divisible and rival good or service for the donor. If the selectorate view is right that a small coalition donor like China seeks private goods, a new puzzle emerges, why are these exchanges labeled as foreign aid rather than just trade?

A plausible answer, we believe, is that there is a time inconsistency in the arrangements China or other resource-seeking small-coalition donors enters into as aid-deals. In trade, goods or services are typically bought and sold now with payment due shortly after entering the contract. They are arrangements that can be terminated with relative ease if the terms of trade change. With an aid deal, that may not be true. The deal may be an investment today that is expected to yield returns in terms of a present and future flow of private benefits, much as policy concessions are designed to lead to present and future public goods benefits for large-coalition donors. In that sense, private-goods-seeking aid donors invest today in aid with an expectation that they will be able to extract wealth in the future, with much of that future flow of wealth controlled by crony-companies of the regime’s winning coalition. That suggests a heavy emphasis by small-coalition donors on projects that invest, for instance, in infrastructure development that is expected to yield a long-term flow of rents as private gains to the politically-favored investing companies.

If small coalition aid deals are long-term rent-seeking investments, then they should be made in circumstances in which the recipient can be relied on to fulfill its end of the bargain down the road when the investment begins to yield large gains. At first blush one might think that this makes large-coalition recipients particularly attractive aid targets for small-coalition donors. A bit closer reasoning, however, makes evident that this is unlikely to be true. Although
larger coalition regimes are more likely to manifest long-term consistency in fulfilling
agreements than smaller coalition regimes (McGillivray and Smith 2004), they are less likely to
grant the sought-after economic concessions in exchange for help with infrastructure
development. In the short-term, large coalition recipients are more vulnerable than small
collection recipients to the risks of alienating many in society and more vulnerable to a rival
democratic candidate promising not to sell out the people’s wealth for short-term gains. Thus,
not only are large coalition leaders less likely to remain in power for a long time but exactly the
sorts of rent-seeking deals discussed here are the sort of actions that may cost them their jobs. In
general, it is likely that the higher price required to purchase reliable rent-seeking opportunities
from large-coalition aid recipients make them less attractive aid recipients than small coalition
governments. On balance, a small coalition donor like China should be no less drawn to give aid
to small coalition regimes than are large coalition donors (Bueno de Mesquita and Smith 2009).

4. China: An Exemplar of a Small-Coalition Donor

A small coalition donor must, of course, have sufficient resources to use foreign aid to
advance the political survival prospects of its leadership. China is an example – though certainly
not the only example – of a small coalition donor. It is perhaps unique, however, in that good
quality data are available with which to investigate its aid-giving, hence our focus on China.

With its massive size, the Chinese central government is able to control vast resources
despite the country’s per capita income limitations. Unlike most donors, China’s central
government is weak on civil liberties and political rights, meaning that it does not require even
passive acceptance of its aid spending from the general population in the way that democratic
governments do (Milner and Tingley 2010). The government, like all donor governments, can
afford to use aid to advance its short-term and longer-term well-being. Unlike most other donors, however, that does not mean that it uses aid to influence the policy choices of recipient governments (Bueno de Mesquita and Smith 2007, 2009; Dreher et al 2008; Rai 1980) so as to benefit a broad coalition of supporters. Being a regime that relies on a relatively small coalition of key backers, China is more likely to use aid to maintain their loyalty through personal opportunities for enrichment rather than through the extraction of public policy concessions from aid recipients. That suggests that China’s government places a premium on private goods acquisition through aid as suggested in the previous section. Still, we should not dismiss out-of-hand the possibility that China’s aid giving is policy oriented.

China’s aid could be driven by its pursuit of policy concessions that benefit all in China but the marginal value of such concessions is likely to be much smaller to the leadership and their coalition of essential backers (family of the leaders; military leaders; senior civil servants; high-ranking party officials) than concessions involving access to expanded private goods now and in the future. That is not to say that the Chinese government – or any small-coalition donor – has no interest in broad, public-goods-oriented policy concessions. Remember, all governments, regardless of coalition size, produce some public and some private goods; it is the mix that differs.

China requires its aid recipients to accept its One China Policy. This substantive policy concession is of great salience to the Chinese leadership and may be of only modest salience to prospective aid recipients, especially among the many in the third-world who voted for the government of the People’s Republic of China to replace the government of the Republic of China on the UN Security Council. As an OECD report in November 2011 noted, “China is well-
known for its practice of offering aid with no political conditions –except one. Adherence to the “One China” policy is Beijing’s central requirement.” (Egbula and Zheng, 2011 p. 4)

The One-China policy concession is easily made by prospective aid recipients. United Nations Resolution 2758, which established that there is one China and that the one China is the People’s Republic was passed overwhelmingly in 1971 by a vote of 76 in favor, 35 opposed, and the remainder abstaining. Since 1971, there is virtual unanimity in the preparedness of governments to accept the One China policy. This is especially true in Africa where China’s aid is concentrated. This then leaves an empirical question. Does China’s aid follow the path of private gains for itself and the strictures of the selectorate theory with regard to who gets aid and how much is promised to them?

Considerable anecdotal evidence in fact supports the belief that China’s aid is oriented toward providing private goods for key backers of the Chinese regime. Consider the energy and mining sectors, two key arenas in which we might anticipate infrastructure investment through aid. The energy sector is, of course, a crucial engine behind China’s growth and so might be thought of as producing a public good in the form of general improvement in the standard of living. Despite more than three decades of rapid economic growth, however, China’s Gini Coefficient – a measure of income inequality – remains above the United Nations warning level indicating excessive inequality. Still, growth has clearly lifted many people out of poverty. Nevertheless, as a recent report in The Washington Post makes clear, the energy sector, as an engine of growth, is also an engine of regime favoritism and cronyism, producing vast wealth for a select few. As The Washington Post reported in May, 2011, “Sinopec’s CEO Fu Chengyu was appointed in April 2011. He is an urbane, English-speaking petroleum engineer and Central

4 See http://english.peopledaily.com.cn/90778/8101041.html
Committee member [emphasis added]. . . His predecessor, Su Shulin, became the deputy Party chief in Fujian Province [emphasis added], following in the footsteps of another former oil executive, Zhou Yongkang, who now sits on the Poliburo Standing Committee and is responsible for China’s vast security apparatus [emphasis added]. . . Sinopec’s connections and wealth ensure that it faces little competition and enjoys easy access to credit from state-owned banks. But they also make it a target for public outrage, and a symbol of a system riddled with corruption by politically connected insiders.” [Source: Andrew Higgins, Washington Post, May 6, 2011]. Although China’s large energy firms, such as Sinopec and Petrochina, are publicly traded companies, their shares are overwhelmingly owned by the Chinese government and the Communist Party.5

The mining sector parallels the energy sector in terms of government control and favoritism. As a recent World Bank study notes, “State control has increased mostly due to growth of Chinese state controlled mining in China and gradually also abroad.” This same study goes on to report that, “There are several indications of a growing government interest, mostly in emerging economies, in controlling domestic mine production as a means to capture a larger share of the rents [emphasis added] from mining.”6 So, it seems that China’s natural resource sector is organized for rent-seeking opportunities that redound to the benefit of key coalition members. In fact, China’s aid is concentrated on the development of these sectors – and their rent-seeking opportunities – to a degree not remotely approximated among democratic donor states.

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5 Like other giant energy companies in China, CNOOC, pursues profit but is ultimately answerable to the party, whose secretive Organization Department appoints its boss. The oil corporation is listed on the Hong Kong stock exchange, but a state-owned parent company in Beijing holds a majority of its shares — and makes all key decisions. See http://factsanddetails.com/china.php?itemid=319&catid=13.

AidData identifies 565 of China’s 1442 aid projects as infrastructure projects in the mining and energy sectors; that is, 39 percent of all Chinese aid projects. For all other donor regimes, energy and mining infrastructure development accounts for only 5 percent of their project commitments; that is, just 2343 projects out of 48,419 identified by AidData. It does indeed seem that Chinese aid is more about helping to meet the recipient’s infrastructure needs to increase the opportunity to obtain critical natural resources from the oil, gas, and mining sectors than is true for other donors.

Chinese aid then appears to look more like foreign direct investment than like trade. If that is correct, then Chinese aid is a complement to Chinese foreign direct investment in recipient countries rather than complementary to trade. It seems more likely that Chinese aid substitutes for trade. Where a prospective recipient is already successfully engaged in substantial trade it has less need of aid – whether from China or anywhere else – to build up its future trading opportunities. Hence, any aid deal it will make will be at a high price and so it is unlikely to get aid albeit if it does get aid whatever the would-be recipient has to offer must be quite valuable because it will demand a large amount of aid for its concessions. If so, China, as other aid donors, is likely to be price sensitive. This suggests that its choice of recipients is likely to look similar to the choice process for more democratic donors in some important respects.

The more accountable the governance of the would-be recipients, the higher the price the recipient seeks to extract in exchange for a deal, whether it is natural resource-based or policy based. Hence, large coalition regimes are expected to be less likely to get aid from China but if they get aid they are likely to get more. The wealth of a prospective recipient with a small-coalition, private-benefits-seeking donor is somewhat more complicated in the case of China. Small coalition regimes are generally likely also to be relatively poor but this is not the case
when the prospective aid-recipient is well endowed with natural resources. In that case, its small coalition structure is reinforced by its wealth (Bueno de Mesquita and Smith 2009b; Jensen and Wantchekon 2004). A private-goods-seeking donor’s hands then are tied. It would prefer to make deals with inexpensive recipients but when the desirability of a prospective recipient is linked to its natural resources, then the choice is to give aid to a small-coalition wealthy regime or not to give aid at all.

To summarize, we hypothesize the following with regard to Chinese (or autocratic donor) aid:

H1. China selects as targets of aid countries with significant prospective future flows of resources derived from infrastructure development, such as improved oil or mining opportunities.
H2. China selects countries amenable to foreign direct investment as targets of aid.
H3. China substitutes aid for trade and so is unlikely to give aid to regimes amenable to trade deals;
H4. China, like other donors, is expected to prefer to give aid to small coalition recipients but to give more aid to large coalition regimes if they get aid at all.
H5. The amount of aid China gives is influenced by the size of the natural resource sectors of the recipient’s economy and so the odds of getting aid is either independent of or increasing in the wealth of resource-endowed prospective recipients.

5. AidData and Chinese Aid

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7 Source: AidData.org; see also Tierney, Michael, Daniel Nielson, Darren Hawkins, J. Timmons Roberts, Michael Findley, Ryan Powers, Bradley Parks, Sven Wilson, and Robert Hicks. 2011.
To ascertain whether China’s aid follows the path of private gains and the strictures of the selectorate theory we turn to the data. Our dependent variables are derived from the AidData project. AidData has assembled data on all aid donors and recipients on a project by project basis. Because China’s aid data are available from 1997-2011, the years during which China has become a major aid donor, we focus on all bilateral Chinese aid for those years. We compare the patterns of Chinese aid to that for all OECD-recipient bilateral aid deals over the same years.

We aggregate the data by recipient-donor country year. This way we can ascertain for each state donor that made an aid commitment, in which years such commitments were made and how much the aid commitments were (in 2009 US dollars). If a country in a given donor-year observation received any aid commitment from the specified prospective donor, we code the dependent variable AnyGrossAid as 1 and otherwise as 0. For those countries and years for which AnyGrossAid=1, we also construct a second dependent variable, lnGrossAid which is the logarithm of the sum of the amount of aid committed by the donor to the recipient country in that year. This, of course, does not mean that the aid was necessarily paid out in full in that year. The flow of the money, itself an interesting question, is not the focus here. Rather, we are concerned with the decision to commit some amount of aid and the concomitant agreement to accept the commitment, both of which are necessary for AnyGrossAid to equal 1 for a donor-recipient dyad and we are interested in how much aid is committed, measured by lnGrossAid. These two dependent variables address the two concerns we articulated at the outset: who gets aid and how much is promised to them.


8 AidData also codes aid given by multilateral organizations such as regional development banks, the World Bank, UNICEF and other UN agencies. Although it will be interesting to explore these data we do not do so here as the selectorate hypotheses tested here need additional modeling to be applied in the multilateral context.
Our independent variables, with small variations due to the years we cover and the availability of data for observations as recent as 2011, echo the variables used in the key tests of the selectorate theory’s earlier application to OECD donors (Bueno de Mesquita and Smith 2009). Thus, we estimate the size of each recipient country’s winning coalition (denoted WB, with B being the designation for the recipient state) each year using the index described in Bueno de Mesquita et al (2003). We also estimate the size of the winning coalition using the Polity Democracy-Autocracy index in a parallel set of tests. Both WB and Polity are normalized to vary between 0 and 1 with higher values denoting more accountable, democratic recipient governments. The normalization facilitates comparisons between the results for WB and Polity. A prospective aid recipient’s wealth is estimated as the logarithm of its Gross Domestic Product (lnGDPB) with the data drawn from the Penn World Tables.

According to the selectorate theory, with its emphasis on aid-for-policy deals, the amount of aid that must be given in exchange for policy concessions increases as governance institutions become more democratic and as wealth becomes greater, reducing the marginal value of the next aid dollar. The theory assumes that if the price rises sufficiently relative to the worth of the concession, donors either do not give aid or give less aid in exchange for a lesser concession. To capture this expected nonlinear effect in the amount of aid given to large coalition or wealthy recipients, we also specify WB^2, Polity^2, and lnGDPB^2 as independent variables when estimating the amount of aid given. This ensures that if there is the anticipated quadratic relationship we will capture it in the estimation equations.

To estimate the opportunity for private gains, we utilize three variables: OIL, ORE, and FDI (net inflows). Trade, which may be motivated by a public goods or private goods orientation, is also included in the estimation equations. The data for each of these variables is
taken from the World Bank. OIL estimates the value of a country’s oil exports as a percentage of its gross national product. Ore exports, trade, and FDI as well are measured as the percentage of GDP each represents. We also control for the logarithm of population size. All else equal, we assume that prospective aid recipients with a large population are more valuable sources of concessions than targets with a small population. Table 1 displays the summary statistics for each variable.

Table 1 about here

The theoretical argument highlights important selection effects that distinguish between those to whom aid is committed and how much aid is committed. Prospective recipients who demand too much aid are unlikely to get any aid at all. Governments desiring to be aid recipients but lacking in the ability to grant meaningful public or private-goods concessions are also unlikely to get aid. Thus, the amount of aid received is contingent on whether one is first selected to get aid at all. To capture this contingent condition, we utilize Heckman models to distinguish between selection equations for the likelihood of receiving aid and regression assessments of the amount of aid received. The selection equation is specified as:

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\text{AnyGrossAid} = a + b_1\text{Governance (WB or Polity)} + b_2\ln(\text{GDPB}) + b_3\text{Oil} + b_4\text{Ore} + b_5\text{Trade} + b_6\text{FDI} + b_7\ln(\text{PopulationB})
\]

The regression equation is as above but excludes \(\ln(\text{PopulationB})\) and adds \(\text{Governance}^2\) (that is, \(\text{WB}^2\) or \(\text{Polity}^2\)) and \(\ln(\text{GDPB})^2\).

6. Results

We begin our analysis with a simple statistical comparison of the magnitude of each aid-recipient’s score on the independent variables as a function of whether they receive aid from
China or from any OECD countries. This allows us a first look at how selection differs across donors. Table 2 reports the regression analyses for China and the OECD each as a dummy independent variable identifying an aid donor, with each of the institutional, wealth, and economic variables in turn as the dependent variable to evaluate selection differences across donors.

As Table 2 makes clear, the Chinese do not match the OECD in terms of the characteristics of their aid recipients nor is the selection of prospective aid recipients random across donors. Only on trade and the Polity score are China and the OECD obviously the same. With this realization in mind, we test our hypotheses while carefully reflecting on selection effects. As noted, we use Heckman models as tests for our propositions. Our central concern is whether Chinese aid giving mirrors the pattern of OECD donors or differs in the manner suggested by our hypotheses.

Table 3 shows the results based on coalition size while table 4 depicts the results when the Polity index is substituted for the crude coalition measure introduced by Bueno de Mesquita et al (2003). The findings are essentially the same so we focus our discussion on the tests that use the more familiar Polity index, with its values normalized to fall between 0 and 1.9

As expected, China is less likely to give aid to a larger coalition regime than to a smaller one. It turns out that the opposite is true in this sample for OECD members. Higher Polity scores (or WB scores) are associated with a higher probability of getting aid among OECD donors

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9 The normalized Polity scores are calculated as [(Polity Democracy – Polity Autocracy)+10]/20. By way of reference points, a standard Polity Democracy-Polity Autocracy score of 10 normalizes to 1; a score of 7, often used as the definitional cut-point for democratic governance normalizes to 0.85 and a Polity score of 0 normalizes to 0.50.
during the years investigated. If, however, we examine the impact of governance as quadratic to allow the possibility of a turning point, we discover that the OECD donors are more likely to give aid as long as a country’s Polity score remains below .75 (+5 on the original Polity scale from -10 to +10); that is as long as it is not a democracy by any standard in the literature, consistent with expectation. Taking the quadratic effect into account in the case of Chinese selection, the odds of getting aid rise as long as the normalized Polity score is less than 0.50 (Polity = 0 in its un-standardized form) and then it falls. In both cases the quadratic terms are highly significant indicating that both the OECD donors and China are much less likely to give aid to polities with accountable governments but China draws the line farther from any standard notion of democracy than do the OECD donors.

While the OECD donors and China are broadly similar in terms of selection on governance criteria, they differ markedly when it comes to the wealth of the prospective aid recipient. As predicted by the selectorate account of aid-for-policy-deals, OECD countries are much less likely to give aid as a prospective recipient’s wealth increases but China is significantly more likely to give aid to well-to-do would-be recipients, perhaps because, as hypothesized, they are well-to-do on the private goods of interest to China: natural resource wealth.

So far we have seen that rich autocracies are much more likely to get aid from China than from OECD members. This is consistent with the pattern suggested by hypothesis 5: autocracies generally are not rich unless they are well-endowed with natural resources. Indeed, the very idea of the resource curse is reflected by this conjunction of circumstances (Humphreys 2005; Jensen and Wantchekon, 2004; Ross 1999; Sachs and Warner 2001). While small-coalition governments generally have poorly performing economies (with Singapore and China itself being notable
exceptions), those endowed with natural-resource wealth generate large GDPs even if at the same time they engender great income inequality and poor performance on quality of life indicators. How then do natural resource endowments influence the prospects of getting any aid?

Oil wealth significantly decreases the likelihood of receiving foreign aid from OECD members. It has no impact on the odds of getting aid from China (although, as we will see, it has a significant impact on how much aid is received if any aid is given). The greater a country’s export of ores – mineral wealth – as a percentage of its GDP, however, the greater the likelihood of receiving foreign aid whether from China or from the OECD countries. Since these two natural resource endowments are essentially uncorrelated with each other \((r = -0.03, N = 14866)\) it is interesting to realize that there seems to be stronger non-market push to secure access to ores than is the case for oil. Critical minerals often are more geographically concentrated than oil and natural gas, perhaps making competition for them more intense.

What about trade and investment opportunities? Here we again see an area of similarity and an important area of difference between China’s aid decisions and OECD member decisions. Those donors who are seeking to acquire products rather policy concessions ought to be unlikely to give aid to societies that are open to trading goods and services and, indeed, this is the case. More trade significantly decreases the odds of receiving aid either from the OECD donors or from China, confirming the anticipated substitution effect between trade and aid. But FDI is an entirely different matter. Investment is an opportunity to secure a hold on the future flow of private benefits. As such it should be an important aid motivator for a small coalition donor such as China and it should not be an inducement to aid for a large-coalition donor like the OECD members (Alesina and Dollar 2000, but see Easterly et al 2004). For large-coalition donors, FDI ought to be a substitute for aid while it is a complement for small-coalition donors. Indeed, the
magnitude of FDI has no impact on the prospects that a country will receive foreign aid from OECD members but it significantly increases the prospects of getting aid from China. The Chinese are more motivated to help build a recipient’s economy through aid and investment, presumably in return for better access to private benefits, including the rent-seeking opportunities referred to in the World Bank’s report cited earlier, than is true for OECD donors.

We have seen some important differences in the decision to give aid reflected both in the assessment in table 2 of the characteristics of regimes chosen to receive aid by the OECD donors and chosen by China and in the selection equations from the Heckman models. That leaves us now with the question of how much aid is committed when the decision is made to give aid. The statistical analysis points to important differences between China’s aid giving behavior and that of the OECD members. We begin with governance institutions.

The selectorate theory leads us to expect that larger coalition aid recipients demand more aid in exchange for whatever concessions they are asked to grant and, therefore, the more accountable, the more democratic they are, the less likely they are to get aid but, if they get aid they are expected to get more aid. The theory also tells us that the impact of governance (and wealth) on the amount of aid is quadratic, first rising and then at some threshold level turning down to lesser amounts of aid for lesser, second-order benefits (Bueno de Mesquita and Smith 2009). The Heckman analysis confirms this pattern for OECD donors. The amount of aid a recipient gets rises significantly with government accountability until the normalized Polity score exceeds 0.40 (-2 for the standard Polity scale) and then it decreases. For China, however, we observe the opposite pattern. Remember, China was especially likely to give aid to rich small coalition, autocratic regimes. The amount of aid given by China decreases as the recipient becomes more accountable up to the point when the normalized Polity score equals 0.59.
(approximately +2 on the standard Polity scale). After that, if China has chosen to give a government aid it gives more aid. Of course, 0.59 is well within the range in which we describe a government in normal parlance as an autocracy or, at best, a mixed regime (Chiozza and Goemans 2004). The actual wealth of the recipient has no bearing on how much aid it receives from China. Wealthier autocrats are more likely to get Chinese aid. How much they get is independent of their wealth but quite dependent on their natural resource endowments. That takes us to the ultimate question, what is the aid used for?

Oil-rich countries, as we noted, are particularly unlikely to be chosen to receive aid, whether from OECD members or China, but if they get aid, they get a lot, whether from China or OECD donors. The story, however, is different when it comes to ore exports and aid. The amount of ore exported as a percentage of a country’s GDP has no bearing on the quantity of OECD aid it receives. If the donor state is China, however, then significantly more aid goes to ore-rich regimes than to those for whom ore exports are a minor part of the economy. In reflecting on that fact it is important to remember what we reported earlier. While only 5 percent of aid projects in general are targeted on infrastructure development in the energy and mining sectors, 39 percent of Chinese aid projects are targeted at just such infrastructure projects. China appears to be seeking better long-term access to minerals and metals, more so than to oil.

FDI has no significant bearing on the quantity of aid China or the OECD gives although, as we noted, it does have a bearing on the prospects that a government is chosen to receive Chinese aid. This is not surprising since the calculation of how much investment to make is situation specific so that different amounts of investment (or aid) buy different degrees of access to private gains in different places. Hence, the decision to give aid reflects the equilibrium expectation that the gain is sufficient. Trade has some beneficial impact on the quantity of aid a
government gets from OECD members although trade decreases the probability of getting any aid. Trade reduces the odds of getting Chinese aid and, conditional on aid being given, has no impact on the amount given. Presumably, in all but a few cases, the cost of aid deals is too high for the OECD when it comes to regimes earning significant amounts through trade. China seems to clearly substitute trade for aid as expected of a private-goods-seeking donor.

7. Conclusions

What does this all add up to? The allocation pattern of Chinese aid is different from OECD donors; it is however, consistent with what we expect from a small-coalition donor who happens also to be economically well endowed. The OECD donors seem to follow the selectorate expectations pretty closely. Likewise, China follows the selectorate expectations as amplified to reflect the survival interests of a small coalition regime. The hypotheses are largely borne out and point to important policy differences between aid giving by the OECD and by China. The prospect of getting aid from the OECD tends to improve with the target society’s poverty but the quantity of aid increases the richer the recipient already is. For China, richer prospective recipients are more likely to receive aid although China is indifferent about their wealth in terms of the quantity of aid given once access to natural resources is established through aid. These tests provide insight both into the workings of aid decision making in more autocratic and more democratic donor states.

Our paper provides one of the first systematic look at China’s aid policy.\textsuperscript{10} Future explorations will need to dig more deeply as data become available into the patterns of aid giving

\textsuperscript{10} Given that Tierney’s team is also working on a china paper that is should be “released” in early Feb, we might want to cite them as a courtesy? \textbf{<- Of course. add the citation earlier and repeat it at least in one other relevant place in the paper.}
by other small coalition donors like Saudi Arabia where it is unlikely that the quest for natural resource wealth is a prime driver in aid decisions.
Table 1: Summary Statistics

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>All</td>
<td>OECD</td>
<td>All</td>
<td>All</td>
<td>OECD</td>
<td>China</td>
<td>China</td>
<td>OECD</td>
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<tr>
<td>AnyGrossAid</td>
<td>19972</td>
<td>0.61</td>
<td>0.49</td>
<td>17380</td>
<td>0.68</td>
<td>0.46</td>
<td>2592</td>
<td>0.14</td>
<td>0.35</td>
</tr>
<tr>
<td>lnGrossAid</td>
<td>13789</td>
<td>10.57</td>
<td>7.56</td>
<td>13519</td>
<td>10.47</td>
<td>7.59</td>
<td>270</td>
<td>15.62</td>
<td>3.04</td>
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</table>

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>WB</td>
<td>21273</td>
<td>0.61</td>
<td>0.26</td>
<td>18947</td>
<td>0.60</td>
<td>0.25</td>
<td>2326</td>
<td>0.65</td>
<td>0.26</td>
</tr>
<tr>
<td>Polity</td>
<td>17200</td>
<td>0.60</td>
<td>0.33</td>
<td>15316</td>
<td>0.59</td>
<td>0.33</td>
<td>1884</td>
<td>0.66</td>
<td>0.33</td>
</tr>
<tr>
<td>GDPB</td>
<td>17563</td>
<td>14.97</td>
<td>6.24</td>
<td>16575</td>
<td>14.87</td>
<td>6.22</td>
<td>988</td>
<td>16.6</td>
<td>6.34</td>
</tr>
<tr>
<td>GDPpc</td>
<td>19761</td>
<td>7.28</td>
<td>1.41</td>
<td>17606</td>
<td>7.23</td>
<td>1.38</td>
<td>2155</td>
<td>7.64</td>
<td>1.64</td>
</tr>
<tr>
<td>OIL</td>
<td>14889</td>
<td>6.13</td>
<td>12.88</td>
<td>13242</td>
<td>6.15</td>
<td>12.89</td>
<td>1647</td>
<td>6.05</td>
<td>12.84</td>
</tr>
<tr>
<td>ORE</td>
<td>15613</td>
<td>2.13</td>
<td>4.80</td>
<td>13908</td>
<td>2.12</td>
<td>4.81</td>
<td>1705</td>
<td>2.22</td>
<td>4.73</td>
</tr>
<tr>
<td>Trade</td>
<td>17819</td>
<td>84.25</td>
<td>42.75</td>
<td>16871</td>
<td>84.32</td>
<td>42.79</td>
<td>948</td>
<td>83.07</td>
<td>42.09</td>
</tr>
<tr>
<td>FDI</td>
<td>17381</td>
<td>4.34</td>
<td>6.89</td>
<td>16439</td>
<td>4.33</td>
<td>6.89</td>
<td>942</td>
<td>4.51</td>
<td>6.98</td>
</tr>
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</table>
Table 2: Demonstration of Selection Effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>China: Coef. (Std. Error)</th>
<th>OECD: Coef. (Std. Error)</th>
<th>F Test: China = OECD, Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>0.56 (0.02) 0.000</td>
<td>0.59 (0.00) 0.000</td>
<td>F=3.34, 0.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=12103; F=34290; R²=0.85</td>
</tr>
<tr>
<td>Polity</td>
<td>0.57 (0.02) 0.000</td>
<td>0.60 (0.00) 0.000</td>
<td>F=1.93, 0.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=10366; F=18882; R²=0.78</td>
</tr>
<tr>
<td>lnGDPB</td>
<td>21.77 (0.42) 0.000</td>
<td>14.47 (0.06) 0.000</td>
<td>F=292, 0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=11462; F=34692; R²=0.86</td>
</tr>
<tr>
<td>OIL</td>
<td>2.77 (0.89) 0.002</td>
<td>4.50 (0.11) 0.000</td>
<td>F=3.75, 0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=8699; F=871; R²=0.17</td>
</tr>
<tr>
<td>ORE</td>
<td>3.74 (0.42) 0.000</td>
<td>2.20 (0.05) 0.000</td>
<td>F=13.40, 0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=9147; F=963; R²=0.17</td>
</tr>
<tr>
<td>Trade</td>
<td>72.98 (3.05) 0.000</td>
<td>77.95 (0.39) 0.000</td>
<td>F=1.29, 0.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=11267; F=20120; R²=0.78</td>
</tr>
<tr>
<td>FDI</td>
<td>4.71 (0.45) 0.000</td>
<td>3.96 (0.06) 0.000</td>
<td>F=2.66, 0.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N=11047; F=2155; R²=0.28</td>
</tr>
</tbody>
</table>
Table 3: Heckman Analysis: China Compared to the OECD Using WB

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>0.21 (0.05)**</td>
<td>2.78 (0.98)**</td>
<td>-0.64 (0.34)#</td>
<td>3.68 (6.81)</td>
</tr>
<tr>
<td>WB^2</td>
<td>-4.86 (0.80)**</td>
<td>-0.18 (0.09)*</td>
<td>0.14 (0.02)**</td>
<td>-1.17 (0.89)</td>
</tr>
<tr>
<td>Ln(GDPB)</td>
<td>-0.99 (0.11)**</td>
<td>4.38 (1.01)**</td>
<td>-2.79 (0.86)**</td>
<td>6.95 (5.90)</td>
</tr>
<tr>
<td>Ln(GDPB)^2</td>
<td>0.07 (1.92)</td>
<td>2.22 (1.21)#</td>
<td>10.31 (5.36)*</td>
<td></td>
</tr>
<tr>
<td>Oil</td>
<td>-0.15 (0.03)**</td>
<td>0.99 (0.26)**</td>
<td>-0.46 (0.28)#</td>
<td>0.18 (1.58)</td>
</tr>
<tr>
<td>Trade</td>
<td>-0.57 (0.27)**</td>
<td>4.45 (2.48)#</td>
<td>4.52 (2.01)*</td>
<td>8.91 (10.89)</td>
</tr>
<tr>
<td>FDI</td>
<td>0.10 (0.00)**</td>
<td></td>
<td>0.11 (0.06)#</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.91 (0.09)**</td>
<td>13.96 (0.76)**</td>
<td>-4.84 (1.07)**</td>
<td>19.88 (9.36)*</td>
</tr>
<tr>
<td>Turning Point: WB</td>
<td>More Aid if WB &lt; 0.29</td>
<td></td>
<td>More Aid if WB &lt; 0.50</td>
<td></td>
</tr>
<tr>
<td>Turning Point: Ln(GDPB)</td>
<td>More Aid if Ln(GDPB) &gt; 12.37</td>
<td></td>
<td>More Aid if Ln(GDPB) &gt; 15.60</td>
<td></td>
</tr>
<tr>
<td>N; Censored; χ^2; Prob.</td>
<td>N =11396; Censored = 3216</td>
<td>χ^2 = 156.2; Prob. = 0.000</td>
<td>N = 638; Censored = 547</td>
<td>χ^2 = 16.1; Prob. = 0.042</td>
</tr>
</tbody>
</table>

**Sig. < 0.01 * Sig. < 0.05 # Sig. <0.10
Table 4: Heckman Analysis: China Compared to the OECD Using Polity

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Polity</td>
<td>0.21 (0.04)**</td>
<td>4.99 (1.07)**</td>
<td>-0.81 (0.29)**</td>
<td>-16.45 (8.81)#</td>
</tr>
<tr>
<td>Polity²</td>
<td></td>
<td>-6.17 (0.89)**</td>
<td></td>
<td>13.94 (7.72)#</td>
</tr>
<tr>
<td>Ln(GDPB)</td>
<td>-0.01 (0.01)**</td>
<td>-0.12 (0.11)</td>
<td>0.14 (0.02)**</td>
<td>-1.41 (0.94)</td>
</tr>
<tr>
<td>Ln(GDPB)²</td>
<td>0.01 (0.00)#</td>
<td></td>
<td>0.04 (0.03)</td>
<td></td>
</tr>
<tr>
<td>Oil</td>
<td>-1.02 (0.12)**</td>
<td>5.59 (1.08)**</td>
<td>-3.28 (0.90)**</td>
<td>12.64 (7.45)#</td>
</tr>
<tr>
<td>Ore</td>
<td>0.49 (0.24)*</td>
<td>0.39 (1.96)</td>
<td>2.25 (1.27)#</td>
<td>13.19 (6.03)*</td>
</tr>
<tr>
<td>Trade</td>
<td>-0.10 (0.03)**</td>
<td>0.49 (0.27)#</td>
<td>-0.50 (0.28)#</td>
<td>0.34 (1.77)</td>
</tr>
<tr>
<td>FDI</td>
<td>-0.08 (0.37)</td>
<td>1.83 (3.18)</td>
<td>5.03 (2.36)*</td>
<td>3.69 (13.38)</td>
</tr>
<tr>
<td>Ln(PopB)</td>
<td>0.10 (0.01)**</td>
<td></td>
<td>0.04 (0.07)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.92 (0.12)**</td>
<td>13.07 (0.93)**</td>
<td>-3.56 (1.28)**</td>
<td>29.46 (11.39)**</td>
</tr>
</tbody>
</table>

Turning Point: Polity
- 0.40
- 0.59

Turning Point: Ln(GDPB)
- 11.00
- 17.62

N; Censored; \( \chi^2 \); Prob.
- N = 9922; Censored = 2365
- \( \chi^2 = 174.6; \) Prob. = 0.000
- N = 561; Censored = 477
- \( \chi^2 = 23.8; \) Prob. = 0.003

** Sig. < 0.01 * Sig. < 0.05 # Sig. <0.10
References


