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# The Needy Donor: An Empirical Analysis of India's Aid Motives

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**Summary.** — With the intension of understanding why poor countries provide aid to other developing countries, we analyze aid commitments by India's Ministry of External Affairs to 125 countries over the 2008–10 period. Our findings are partially in line with our expectations of the behavior of a "needy" donor. Commercial and political self-interests dominate India's aid allocation. We find the importance of political interests to be significantly larger for India than for all donors of the Development Assistance Committee. Moreover, countries that are geographically closer are favored, and countries at a similar developmental stage are more likely to enter India's aid program.


*Key words* — foreign aid, new donors, aid allocation, South–South Cooperation, India

## 1. INTRODUCTION

India, widely seen as one of the success stories of globalization, has significantly accelerated its economic growth since the inception of economic reforms in 1991 (Basu, 2008; Basu & Maertens, 2007; Panagariya, 2010). The country is one of the fastest growing economies in the world and host to some of the largest foreign investment inflows in recent years (UNCTAD, 2010). Yet, for many, India's progress since its independence 65 years ago is disappointing. Despite rapid economic growth over the last decade, some areas in India continue to be severely underdeveloped (Banerjee, 2010). India has a large domestic constituency of people suffering from underdevelopment, chronic poverty, and mal-governance. According to the World Bank's (2011) estimates, 37% of the Indian population is below the poverty line of US$ 1.25 a day. Moreover, India ranks below its neighbors Bangladesh, Bhutan, Nepal, Pakistan, and Sri Lanka in terms of life expectancy, access to sanitation, infant immunization, and underweight children. It also ranks below Bangladesh, Bhutan, and Sri Lanka in controlling the infant mortality rate (Drèze & Sen, 2011), below Sri Lanka in terms of the literacy rate and access to education (UNESCO, 2011), below Nepal in the 2011 Global Hunger Index (IFPRI, 2011), and below Bangladesh with respect to controlling literacy among female youths (Drèze & Sen, 2011).

Therefore, it is not surprising to note that despite its rapid economic growth in recent years, India still receives development aid. In 2009, the total net Official Development Assistance received by India from all donor countries was about US$ 2.502 billion, of which US$ 1.578 billion was in the form of net bilateral aid flows from countries organized in the Development Assistance Committee (DAC) (OECD, 2012). [1] At US$ 630 million, India is still the single largest recipient of development aid from the United Kingdom (OECD, 2012). Moreover, India also receives a substantial amount of aid from international non-governmental organizations (NGOs). For example, in 2010, the Bill & Melinda Gates Foundation committed US$ 100 million to India (OECD, 2012). That being said, it is puzzling to note that India itself is an aid donor. [2] In fact, this puzzle is not new. Indian engagement in delivering foreign aid goes back to the 1950s, with its primary target being to provide development assistance to neighboring countries. Traditionally, Indian foreign aid has focused on technical assistance. Ever since it began in 1964, the Indian Technical and Economic Cooperation (ITEC), India's flagship external assistance program, has provided training, education, and technical expertise to about 40,000 NGO personnel, scholars and leaders from developing countries (Agrawal, 2007).

Over the last few years, aid from India has diversified and gained prominence. During the economic reforms period spanning from 1992 to 2009, official foreign assistance

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provided under the umbrella of the Ministry of External Affairs (MEA) amounted to 18,950 crores Indian rupees (US$ 3.55 billion in constant 2000 prices) according to its annual reports (MEA, 1993–2010). The Ministry allocated 2359 crores Indian rupees (US$ 324 million in constant 2000 prices) to aid-related activities in the 2009 financial year alone (MEA, 2010). According to Manning (2006, p. 375), India, together with China, is one of the two "heavyweights" among the non-DAC donors. India's increased commitment to providing development aid is reflected in the government's decision to set up a separate agency in order to oversee the aid allocation process. [3]

In contrast to the extensive empirical literature on the allocation of development aid from Western donor countries (e.g., Alesina & Dollar, 2000), studies on development assistance provided by non-DAC donors lack rigorous empirical analysis. Exceptions include Neumayer (2003a, 2004) on Arab aid, Dreher and Fuchs (2011) on China's foreign assistance, and Dreher, Nunnenkamp, and Thiele (2011) on aid from donors outside the DAC in general (excluding India). [4] Concerning India's foreign aid in particular, to the best of our knowledge, no prior study provides an econometric analysis of the determinants of India's aid allocation decisions. This paper aims to fill this gap in the literature. A better understanding of the factors driving India's aid allocation decisions may offer important insights into why poor countries serve as donors of foreign aid to other developing countries.

India claims that its aid is more need-oriented than aid from richer donor countries as its economic and political structure is closer to that of other developing countries. If this is the case, India should provide more aid to countries that are closer to India in terms of economic development. We test this prediction empirically. At the same time, many suspect that India might be increasingly using foreign aid as an instrument to gain access to overseas markets for its goods and services, pave the way for Indian investment abroad, and secure access to natural resources (e.g., Agrawal, 2007; Kragelund, 2008). Another argument put forward is that Indian aid is extensively used as a foreign policy tool to expand the country's geopolitical and diplomatic influence (e.g., Agrawal, 2007). The consensus in the literature is that political and commercial interests are important determinants of aid allocation for the DAC group of "rich" donors (e.g., Alesina & Dollar, 2000; Kuziemko & Werker, 2006; Neumayer, 2005), as well as for multilateral organizations (e.g., Dreher, Sturm, & Vreeland, 2009; Kilby, 2011). Not only do we also expect to find this for the "needy" donor India, we expect these relationships to be even more pronounced. We argue that India has more incentives to provide politically and commercially motivated aid since the country lags behind DAC donors in terms of economic development. We will elaborate this hypothesis below and test it empirically.

Our findings show that India's aid allocation is partially in line with our expectations of the behavior of a "needy" donor. Commercial and political self-interests dominate India's aid allocation. We find the importance of political interests, proxied by the voting alignment between donor and recipient in the United Nations, to be significantly larger for India than for all traditional DAC donors. Moreover, we find that India as a donor favors countries which are closer geographically and that countries at a similar developmental stage are more likely to become one of India's aid recipients.

The paper is structured as follows. Section 2 introduces India's foreign aid program and examines its evolution over time. Based on the previous aid literature, Section 3 develops our hypotheses on the aid allocation behavior of a "needy" donor. In Section 4, we empirically analyze the determinants of aid allocations by the MEA based on data for the years 2008–10 from AidData, a project-level database (Tierney *et al.*, 2011). To analyze whether Indian aid is special, we further compare India's aid allocation decisions with those of other donors. In particular, we test whether Indian aid is motivated to a higher extent by political and commercial considerations and to a lesser extent by recipient needs compared to aid from "rich" donors. Finally, Section 5 summarizes our results, concludes, and provides policy implications.

## 2. AN OVERVIEW OF INDIA'S AID PROGRAM

The origins of Indian development aid date back to the Colombo Plan of 1950, which a group of Commonwealth countries (including India) formulated in Sri Lanka with the objective of providing assistance to developing countries in order to raise their respective living standards. Along with the Colombo Plan, India started providing aid in the form of grants and loans. India's primary target in its early days after independence was to support neighboring countries, in particular Bhutan, Myanmar, and Nepal. [5] However, despite its active role, Indian development aid largely remained confined to the field of technical assistance, mainly due to resource scarcity and strong demand for developmental funds within the country. As a founding member of both groups of states, India's aid program was anchored in the Non-Aligned Movement and the Group of 77 at the United Nations. Moreover, India's aid activities are manifestations of the country's foreign policy goal to promote multilateralism (Taylor, 2012).

After the collapse of the USSR and a severe balance-of-payments crisis, India introduced pro-market economic reforms in 1991. Eventually, as the economy grew stronger, India deepened its engagement with developing countries and extended its aid program. The 2003–04 budget speech is considered as a sharp break in India's role as an actor in international development cooperation. India wanted to be perceived primarily as an aid donor and not as a recipient of foreign assistance. Following the speech, India announced several key changes to its development cooperation (e.g., Price, 2004). First, the country would only accept government-to-government aid that is untied and provided by the European Union or five selected countries (Germany, Japan, Russia, United Kingdom, and United States). Second, India would repay its debt to most of its bilateral donors and multilateral institutions. Third, it would extend its own aid effort to other developing countries through debt cancellations for some Highly Indebted Poor Countries, and an increase in its grant and project assistance under the so-called India Development Initiative. Although the actual policy changes were softer in the beginning than the speech seemed to imply (see Price, 2004 for a discussion), it became clear that India intended to play an important role in the world of international development cooperation. The provision of credit lines via India's Export–Import (Exim) Bank is one of the most prominent outcomes of these reforms.

To provide a better understanding of how India's aid program evolved over time, we compiled data on India's aid budget since 1966 based on the annual reports of the Ministry of External Affairs (MEA, 1967–2011). Our aim is to mimic the OECD's definition of aid as closely as possible. Specifically, the OECD DAC defines Official Development Assistance (ODA) as financial flows to developing countries provided by official agencies with the objective to promote economic development and welfare, and that contain a grant element of at least 25% (see http://stats.oecd.org/glossary/detail.asp?ID=6043, accessed July 2012). Although we lack detailed

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information on the concessionality of each individual loan, aid provided by the MEA by and large qualifies as ODA. According to a study by ECOSOC (2008), 80% of the total aid disbursed by India is in the form of grants. The remaining fraction consists of loans with an estimated grant element of 53–57%.[6] Although we lack information on aid provided through other ministries, the figures should provide the reader with an intuition of the overall evolution of the size of India's aid program as we cover the country's most important aid outlet.

As can be seen from Figure 1, there is a spike in India's aid budget in 1972.[7] This is largely due to the additional external assistance provided by India to Bangladesh, which obtained independence from what was formerly known as West Pakistan (now Pakistan) in 1971 with the help of India. According to the MEA annual report in 1973, India allocated about 167.6 crores Indian rupees (about US$ 369.7 million in 2000 constant prices) of aid to Bangladesh in 1972 (mostly in the form of grants and concessional loans). India's aid disbursements suffered a decline during the early 1990s, a period marred by balance-of-payments problems and political crises. However, from the mid-1990s onward, there has been a surge in disbursements of development aid. Though there were ups and downs, which could be attributed to the change in government in 2004 and to the Global Financial Crisis starting in 2008, India's aid budget shows an increasing trend since the mid-1990s.

Taken together, India's aid budget rose from 13.4 crores Indian rupees (about US$ 40.3 million in constant 2000 prices) in 1966, to 2,917.4 crores Indian rupees (US$ 362.8 million in constant 2000 prices) in 2010. This amount, which only captures MEA aid, is comparable to Austria's total bilateral ODA (US$ 395.2 million in constant 2000 prices) and amounts to about two thirds of Italy's total bilateral ODA (US$ 547.0 million in constant 2000 prices). A comparison with the figures on non-DAC donors provided in Dreher *et al.* (2011, p. 1952) underlines the fact that India is one of the most important providers of development assistance outside the DAC.

This increase in aid amounts can be largely attributed to India's economic growth over the last two decades. The dashed line in Figure 1 plots aid as a share of gross national income (GNI), the usual measure of donor countries' aid effort. As can be seen, India's aid effort reached an all-time low in 1994 with 0.013% of GNI. After that, it gradually increased to 0.051% in 2005, the year after the Indian National Congress-led United Progressive Alliance (UPA) took power from the Bharatiya Janata Party (BJP). In subsequent years, India's aid effort remained below 0.05% of GNI. It is thus well below the official UN goal of 0.7% that has been set for rich donor countries.

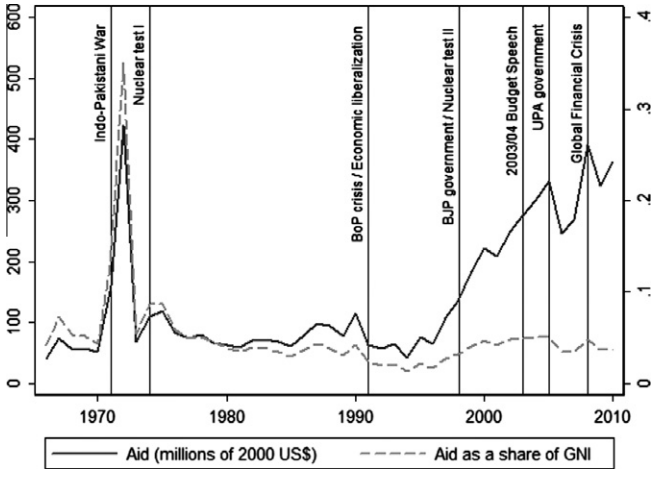


Figure 1. *Aid provided by the MEA in millions of constant 2000 US$ (1966–2010). Source: Ministry of External Affairs (MEA, 1967–2011).*

In addition to the MEA, India provides concessional finance via its Exim Bank. The sum of all financial flows provided by the Exim Bank during 2005–09 and registered on AidData (Tierney *et al.*, 2011) amounts to US$ 2.45 billion (in constant 2000 prices). In contrast to MEA aid, the largest share of Exim Bank loans (73.2%) was allocated to Sub-Saharan African countries. Although Sinha and Hubbard (2011) find that most credits satisfy the criterion of a grant element of at least 25%, they conclude that Indian lines of credit (LOCs) do not qualify as ODA as defined by the OECD. Since the credit lines are extended for the purpose of export promotion, these flows meet the criteria of officially supported export credits instead.[8] Therefore, we restrict our empirical analysis below to cover financial flows provided by the MEA only.

## 3. THEORY AND HYPOTHESES

The extensive literature on the allocation of development aid emphasizes that aid from Western donors and multilateral institutions is guided by strategic interests, in addition to economic needs in developing countries (Alesina & Dollar, 2000; Dreher *et al.*, 2009; Kilby, 2009a; Kuziemko & Werker, 2006). In contrast, research on non-DAC aid is still in its infancy. Manning (2006), ECOSOC (2008) and Kragelund (2008, 2010) provide good overviews of the aid activities of these so-called new donors. Among the few econometric studies on aid allocation by non-DAC donors are Neumayer (2003a, 2004) on Arab aid, Dreher and Fuchs (2011) on China's foreign assistance, and Dreher *et al.* (2011) on aid from donors outside the DAC in general. The literature usually groups the determinants of a donor's aid allocation into three categories. First, aid allocation follows recipient needs. Based on humanitarian motives, altruist countries provide more assistance to poorer countries. An important goal is poverty reduction. Second, aid is allocated based on good policies. Following the idea of merit, countries with good policies and good institutions are supported through increased aid flows. Third, donors' aid patterns are shaped by political and commercial self-interests. In the following, we discuss whether and how these motives are reflected in India's aid policy.

According to an early scholar of Indian aid, India provided aid to neighboring countries "with the sole objective of restoring the local citizens to a place of primacy" (Banerjee, 1982, p. 27). In line with this, the Indian government of today claims that its aid program responds to the economic needs of developing countries. For example, the MEA describes the ITEC program as "an earnest attempt by India to share the fruits of its [i.e., India's] socio-economic development and technological achievement with other developing countries" (ITEC, 2011). Referring to the role that Indian values might play in India's aid provision, Meier and Murphy (2011, p. 7) point out that, "Hinduism, Buddhism, Islam and Sikhism all espouse solidarity with the suffering and giving without expectations for return." If this is the case, India's aid should be targeted to the countries in greatest need. We test the following hypothesis:

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**Hypothesis 1a.** The poorer a country, the more likely it is to receive Indian aid and the more aid that it will receive.

Scholars of Indian aid argue that the country's aid is particularly need-oriented since it provides the "appropriate technology and managerial experience" to other developing countries (Banerjee, 1982, p. 55). Furthermore with its own experience in guiding internal and external development projects it "is now bringing to the table its experience in supporting successful small-scale programmes" such as the Small Development Project (SDP) in the areas of education, health, and infrastructure (Chaturvedi, 2012). Along these lines, the Indian MEA claims that it "possess[es] skills of manpower and technology more appropriate to the geographical and ecological conditions and the stage of technological development of several developing countries." [9] If we take this argument at face value, this implies that India should allocate more aid to countries that are at a similar stage of development. Consequently, aid from India should decrease with a recipient country's distance from India's own development level. We will test the following hypothesis:

**Hypothesis 1b.** Countries at a similar stage of development are more likely to receive aid from India and receive more aid if they are among India's aid recipients.

At the same time, India emphasizes that its aid serves "mutual benefit" (ITEC, 2011), i.e., its aid allocation is also motivated by Indian interests that are not directly related to the developmental concerns of its partner countries in the developing world. [10] In this regard, the MEA (2004, p. 133) openly admits that "[t]he Government has been using development aid, including grants and LOCs on concessional terms as tools for the promotion of India's political, economic, and commercial interests." With respect to commercial interests, Indian aid is seen as an instrument not only to gain access to overseas markets for its goods and services, but also to pave the way for Indian investment abroad (Agrawal, 2007; Kragelund, 2008; Price, 2004). The fact that India's aid is mainly "tied aid" suggests that commercial interests play a dominant role. [11] Moreover, India's aid is supposedly targeted at developing countries possessing oil and other natural resources in order to meet its own rising domestic demand for energy resources (e.g., Chanana, 2009). While the MEA (2009, p. xiii) admits that its aid was "helping Indian companies get project contracts and orders for supply of goods," it is emphasized that "the LOCs have helped in infrastructure development in these regions thereby creating considerable goodwill for the country." Additionally, with respect to the TEAM-9 [12] program, Kragelund (2008) also identifies an overlap with the business activities of Indian oil companies.

In addition to commercial interests, the Indian foreign aid program is seen as a foreign policy tool to expand the country's geopolitical and diplomatic influence beyond the South Asian region, as well as an attempt to build military alliances elsewhere (e.g., Agrawal, 2007). In this regard, Lafargue (2006) notes that Zambia, an Indian aid recipient, did not criticize India's nuclear tests in 1998 and in 2003 officially recognized the disputed Jammu and Kashmir regions as being a part of India. Aid is also considered by some to be a part of India's efforts to obtain support for its bid for a permanent seat in the United Nations Security Council (e.g., Kragelund, 2008). [13] Moreover, India's aid program is considered as a tool to improve its image around the world (Taylor, 2012). This is supported by the MEA's statement that the ITEC program "has generated immense goodwill and substantive cooperation among the developing countries," and that it "constitutes an integral part of India's South–South Cooperation effort which has been a traditional pillar of the country's foreign policy and diplomacy" (ITEC, 2011). According to Agrawal (2007, p. 2), India aims to "develop a viable "pro-India" constituency among key decision makers in recipient countries." [14] Focusing on how India can actually use aid as a foreign policy tool, Dutt (1980) lists five elements: first, to improve bilateral relations, second, to improve India's image, third, to gain leverage and influence over recipient countries, fourth, to reward recipients' policy position, and fifth, to maintain the stability and status quo in recipient countries. [15] Taken together, we test the following hypothesis:

**Hypothesis 2a.** India's aid allocation is guided by India's political and commercial self-interests.

With India emerging on the world stage as a significant provider of development assistance, critics of its aid program question the diversion of resources away from internal development given the chronic socio-economic problems plaguing India. It is this paradox which raises suspicion that India's aid has mainly been allocated in accordance with the country's own interests. We expect a "needy" donor to behave differently than a developed donor country. More precisely, the importance of self-interest should be larger in India's case than for "rich" donor countries for several reasons. First, a "poor" donor is more exposed to public criticism of its aid allocation because of domestic deficiencies than a "rich" donor. In order to defend its aid allocation vis-à-vis its electorate, the country might be inclined to follow political and commercial interests to a larger extent. In this regard, Price (2004) notes that the Indian government had to emphasize the benefits that accrue to India in order to gain domestic support for its foreign aid policy, especially the aid reforms after the 2003–04 Finance Minister's budget speech. Note that this need to defend aid expenditure is even larger in democracies like India, where the government faces elections, than in autocratic donor countries. [16] A second explanation is evident if one assumes a declining marginal utility of wealth, i.e., a "needy" donor like India values an additional dollar of wealth more than richer countries. The "poor" donor, lagging behind the "rich" donor in terms of wealth, consequently has more incentives to provide strategic aid than the "rich" donor does. We formulate the following hypothesis:

**Hypothesis 2b.** While the elasticity to recipient needs is lower for India compared to "rich" donors, the opposite is true for political and commercial factors in regard to their respective aid allocations.

## 4. EMPIRICAL ANALYSIS

### (a) *Overview*

In this section, we employ data on aid commitments by the MEA in constant 2000 US dollars, obtained from the project-level database AidData (Tierney *et al.*, 2011). Data are available for the 2008–10 period. While the first entry in the aid database is "Welfare Activities for the Muktijoddhas (Freedom Fighters)" in Bangladesh in 2008, the database ends with an IT center in Osh in the Kyrgyz Republic in 2010. In what follows, we limit our analysis to aid projects that are able to

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be traced to specific countries, thus excluding aid provided to world regions where information on the country breakdown is absent. [17] To follow the OECD's definition of ODA, we further exclude projects related to military assistance, as well as aid provided to countries that are not on the DAC list of aid recipients. [18] Our primary aim is to estimate the motives behind India's aid allocation decisions. Beyond that, we compare India's aid allocation to that of other donor countries in order to investigate whether aid from the "needy" donor India is allocated based on different grounds.

India's allocation of aid amounts in the 2008–10 period is represented graphically in Figure 2. The lion's share (89.7%) of India's aid administered by the MEA was allocated to South Asian countries. With the exception of Pakistan, the six remaining South Asian countries were all beneficiaries of Indian aid in this period of time. Southeast Asian countries received 5.5% of MEA aid during this period. This corresponds to a total of 18 countries which have obtained development assistance in this region. During the same time period, 2.2% of the Ministry's total aid amount was allocated to 38 Sub-Saharan African countries, while 1.6% was directed to eight transition economies in Eastern Europe and Central Asia. In the Middle East and North Africa, only Palestine and Syria were recipients of Indian aid (1.2% of India's total aid amount in the 2008–10 period). Indian support in this region was significantly concentrated on providing various types of humanitarian assistance to Palestine. Finally, less than 0.1% of total aid allocations by the MEA went to 10 Latin American countries. Taken together, it is clear that India strongly favors countries within its region, as has been argued previously (e.g., Katti, Chahoud, & Kaushik, 2009; Meier & Murphy, 2011; Price, 2005).

Most of India's aid is project aid, with some countries, such as Bhutan for example, also receiving budget support. India also engages in humanitarian aid, including disaster prevention activities. Figure 3 shows in detail the country's aid allocations for each sector. As can be seen, the largest amount of aid (23.1%) was committed to the energy sector (DAC purpose code: 230), covering both the production and distribution of energy in recipient countries. The second most important sector was drinking water provision and sanitation facilities (code: 140), making up 15.0% of the Ministry's total aid amount. 12.8% of MEA aid was allocated to transport and storage facilities in recipient countries (code: 210), closely followed by 11.8% earmarked for commodity aid and general program assistance (code: 500). None of the remaining sectors alone received 10% of India's total aid amount. Taken together, the Ministry directed about 45% of its aid at commercial sectors. In conjunction with the fact that most of India's aid is tied aid, this suggests that economic self-interests play an important role in India's aid allocation. Nevertheless, a large portion of the MEA's total aid (24%) also covered sectors concerned with the overall development of basic public goods (such as health, drinking water, education, and agriculture).

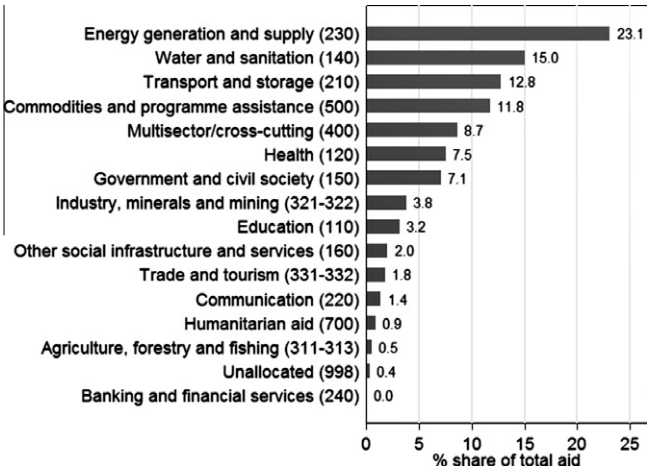


Figure 3. *India's aid allocation to other developing countries by sector (Ministry of External Affairs, 2008–10, DAC purpose codes in parentheses, in %). Source: AidData (Tierney et al., 2011).*

In order to analyze geographical differences in sectoral aid allocation, we separately plot India's aid provided to countries outside India's core group of aid recipients in South Asia (see Figure 4). While commercial sectors are again dominant, with transport and storage (35.2%) being the most important sector, some interesting differences emerge. For example, humanitarian aid, only 0.9% of India's total aid, plays a larger role in aid going to countries outside South Asia, receiving 7.2% of aid allocated here. Conversely, commodity aid and general program assistance play only a negligible role (0.2%) in aid not going to countries within India's neighborhood, while playing a much larger role in India's total aid. We now turn to the econometric analysis.

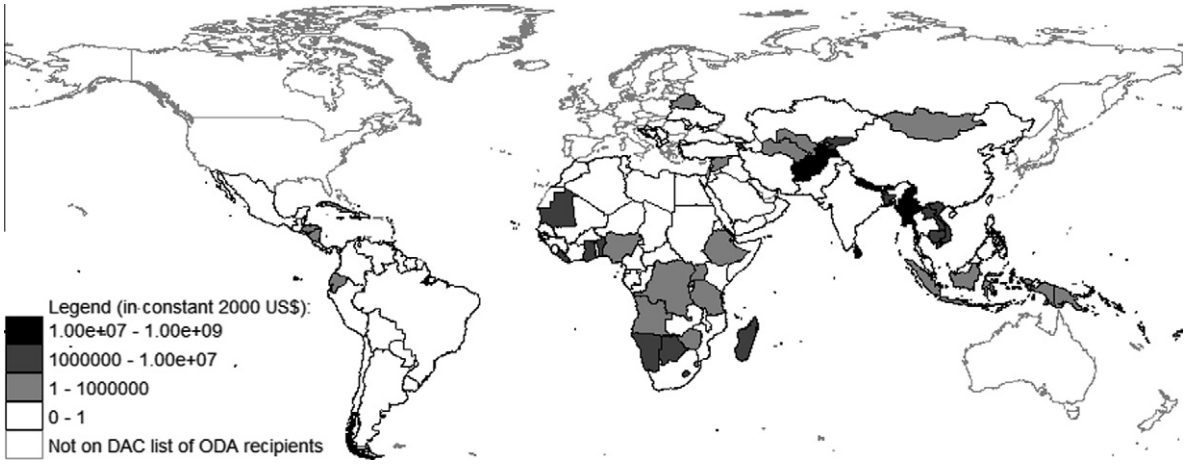


Figure 2. *India's aid allocation by country in constant 2000 US$ (Ministry of External Affairs, 2008–10). Source: AidData (Tierney et al., 2011).*

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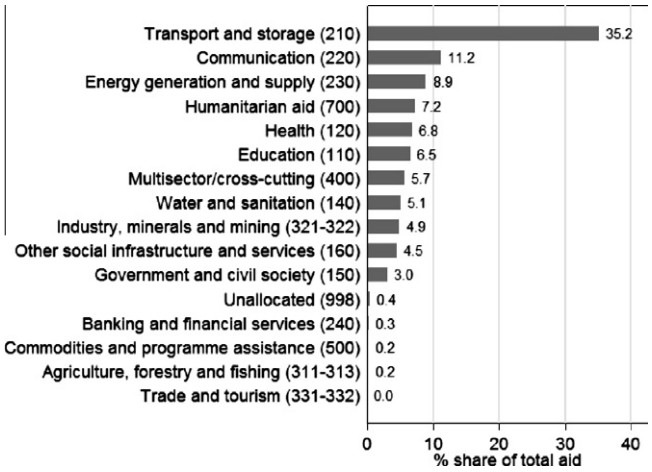


Figure 4. *India's aid allocation to countries outside South Asia by sector (Ministry of External Affairs, 2008–10, DAC purpose codes in parentheses, in %). Source: AidData (Tierney et al., 2011).*

### (b) *Data and methodology*

We follow a common practice in the existing aid allocation literature and estimate India's aid allocation in two steps (e.g., Neumayer, 2002). First, we estimate the likelihood that India allocates aid to a particular country. Our dependent variable is a dummy that takes a value of one if India provided aid to a developing country on the DAC list of aid recipients. Second, given that a country receives aid from India, we estimate the (logged) amount of aid in constant 2000 US dollars that has been committed to a particular recipient country. One way to estimate the first step (the so-called gate-keeping stage) is through a Probit (or Logit) model, which takes the binary nature of the data into account. In the second step, it may be preferable to include the inverse Mills ratio derived from the first step to avoid selection bias. Since we lack a suitable exclusion variable, we run a Heckman model without an exclusion variable, i.e., we identify the model based on the non-linearity inherent in the selection equation. The resulting Wald test does not reject the null hypothesis of independent equations ($p$-value: 0.650).[19] Therefore, we opt for an Ordinary Least Squares (OLS) estimation of the (logged) aid amount allocated to a recipient country.

For our econometric analysis, we sum bilateral aid allocation over the 2008–10 period since it is difficult to explain aid allocation on a yearly basis due to its volatility (see also Dreher *et al.*, 2011; Gupta, Pattillo, & Wagh, 2006). Concerning the selection of our explanatory variables, we follow the previous literature on aid allocation, in particular that concerned with emerging donors (e.g., Dreher & Fuchs, 2011; Dreher *et al.*, 2011). To control for the effect of geographic proximity, we account for the (logged) distance between the recipient and donor country.[20] There are two explanations as to why distance should matter. First, distance can be seen as a proxy for costs associated with the provision of development aid. Aid costs are expected to be a particular concern for a "needy" donor with limited resources like India. Second, regional power politics might play a role; India might favor countries in its neighborhood (with the exception of Pakistan due to the bilateral conflict over Kashmir) as it aspires to become a regional power. Furthermore, Dreher *et al.* (2011) find that, in general, so-called new donors are more likely to provide aid to countries that are closer to them geographically. Given that India is even poorer in terms of income per capita than any of the donors covered in Dreher *et al.* (2011), we expect to find a pronounced effect of distance on aid allocation for the "needy" donor under investigation.

We use two variables to examine whether India's aid responds to the needs of other developing countries (Hypothesis 1a). To reflect humanitarian motives, the need orientation of donors is proxied by the recipient country's (logged) GDP per capita (measured in 2005 international dollars; data from Heston, Summers, & Aten, 2009). A need-oriented donor should provide more aid to poorer countries. We therefore expect a negative sign for this income measure. In addition, we control for the (log) total number of people affected by natural disasters as an additional indicator of recipient need since disaster relief is part of the aid program of the MEA (data from EM-DAT, 2010). Furthermore, we include developmental distance to test Hypothesis 1b. A country's developmental distance to India is measured as the (log) absolute difference between the income per capita of India and that of a particular recipient country (measured in 2005 international dollars). We expect India's aid to decrease with increasing developmental distance from a recipient country. As a control variable, we also include (log) population of recipient countries.

To proxy donors' political self-interests, we follow the literature and employ a recipient country's voting alignment with India in the United Nations General Assembly (UNGA). The UNGA voting alignment seems to be of large relevance for India since "marshaling support for Indian positions in forums such as the UN take up much of India's diplomatic effort" (Dutt, 1980, p. 678). Using data from Voeten and Merdzanovic (2009), we calculate the number of times a country votes in line with India (either both voting yes, both voting no, both voting abstentions, or both being absent). We then divide the resulting value by the total number of votes in a particular year to derive a measure of voting coincidence between zero and one. We follow Dreher *et al.* (2011) and compute the voting alignment based on key votes as defined by the US State Department (Kilby, 2009b).[21] Various empirical studies find that developing countries are favored in donors' aid allocation decisions when they have closer political ties (Alesina & Dollar, 2000; Barro & Lee, 2005; Dreher *et al.*, 2009; Kilby, 2009a; Thacker, 1999). We also include a dummy variable that takes a value of one if a recipient country is a non-suspended member of the Commonwealth of Nations. It can be argued that India uses the Commonwealth as a forum to develop political and commercial ties. For example, over the years India has developed strong ties with Commonwealth countries in South and Southeast Asia, as well as Africa (Johnson & Kumar, 2011). Another possible reason for India's focus on Commonwealth nations comes from Banerjee (1982, p. 54) who views India's aid "as a part of the process to undo the injustice of ages."

To account for commercial interests, we include India's (log) total exports to a particular recipient country in constant US$. In addition, we follow Dreher *et al.* (2011) and use the recipient country's (log) depletion of mineral and energy resources as a proxy for a recipient's endowment of natural resources.

Finally, to account for merit as a motive for aid supply, institutional quality in the recipient countries is proxied by both the political rights measure from Freedom House (2009) and the corruption index from Kaufmann, Kraay, and Mastruzzi (2009). The political rights variable is coded on a scale of 1–7, with higher values representing worse liberties, and lower values reflecting full liberties. As the world's largest democracy, India might reward democratic countries and provide less aid to autocratic countries in comparison.

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Note that India is the second largest donor in the United Nations Democracy Fund (UNDEF) with cumulative contributions of US$ 25 million (as of January 5, 2012), which shows India's open and official support of democratization, at least in this arena.[22] Alternatively, India might follow the "spirit of Bandung" (Lafargue, 2006) and follow the principle of non-interference in internal affairs, i.e., its aid allocation might be independent of the institutional characteristics of the recipient country.[23] If this is the case, we would expect India to be unresponsive to corruption in recipient countries. The control-of-corruption index ranges from −2.5 to 2.5, with higher values corresponding to better governance.

For our time-varying explanatory variables, we take lagged values, i.e., the corresponding value in 2007, to mitigate endogeneity concerns. The only exception is the disaster variable since it is reasonable to assume that the occurrence of natural catastrophes is exogenous. Since our export variable and UNGA voting alignment both show relatively high volatility over time, we follow Dreher *et al.* (2011) and take the average of the respective values in the 3 years preceding our period of investigation (2005–07). All definitions and sources of variables are provided in Table 1. For descriptive statistics, please refer to Table 2.

### (c) *Main results*

Table 3 displays our results. While columns 1–4 show the results for the gate-keeping stage, columns 5–8 present the results of the allocation decision. Analyzing the coefficient on GDP per capita in column 1, Indian aid shows some need orientation. The probability that a developing country receives aid from India decreases with a country's stage of development. The coefficient is statistically significant at the 10% level. Computing the marginal effects at means of all other explanatory variables, a 10% decrease in GDP per capita leads to an increase in the probability to receive Indian aid by 0.011 percentage points. In turn, both the number of people affected by natural disasters and country size have no significant impact on the probability that a developing country receives aid from India, at conventional levels of significance.[24]

To test whether India favors countries at a similar developmental stage (Hypothesis 1b), we add the developmental distance from India to our regression in column 2. The corresponding coefficient shows the expected negative sign and is statistically significant at the 10% level. Note that the coefficient on per-capita GDP loses its statistical significance. Considering that the developmental distance between India and developing countries is correlated with the recipient's income per capita, we drop this latter variable as a next step. As shown in column 3, developmental distance then reaches statistical significance at the 5% level. This suggests that countries closer to India in terms of economic development are favored by the MEA, in line with Hypothesis 1b. The corresponding marginal effect of a 10% decrease in developmental distance amounts to 0.01 percentage points.

According to all three specifications (columns 1–3), countries which are geographically closer to India are favored. The probability that a country receives aid from India decreases with distance, at the 1% level of significance. Holding all other explanatory variables constant at their mean and computing the marginal effects, a 10% decrease in bilateral distance leads to an increase in the probability to receive Indian aid by roughly 0.03 percentage points. The political and commercial variables do not have a significant effect on Indian aid in the gate-keeping stage. The coefficient on the UNGA voting alignment on key votes, the Commonwealth dummy, and the variable capturing the extraction of natural resources are all not statistically significant at conventional levels. Note that the Indian exports variable gains statistical significance in column 3, at the 5% level, but the suggested negative effect is not robust (see columns 1 and 2). The indicators of recipient merit, political rights, and control of corruption are not statistically significant at conventional levels in all three specifications. This finding would support the idea that India's present aid allocation still follows the "spirit of Bandung", with the principle of non-interference in internal affairs.

To rule out that our findings are driven by India's focus on its region, we exclude all South Asian countries from our sample. As can be seen from column 4, our results obtained for this subsample largely mimic our previous results.

Focusing on the sample of India's recipient countries, we analyze the subsequent allocation decision. Recall that our dependent variable is the (logged) amount of aid in constant 2000 US dollars provided to a particular recipient country. As can be seen from column 5, we do not find a significant link between a recipient country's stage of development and the amount of aid received. This also holds true if we use the developmental distance between India and the recipient instead of the recipient country's GDP per capita (column 7), or if we include both variables at the same time (column 6). While this finding questions India's commitment toward recipient need at the allocation stage, we obtain a nuanced picture if we consider the effect of the number of people affected by disasters. While we did not find that disaster-affected countries are more likely to receive Indian aid, countries suffering from more severe natural disasters receive larger aid amounts if they are already among India's aid recipients. On average, if the number of people affected increases by 1%, India's aid commitments increase by about 0.1%.

Our results also show that larger countries are disadvantaged as the coefficient on population is negative and statistically significant at the 1% level. While this result seems surprising at first, it is in line with empirical evidence for China (Dreher & Fuchs, 2011) and six other so-called new donors (Dreher *et al.*, 2011). This counterintuitive finding can be explained by political self-interests, as it is cheaper to "buy" policy concessions from smaller countries (see Bueno de Mesquita & Smith, 2009). This is of particular importance in fora where each country's vote has equal weight such as the UNGA. As was the case in the gate-keeping stage, geographic proximity is also an important determinant of aid amounts. A 1% increase in the distance from India to a particular recipient country decreases India's aid commitments by about 1.6%, on average.

Political and commercial motives are also important for India's aid allocation decisions. Recipients with both a closer voting alignment with India in the UNGA and stronger commercial ties (proxied by Indian exports to recipient countries) do in fact receive larger aid flows from the "needy" donor, with both coefficients being significant at the 1% level. If the voting alignment on key votes increases by 10% points, India increases its aid commitments by roughly 0.7%, on average. Accordingly, if Indian exports grow by 1%, aid increases by 0.4%. These results support Hypothesis 2a. In contrast to our expectations, however, India disfavors countries that are members of the Commonwealth. The coefficient on the Commonwealth dummy shows a surprising negative sign and is statistically significant at the 1% level. Our results indicate that India donates strategically in order to strengthen ties with developing countries with which it does not already share Commonwealth ties. In these cases, the marginal benefit of

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Table 1. *Definitions and sources*

| Variable | Description | Source |
|---|---|---|
| *Explained variables* | | |
| 1 if aid commitments | 1 if aid committed to recipient country, 2008–10 | AidData (Tierney *et al.*, 2011) |
| (log) Aid commitments | (log) Aid commitments to recipient country (constant 2000 US$), sum, 2008–10 | AidData (Tierney *et al.*, 2011) |
| *Explanatory variables: Main results* | | |
| (log) GDP per capita | (log) GDP per capita (constant 2005 I$), lag | Penn World Tables (Heston *et al.*, 2009) |
| (log) Developmental distance | (log) Absolute difference between the per-capita GDP of donor and recipient, lag | Own construction based on Penn World Tables |
| (log) Affected from disasters | (log) Number of people affected by disasters, average | EM-DAT (2010) |
| (log) Population | (log) Total population, lag | Penn World Tables (Heston *et al.*, 2009) |
| (log) Distance | (log) Bilateral distance (weighted by populations of major cities) | CEPII (Mayer & Zignago, 2006) |
| UN voting (key votes) | UNGA voting alignment between donor and recipient (key votes), lag | Voeten and Merdzanovic (2009), Kilby (2009b) |
| Commonwealth | 1 if recipient is a non-suspended member of the Commonwealth, lag | www.thecommonwealth.org, internet research |
| (log) Indian/Bilateral exports | (log) Total exports from donor to recipient country, lag | UN Comtrade via WITS (http://wits.worldbank.org) |
| (log) Resource depletion | (log) Product of unit resource rents and physical quantities of energy and minerals extracted, lag | World Bank (http://data.worldbank.org/indicator) |
| Political rights | Index of political rights rated on a seven-point scale (1: most free), lag | Freedom House (2009) |
| Control of corruption | Index ranging from −2.5 to 2.5 with higher values corresponding to better governance, lag | Kaufmann *et al.* (2009) |
| *Explanatory variables: Robustness checks* | | |
| (log) Indian migrants | (log) Estimated size of Indian community in recipient country, 2001 | MEA (2001b) |
| Chinese project aid | Number of Chinese aid projects completed in recipient country (% of total), 1996–2005 | Dreher and Fuchs (2011) |
| (log) U5 mortality | (log) Mortality rate, under 5 years (per 1000), lag | World Bank (http://data.worldbank.org/indicator) |
| Neighbor | 1 if donor and recipient share a border | CEPII (Mayer & Zignago, 2006) |
| South Asia | 1 if recipient country is located in South Asia | Own construction |
| UN voting (all votes) | UNGA voting alignment between donor and recipient, lag | Voeten and Merdzanovic (2009), Kilby (2009b) |
| UN voting (BRIC–USA) | UNGA voting alignment between donor and recipient (disagreement between BRIC and United States of America), lag | Voeten and Merdzanovic (2009), Kilby (2009b) |
| Peacekeeping mission | 1 if India participated in a multilateral peacekeeping mission in the recipient country | SIPRI (http://www.sipri.org/databases/pko) |
| Common language | 1 if a language is spoken by at least 9% of the population in donor and recipient country | CEPII (Mayer & Zignago, 2006) |
| Common colonial history | 1 if donor and recipient have had a colonial relationship or a common colonizer after 1945 | CEPII (Mayer & Zignago, 2006) |
| Democracy | 1 if the regime qualifies as democratic, lag | Cheibub *et al.* (2010) |

Notes: Values in current US$ have been transformed to constant 2000 US$ using US consumer price indices from the World Bank (http://data.worldbank.org/indicator).
The value of 1 has been added to exports and natural resource variables as well as to the number of people affected by disasters before taking logarithms.

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Table 2. *Descriptive statistics*

| | Obs | Mean | Std. dev. | Min | Max |
|---|---|---|---|---|---|
| 1 if aid commitment | 125 | 0.41 | 0.49 | 0.00 | 1.00 |
| (log) Aid commitments | 51 | 13.28 | 2.45 | 9.02 | 20.07 |
| (log) GDP per capita | 125 | 8.37 | 0.97 | 5.95 | 10.16 |
| (log) Developmental distance | 125 | 7.86 | 1.09 | 3.83 | 10.00 |
| (log) Affected from disasters | 125 | 9.21 | 4.34 | 0.00 | 18.71 |
| (log) Population | 125 | 15.62 | 2.02 | 10.59 | 21.00 |
| (log) Distance | 125 | 8.83 | 0.64 | 7.04 | 9.74 |
| UN voting (key votes) | 125 | 0.74 | 0.14 | 0.25 | 0.93 |
| Commonwealth | 125 | 0.30 | 0.46 | 0.00 | 1.00 |
| (log) Indian exports | 125 | 17.36 | 2.42 | 10.32 | 22.66 |
| (log) Resource depletion | 125 | 13.16 | 10.22 | 0.00 | 25.82 |
| Political rights | 125 | 3.94 | 1.95 | 1.00 | 7.00 |
| Control of corruption | 125 | −0.47 | 0.59 | −1.38 | 1.34 |
| (log) Indian migrants | 125 | 4.73 | 4.24 | 0.00 | 14.33 |
| Chinese project aid | 124 | 0.75 | 0.94 | 0.00 | 4.62 |
| (log) U5 mortality | 125 | 3.84 | 0.90 | 1.76 | 5.57 |
| Neighbor | 125 | 0.04 | 0.20 | 0.00 | 1.00 |
| South Asia | 125 | 0.05 | 0.21 | 0.00 | 1.00 |
| UN voting (all votes) | 125 | 0.79 | 0.10 | 0.38 | 0.89 |
| UN voting (BRIC–USA) | 125 | 0.92 | 0.12 | 0.37 | 1.00 |
| Peace keeping mission | 125 | 0.10 | 0.31 | 0.00 | 1.00 |
| Common language | 125 | 0.31 | 0.47 | 0.00 | 1.00 |
| Common colonial history | 125 | 0.30 | 0.46 | 0.00 | 1.00 |
| Democracy | 125 | 0.52 | 0.50 | 0.00 | 1.00 |

*Note:* Descriptive statistics for sample as in Table 3, column 1.

Table 3. *Allocation of India's aid commitments (2008–10)*

| | Selection (Probit) | | | | Allocation (OLS) | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 if aid commitment | | | | (log) Aid commitments | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| (log) GDP per capita | −0.315* | −0.244 | | | −0.241 | −0.243 | | |
| | (0.060) | (0.182) | | | (0.226) | (0.209) | | |
| (log) Developmental distance | | −0.228* | −0.268** | −0.299** | | 0.012 | −0.015 | 0.038 |
| | | (0.097) | (0.039) | (0.026) | | (0.936) | (0.924) | (0.776) |
| (log) Affected from disasters | −0.060 | −0.079* | −0.063 | −0.060 | 0.111** | 0.112* | 0.126** | 0.134** |
| | (0.137) | (0.059) | (0.126) | (0.157) | (0.037) | (0.055) | (0.015) | (0.011) |
| (log) Population | 0.028 | 0.060 | 0.113 | 0.155 | −0.526*** | −0.530*** | −0.451** | −0.405** |
| | (0.852) | (0.697) | (0.438) | (0.297) | (0.002) | (0.004) | (0.012) | (0.023) |
| (log) Distance | −0.847*** | −0.798*** | −0.802*** | −0.803*** | −1.668*** | −1.670*** | −1.695*** | −1.551*** |
| | (0.001) | (0.004) | (0.003) | (0.008) | (0.000) | (0.000) | (0.000) | (0.000) |
| UN voting (key votes) | 0.364 | 0.526 | 0.689 | 0.783 | 6.918*** | 6.911*** | 6.631*** | 6.915*** |
| | (0.747) | (0.647) | (0.542) | (0.497) | (0.000) | (0.000) | (0.000) | (0.000) |
| Commonwealth | 0.434 | 0.464 | 0.503 | 0.633** | −1.203*** | −1.209*** | −1.182*** | −1.059*** |
| | (0.146) | (0.132) | (0.101) | (0.045) | (0.001) | (0.001) | (0.001) | (0.009) |
| (log) Indian exports | −0.152 | −0.157 | −0.197** | −0.243** | 0.398*** | 0.400*** | 0.359*** | 0.309** |
| | (0.123) | (0.117) | (0.036) | (0.014) | (0.001) | (0.002) | (0.003) | (0.014) |
| (log) Resource depletion | 0.002 | −0.002 | −0.011 | −0.004 | −0.019 | −0.019 | −0.024 | −0.019 |
| | (0.924) | (0.895) | (0.488) | (0.796) | (0.339) | (0.355) | (0.217) | (0.366) |
| Political rights | −0.140 | −0.144 | −0.145 | −0.147 | 0.037 | 0.038 | 0.039 | −0.001 |
| | (0.173) | (0.165) | (0.157) | (0.169) | (0.798) | (0.800) | (0.801) | (0.996) |
| Control of corruption | −0.228 | −0.177 | −0.289 | −0.300 | 1.474*** | 1.469*** | 1.459*** | 1.243*** |
| | (0.421) | (0.557) | (0.307) | (0.335) | (0.000) | (0.000) | (0.000) | (0.003) |
| Constant | 12.592*** | 13.075*** | 11.043*** | 11.206*** | 26.284*** | 26.253*** | 24.308*** | 22.393*** |
| | (0.000) | (0.000) | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) | (0.000) |
| Number of observations | 125 | 125 | 125 | 119 | 51 | 51 | 51 | 46 |
| Prob > Chi2/Prob > *F* | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| (Pseudo) *R*-squared | 0.17 | 0.19 | 0.18 | 0.17 | 0.83 | 0.82 | 0.82 | 0.73 |

We report coefficients of the explanatory variables (corresponding *p*-values in parentheses)
* Indicates significance at the 10% level.
** Indicates significance at the 5% level.
*** Indicates significance at the 1% level.

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aid giving may be higher compared to aid allocated to Commonwealth members. Moreover, recipient countries' extraction of natural resources does not have the expected positive impact on the size of India's aid flows.

While we do not find a statistically significant effect of political rights on aid amounts provided by India, aid flows are significantly larger to countries with a relatively low level of corruption, at the 1% level of significance, a result in contrast to our findings at the gate-keeping stage.[25] Given the country's background in the Non-Aligned Movement and its grounding in the "spirit of Bandung", this finding seems surprising at first. However, it is in line with Taylor's (2012, p. 788) observation that India's stance on good governance and democracy promotion is changing and that the world's largest democracy—in contrast to China—"reinforces good governance and accountability when there is political space to do so." Since almost 90% of aid goes to South Asia, we again check whether our findings are driven by India's special relations with South Asian recipients by excluding all South Asian countries from our regression. The resulting coefficients (column 8) are very similar to the ones obtained above.

Overall, the empirical results lend some support in favor of our "needy" donor hypotheses. In line with Hypothesis 1b, countries at a similar developmental stage are more likely to enter India's aid program (although they do not receive larger amounts of aid). Moreover, political and commercial interests have an impact on the size of India's aid flows, which empirically supports Hypothesis 2a. As a next step, we will compare the role that political and commercial motives play in India's aid allocation decisions with aid flows from richer donors. By doing this, we test whether aid allocation from the "needy" donor India is driven to a higher extent by political and commercial motives than is the case for richer donor countries (Hypothesis 2b).

### (d) *Comparison with DAC and other non-DAC Donors*

Finally, we compare India's aid allocation with other donors to evaluate whether aid from the "needy" donor under investigation is special. Dutt (1980, p. 676) expects India's aid allocation to be closer to that of the big powers than to Scandinavian aid since "Indian elites perceive India as having a role on the world stage," an assessment that became even more evident after the 2003 budget speech. The pattern of India's aid allocation is compared to the largest donors of the DAC, i.e., the United States, Japan, and the three largest European Union countries (European Union-3, i.e., Germany, France, and the United Kingdom). We use the so-called "like-minded donors" or "good donors" (Canada, Denmark, Netherlands, Norway, and Sweden) as a further benchmark. This latter group is known as such as these countries are said to provide development aid predominantly based on humanitarian motives.[26] Beyond that, we compare India's aid allocation with two emerging donors for which data are easily accessible. The first donor is South Korea, another large emerging Asian donor, which became a DAC member in 2010. The second one is the United Arab Emirates, which has provided sizable aid amounts since the oil crises of the 1970s.[27]

Data on ODA from these donors again cover the 2008–10 period, and are obtained from the OECD (2012). Unfortunately, we cannot compare India with China, the largest non-DAC donor, since we lack sufficient data on China's foreign aid after 2005 (see Dreher & Fuchs, 2011 for a discussion). We use a similar set of explanatory variables as in our baseline model in column 1 of Table 3. Note that we replace the Commonwealth dummy, which is an India-specific variable, with a general dummy variable for common colonial history between donor and recipient. More precisely, the variable takes a value of one if donor and recipient had a common colonizer (e.g., the British Crown in the case of India) or if the recipient was a colony of the donor country after 1945 as defined in Mayer and Zignago (2006). Moreover, we now employ the recipient's UNGA voting alignment on key votes with the respective donor (not necessarily India) and, analogously, we take the exports of the respective donor to a recipient economy.

In order to be able to compare the effects between donors, we run nested regressions rather than individual regressions for each donor (see also Berthélemy, 2006; Dreher & Fuchs, 2011; Dreher *et al.*, 2011). This is done by interacting dummies for each donor country or donor group with each of our explanatory variables. In addition to the coefficients and the corresponding *p*-value of all explanatory variables for all donors (in parentheses), we compute the *p*-values of a Wald test for differences in the effect of a variable for a particular country and India.

Table 4 displays our results. Analyzing the role of recipient needs as measured by GDP per capita, we find that Indian aid shows the smallest need orientation of all donors under investigation. The coefficient on GDP per capita for India is the smallest in absolute terms and significantly different from the European Union-3 and the "good" donors, at least at the 5% level of significance (see *p*-values of the Wald test in italics). Moreover, India is the only donor for which population size has a negative effect on aid commitments that is statistically significant at conventional levels, which questions India's actual concern for recipient needs. Only with respect to disaster response does India show some need orientation. Apart from Japan, India is the only donor with a statistically significant and positive coefficient on the number of people affected by disasters.

The effect of geographic distance between the donor and recipient is the largest for India compared to all other donors included in the analysis. This could be seen as evidence that aid costs matter more for a "poor" donor than for "rich" donors, but may also indicate that India assumes its role as a regional power. The *p*-values of the Wald test in italics show that the distance coefficient for India is significantly different, at least at the 5% level, from the United States, the European Union-3 and the "good" donors. Analyzing the impact of the UNGA voting alignment on aid allocation, the coefficient for India is found to be the largest among the donors under investigation. While Indian aid is significantly more motivated by politics than aid from all traditional DAC donors, the difference between the coefficients is not statistically significant with respect to South Korea and the United Arab Emirates. While countries that share a common colonial legacy do not receive higher aid amounts from India and are even receiving less aid on average, the European Union-3 and the "good" donors provide significantly more aid to countries which have had a colonial relationship with them.

The effect of bilateral exports on aid amounts is larger for India than for any of the other donors under investigation. According to the *p*-values of the Wald test in italics, Indian aid has a significantly closer link to commercial relationships than aid from the "good" donors and Japan. With regard to its relationship with natural resource endowments, we find that none of the donors in the analysis rewards countries extracting natural resources through increased aid flows. Likewise, we do not find evidence that any of the donors under investigation reward countries with greater political rights. Fi-

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Table 4. *Comparison of India's aid allocation with other donors (2008–10)*

| | India | United States of America | European Union-3 | Good donors | Japan | Korea | United Arab Emirates |
|---|---|---|---|---|---|---|---|
| (log) GDP per capita | −0.249 | −0.646** | −0.798*** | −1.007*** | −0.586*** | −0.562* | −0.926*** |
| | (0.165) | (0.021) | (0.000) | (0.000) | (0.000) | (0.067) | (0.007) |
| | | *0.211* | *0.016* | *0.002* | *0.163* | *0.344* | *0.092* |
| (log) Affected from disasters | 0.097** | 0.039 | −0.044 | 0.054 | 0.103*** | 0.045 | −0.076 |
| | (0.039) | (0.500) | (0.358) | (0.231) | (0.007) | (0.524) | (0.392) |
| | | *0.384* | *0.013* | *0.441* | *0.925* | *0.475* | *0.101* |
| (log) Population | −0.483*** | 0.699*** | 0.679*** | 0.462*** | 0.371*** | 0.524*** | −0.012 |
| | (0.001) | (0.000) | (0.000) | (0.000) | (0.000) | (0.004) | (0.960) |
| | | *0.000* | *0.000* | *0.000* | *0.000* | *0.000* | *0.108* |
| (log) Distance | −1.634*** | 0.171 | −0.386* | −0.722** | −1.483*** | −0.779 | −0.934 |
| | (0.000) | (0.740) | (0.081) | (0.021) | (0.000) | (0.115) | (0.168) |
| | | *0.002* | *0.000* | *0.033* | *0.681* | *0.123* | *0.321* |
| UN voting (key votes) | 6.826*** | 2.009* | 1.873* | 0.165 | 0.926 | 1.923 | 2.453 |
| | (0.000) | (0.077) | (0.085) | (0.906) | (0.506) | (0.627) | (0.424) |
| | | *0.006* | *0.005* | *0.001* | *0.002* | *0.236* | *0.229* |
| Common colonial history | −1.219*** | 1.221 | 1.622*** | 4.803*** | | | 0.860 |
| | (0.000) | (0.465) | (0.000) | (0.000) | | | (0.191) |
| | | *0.153* | *0.000* | *0.000* | | | *0.008* |
| (log) Bilateral exports | 0.401*** | 0.088 | 0.367*** | 0.121 | 0.068 | 0.285** | 0.187** |
| | (0.000) | (0.620) | (0.004) | (0.173) | (0.220) | (0.025) | (0.019) |
| | | *0.118* | *0.835* | *0.025* | *0.007* | *0.444* | *0.102* |
| (log) Resource depletion | −0.027 | 0.012 | 0.020 | −0.011 | −0.013 | −0.020 | −0.012 |
| | (0.115) | (0.563) | (0.199) | (0.591) | (0.296) | (0.473) | (0.723) |
| | | *0.133* | *0.017* | *0.514* | *0.498* | *0.816* | *0.691* |
| Political rights | 0.056 | −0.126 | 0.068 | 0.004 | −0.012 | 0.058 | 0.058 |
| | (0.676) | (0.306) | (0.340) | (0.967) | (0.888) | (0.744) | (0.752) |
| | | *0.333* | *0.939* | *0.780* | *0.677* | *0.992* | *0.993* |
| Control of corruption | 1.481*** | −0.572 | 0.202 | 0.433 | 0.467** | −0.273 | −0.032 |
| | (0.000) | (0.188) | (0.438) | (0.227) | (0.045) | (0.552) | (0.964) |
| | | *0.000* | *0.001* | *0.004* | *0.003* | *0.000* | *0.051* |
| Donor country dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 1371 | | | | | | |
| Number of recipients | 125 | | | | | | |
| Per donor group | 51 | 124 | 125 | 124 | 125 | 118 | 87 |
| *R*-squared | 0.58 | | | | | | |

Estimation technique: Nested OLS model with standard errors clustered by recipient country.
Dependent variable: (log) Aid commitments to recipient country, sum 2008–10.
We report coefficients of the explanatory variables (corresponding *p*-values in parentheses).
In italics: *p*-values of a Wald test of equal coefficients of the respective donor (group) compared to India.
* Indicates significance at the 10% level.
** Indicates significance at the 5% level.
*** Indicates significance at the 1% level.

nally, we find that, alongside India, Japan is the only other donor that provides significantly larger amounts of aid to recipients that score better on the control-of-corruption index, at conventional levels of significance.

### (e) *Robustness checks*

Next, we examine the robustness of our findings. To begin with, we analyze 11 additional variables that might influence India's aid commitments in addition to those included in Tables 3 and 4, respectively. First, Indian aid allocation decisions are said to be related to the prevalence of Indian diaspora communities (e.g., Banerjee, 1982; Dutt, 1980; Kragelund, 2011; Lafargue, 2006). The (log) Indian migrant stock in recipient countries is obtained from the MEA (2001b). Second, in order to examine whether India targets traditional recipients of aid from China, we include a variable capturing the number of completed Chinese aid projects in recipient countries as a share of China's total aid over the 1996–2005 period (see definition in Dreher & Fuchs, 2011). A positive sign could suggest aid competition between the two emerging Asian powers, as suggested by some scholars (see Cheru & Obi, 2011 for instance). Third, we add a recipient country's (logged) infant mortality rate (children under the age of 5) as an alternative measure of India's need orientation. Fourth, we add a dummy for countries which share a border with India to test whether India favors its direct neighbors in addition to the role played by geographic distance. Fifth, we add a dummy variable for South Asian countries (India's direct neighbors plus Afghanistan, Maldives, and Sri Lanka) to account for the fact that the bulk of India's aid goes to this group of countries. Sixth, we replace the UNGA voting alignment index covering key votes with an index that covers all votes. Seventh, to allow for an alternative definition of what constitutes a key vote from the Indian perspective, we consider only those votes which show opposite voting behavior to the United States on the one hand, and to the four BRIC countries on the other. More precisely, we construct a voting alignment index based on those votes where Brazil, Russia, India, and China vote "yes" and the United States votes "no" (or vice versa). [28] This measure

Table 5. *Allocation of India's aid commitments (probit, 2008–10): robustness checks*

| | Baseline | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (log) GDP per capita | −0.315* | −0.313* | −0.247 | −0.469** | −0.315* | −0.323* | −0.316* | −0.321* | −0.353** | −0.331* | −0.320* | −0.319* |
| | (0.060) | (0.061) | (0.165) | (0.037) | (0.059) | (0.051) | (0.057) | (0.053) | (0.044) | (0.052) | (0.059) | (0.054) |
| (log) Affected from disasters | −0.060 | −0.060 | −0.066 | −0.058 | −0.060 | −0.065 | −0.062 | −0.060 | −0.065 | −0.058 | −0.058 | −0.053 |
| | (0.137) | (0.139) | (0.102) | (0.145) | (0.134) | (0.107) | (0.128) | (0.139) | (0.112) | (0.151) | (0.152) | (0.177) |
| (log) Population | 0.028 | 0.031 | 0.062 | 0.007 | 0.028 | 0.038 | 0.022 | 0.028 | 0.030 | −0.027 | −0.009 | 0.016 |
| | (0.852) | (0.837) | (0.681) | (0.963) | (0.852) | (0.801) | (0.883) | (0.850) | (0.838) | (0.854) | (0.950) | (0.914) |
| (log) Distance | −0.847*** | −0.847*** | −0.783*** | −0.825*** | −0.841*** | −0.720** | −0.873*** | −0.850*** | −0.842*** | −0.852*** | −0.852*** | −0.797*** |
| | (0.001) | (0.001) | (0.003) | (0.002) | (0.003) | (0.016) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| UN voting (key votes) | 0.364 | 0.337 | 0.157 | 0.610 | 0.365 | 0.380 | | | 0.382 | 0.602 | 0.530 | 0.380 |
| | (0.747) | (0.767) | (0.889) | (0.590) | (0.746) | (0.734) | | | (0.735) | (0.590) | (0.641) | (0.727) |
| Commonwealth | 0.434 | 0.424 | 0.432 | 0.494 | 0.432 | 0.384 | 0.436 | 0.448 | 0.421 | | | 0.549* |
| | (0.146) | (0.162) | (0.150) | (0.100) | (0.146) | (0.205) | (0.140) | (0.128) | (0.158) | | | (0.061) |
| (log) Indian exports | −0.152 | −0.157 | −0.165* | −0.148 | −0.152 | −0.162 | −0.162 | −0.144 | −0.150 | −0.126 | −0.136 | −0.152 |
| | (0.123) | (0.128) | (0.092) | (0.135) | (0.124) | (0.110) | (0.101) | (0.137) | (0.129) | (0.197) | (0.166) | (0.121) |
| (log) Resource depletion | 0.002 | 0.001 | 0.001 | 0.003 | 0.002 | 0.004 | 0.002 | 0.002 | 0.001 | 0.003 | 0.003 | 0.003 |
| | (0.924) | (0.948) | (0.940) | (0.885) | (0.923) | (0.829) | (0.896) | (0.920) | (0.932) | (0.877) | (0.864) | (0.852) |
| Political rights | −0.140 | −0.139 | −0.133 | −0.135 | −0.140 | −0.134 | −0.142 | −0.131 | −0.136 | −0.163 | −0.162 | |
| | (0.173) | (0.175) | (0.201) | (0.190) | (0.173) | (0.196) | (0.153) | (0.171) | (0.184) | (0.124) | (0.116) | |
| Control of corruption | −0.228 | −0.231 | −0.211 | −0.315 | −0.230 | −0.229 | −0.250 | −0.212 | −0.235 | −0.205 | −0.219 | −0.114 |
| | (0.421) | (0.415) | (0.452) | (0.291) | (0.423) | (0.423) | (0.378) | (0.450) | (0.407) | (0.467) | (0.440) | (0.670) |
| Additional variable | | (log) Indian migrants | Chinese project aid | (log) U5 mortality | Neighbor | South Asia | UN voting (all votes) | UN voting (BRIC–USA) | Peacekeeping mission | Common language | Common colonizer | Democracy |
| | | 0.005 | 0.190 | −0.246 | 0.035 | 0.633 | 0.978 | 0.073 | −0.269 | 0.039 | 0.148 | 0.442 |
| | | (0.883) | (0.174) | (0.291) | (0.961) | (0.418) | (0.492) | (0.950) | (0.521) | (0.894) | (0.624) | (0.133) |
| Constant | 12.592*** | 12.632*** | 11.210*** | 14.607*** | 12.546*** | 11.551*** | 12.617*** | 12.704*** | 12.850*** | 13.218*** | 13.031*** | 11.524*** |
| | (0.000) | (0.000) | (0.002) | (0.000) | (0.000) | (0.001) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Number of observations | 125 | 125 | 124 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 |
| Prob > Chi2 | 0.002 | 0.003 | 0.003 | 0.001 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 |
| Pseudo *R*-squared | 0.17 | 0.17 | 0.18 | 0.18 | 0.17 | 0.18 | 0.17 | 0.17 | 0.17 | 0.16 | 0.16 | 0.17 |

*Notes:* Dependent variable: Dummy that takes a value of one if aid was committed to a recipient country during the 2008–10 period.
*Indicates significance at the 10% level.
**Indicates significance at the 5% level.
***Indicates significance at the 1% level.

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Table 6. *Allocation of India's aid commitments (OLS, 2008–10): robustness checks*

| | Baseline | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (log) GDP per capita | −0.241 | −0.240 | −0.214 | −0.047 | −0.230 | −0.230 | −0.317 | −0.286 | −0.378* | −0.233 | −0.249 | −0.251 |
| | (0.226) | (0.233) | (0.292) | (0.880) | (0.246) | (0.238) | (0.126) | (0.175) | (0.098) | (0.340) | (0.208) | (0.201) |
| (log) Affected from disasters | 0.111** | 0.111** | 0.109** | 0.106** | 0.108** | 0.106* | 0.077 | 0.075 | =0.099* | 0.101* | 0.097* | 0.110** |
| | (0.037) | (0.040) | (0.042) | (0.034) | (0.043) | (0.051) | (0.162) | (0.173) | (0.057) | (0.060) | (0.063) | (0.036) |
| (log) Population | −0.526*** | −0.526*** | −0.531*** | −0.532*** | −0.522*** | −0.494*** | −0.502*** | −0.465*** | −0.521*** | −0.363** | −0.483*** | −0.542*** |
| | (0.002) | (0.002) | (0.003) | (0.003) | (0.002) | (0.004) | (0.003) | (0.008) | (0.003) | (0.037) | (0.004) | (0.003) |
| (log) Distance | −1.668*** | −1.669*** | −1.630*** | −1.660*** | −1.529*** | −1.481*** | −1.997*** | −2.053*** | −1.655*** | −1.857*** | −1.634*** | −1.635*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| UN voting (key votes) | 6.918*** | 6.907*** | 6.933*** | 6.858*** | 7.215*** | 7.067*** | | | 7.018*** | 5.926*** | 6.826*** | 6.941*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | | | (0.000) | (0.000) | (0.000) | (0.000) |
| Commonwealth | −1.203*** | −1.210*** | −1.210*** | −1.236*** | −1.199*** | −1.252*** | −1.050*** | −1.000*** | −1.235*** | | | −1.292*** |
| | (0.001) | (0.002) | (0.001) | (0.001) | (0.001) | (0.001) | (0.003) | (0.006) | (0.000) | | | (0.000) |
| (log) Indian exports | 0.398*** | 0.395*** | 0.398*** | 0.413*** | 0.383*** | 0.363*** | 0.365*** | 0.378*** | 0.401*** | 0.292** | 0.401*** | 0.412*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.004) | (0.003) | (0.003) | (0.001) | (0.015) | (0.001) | (0.002) |
| (log) Resource depletion | −0.019 | −0.019 | −0.019 | −0.019 | −0.019 | −0.016 | −0.010 | −0.011 | −0.019 | −0.014 | −0.027 | −0.020 |
| | (0.339) | (0.316) | (0.350) | (0.349) | (0.347) | (0.441) | (0.625) | (0.622) | (0.348) | (0.534) | (0.153) | (0.303) |
| Political rights | 0.037 | 0.037 | 0.039 | 0.030 | 0.035 | 0.039 | 0.072 | 0.096 | 0.044 | 0.052 | 0.056 | |
| | (0.798) | (0.802) | (0.788) | (0.849) | (0.812) | (0.785) | (0.568) | (0.447) | (0.765) | (0.750) | (0.703) | |
| Control of corruption | 1.474*** | 1.470*** | 1.465*** | 1.426*** | 1.403*** | 1.457*** | 1.508*** | 1.587*** | 1.475*** | 1.505*** | 1.481*** | 1.461*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Additional variable | | (log) Indian migrants | Chinese project aid | (log) U5 mortality | Neighbor | South Asia | UN voting (all votes) | UN voting (BRIC−USA) | Peacekeeping mission | Common language | Common colonizer | Democracy |
| | | 0.004 | 0.080 | 0.341 | 0.682 | 0.682 | 8.478*** | 5.854*** | −0.657 | −0.239 | −1.219*** | −0.259 |
| | | (0.920) | (0.551) | (0.267) | (0.268) | (0.264) | (0.000) | (0.000) | (0.260) | (0.486) | (0.001) | (0.498) |
| Constant | 26.284*** | 26.321*** | 25.727*** | 23.238*** | 24.922*** | 24.515*** | 28.461*** | 29.206*** | 27.246*** | 27.486*** | 25.511*** | 26.396*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Number of observations | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 |
| Prob > *F* | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*Notes:* Dependent variable: (log) Aid commitments to recipient country, sum 2008–10 period.
* Indicates significance at the 10% level.
** Indicates significance at the 5% level.
*** Indicates significance at the 1% level.

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should reflect the one-dimensional voting pattern that continues to exist in the General Assembly after the end of the Cold War, with the United States and its Western allies on one pole and a "counterhegemonic voting bloc," most notably the rising powers, on the other (see Voeten, 2000). Eighth, we add a dummy variable that takes a value of one if India participates in a multilateral peacekeeping mission in a recipient country. India's participation in peacekeeping missions is generally understood as a manifestation of India's inclinations towards multilateralism (see, for example, Taylor, 2012). Ninth, we replace the Commonwealth dummy with a dummy that takes a value of one if India and a recipient country share a common language (i.e., English). Tenth, the Commonwealth dummy is substituted by a dummy variable that takes a value of one if the recipient country and India had a common colonizer after 1945 (i.e., the British Crown). Eleventh, we replace the political rights measure with a dummy capturing whether a recipient country qualifies as a democracy as defined in Cheibub, Gandhi, and Vreeland (2010).

Detailed tables containing the regression results are reported in Tables 5 and 6. In the gate-keeping stage (see Table 5), we do not find any statistical significance for the variables listed above, at conventional levels of significance. For example, neither Indian diaspora communities nor Chinese aid projects lead to a significant increase (or decrease) in the probability that a developing country enters India's aid program. The outlined changes in the definition of the various explanatory variables do not change our main conclusions. In the allocation stage (see Table 6), we confirm the large positive significant effect of a country's UNGA voting alignment when we use the two alternative definitions instead. Note that the common colony dummy takes a negative sign, at the 1% level, in line with our results for the Commonwealth dummy. Apart from these variables, all other variables introduced do not reach statistical significance at conventional levels.

As a further robustness check, we run a sub-sample analysis by restricting our sample to those countries that receive aid from India (see Table 7). Aware that this approach has its lim-

Table 7. *Comparison of India's aid allocation with other donors (Indian aid recipients only, 2008–10)*

| | India | United States of America | European Union-3 | Good donors | Japan | Korea | United Arab Emirates |
|---|---|---|---|---|---|---|---|
| (log) GDP per capita | −0.249 | 0.003 | −0.628** | −0.647** | −0.314 | −0.237 | −1.174** |
| | (0.191) | (0.994) | (0.035) | (0.011) | (0.108) | (0.429) | (0.027) |
| | | *0.552* | *0.203* | *0.154* | *0.823* | *0.970* | *0.119* |
| (log) Affected from disasters | 0.097* | 0.131* | 0.025 | 0.062 | 0.083* | 0.099 | −0.213 |
| | (0.053) | (0.083) | (0.705) | (0.342) | (0.056) | (0.278) | (0.188) |
| | | *0.696* | *0.244* | *0.595* | *0.844* | *0.979* | *0.073* |
| (log) Population | −0.483*** | 0.868*** | 0.543** | 0.567*** | 0.312** | 0.841*** | −0.256 |
| | (0.002) | (0.005) | (0.013) | (0.001) | (0.020) | (0.000) | (0.507) |
| | | *0.000* | *0.000* | *0.000* | *0.000* | *0.000* | *0.601* |
| (log) Distance | −1.634*** | 0.184 | −0.535 | −1.139** | −1.467*** | −1.336*** | −2.001* |
| | (0.000) | (0.798) | (0.317) | (0.022) | (0.000) | (0.002) | (0.072) |
| | | *0.025* | *0.041* | *0.394* | *0.618* | *0.544* | *0.739* |
| UN voting (key votes) | 6.826*** | 4.023 | −0.383 | 0.717 | −0.076 | 10.602** | −1.883 |
| | (0.000) | (0.165) | (0.880) | (0.766) | (0.964) | (0.016) | (0.678) |
| | | *0.389* | *0.021* | *0.030* | *0.001* | *0.388* | *0.097* |
| Common colonial history | −1.219*** | 4.189*** | 1.039** | 2.681*** | | | 0.606 |
| | (0.000) | (0.007) | (0.050) | (0.000) | | | (0.519) |
| | | *0.001* | *0.000* | *0.000* | | | *0.092* |
| (log) Bilateral exports | 0.401*** | 0.043 | 0.506*** | 0.311*** | 0.220*** | 0.217* | 0.231** |
| | (0.001) | (0.858) | (0.009) | (0.002) | (0.003) | (0.074) | (0.014) |
| | | *0.136* | *0.616* | *0.468* | *0.179* | *0.184* | *0.226* |
| (log) Resource depletion | −0.027 | 0.037 | 0.012 | −0.030 | −0.019 | −0.031 | 0.020 |
| | (0.137) | (0.253) | (0.630) | (0.291) | (0.164) | (0.222) | (0.618) |
| | | *0.066* | *0.084* | *0.926* | *0.716* | *0.914* | *0.301* |
| Political rights | 0.056 | −0.026 | 0.083 | 0.141 | −0.052 | 0.186 | −0.499 |
| | (0.692) | (0.897) | (0.410) | (0.251) | (0.474) | (0.177) | (0.190) |
| | | *0.756* | *0.881* | *0.697* | *0.491* | *0.468* | *0.200* |
| Control of corruption | 1.481*** | 0.175 | 0.972** | 1.321*** | 0.573** | −0.267 | −1.157 |
| | (0.000) | (0.805) | (0.021) | (0.005) | (0.048) | (0.607) | (0.398) |
| | | *0.094* | *0.314* | *0.707* | *0.025* | *0.001* | *0.064* |
| Donor country dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 574 | | | | | | |
| Number of recipients | 51 | | | | | | |
| Per donor group | 51 | 51 | 51 | 50 | 51 | 49 | 33 |
| *R*-squared | 0.65 | | | | | | |

Estimation technique: Nested OLS with standard errors clustered by recipient country.
Dependent variable: (log) Aid commitments to recipient country, sum 2008–10.
We report coefficients of the explanatory variables (corresponding *p*-values in parentheses).
In italics: *p*-values of a Wald test of equal coefficients of the respective donor (group) compared to India.
* Indicates significance at the 10% level.
** Indicates significance at the 5% level.
*** Indicates significance at the 1% level.

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itations, we intend to control for differences between the sample of India's aid recipients and that of other donors. This subsample sample includes 51 countries that received aid from India in the 2008–10 period. As before, we run nested regressions by interacting dummies for each donor country with each of our explanatory variables. By construction, the results for India are exactly the same as those reported in Table 4. With respect to per-capita GDP, the respective coefficients for the United States, Japan, and South Korea lose their statistical significance. When restricting the sample to Indian aid recipients only, Indian aid does not appear to be inferior with respect to need orientation compared to all other donors under investigation (see *p*-values of the Wald test in italics). Concerning the UNGA voting alignment, however, our results confirm the high importance of political interests in India's aid allocation. The respective coefficient for India is still larger than for any traditional DAC donor, the difference being statistically significant, at least at the 5% level (except for the United States). Note that the coefficient on UNGA voting alignment is now larger for South Korea than for India, but the difference is not statistically significant at conventional levels (as indicated by the *p*-value in italics). Although the European Union-3, South Korea, and United Arab Emirates retain the expected sign and level of significance on bilateral exports, "good" donors and Japan are now positive and significantly different from zero, at the 1% level. Finally, we also find some changes with respect to the corruption variable. We now find that the coefficients for the European Union-3 and the "good" donors (along with India and Japan) become positive and statistically significant, at least at the 5% level of significance. With respect to population size, mineral and energy depletion, and political rights, our results largely mimic those in Table 4. Taken together, while commercial interests do not seem to play a significantly larger role for India than for most "rich" donors, according to this robustness check, the sub-sample analysis largely confirms the outstanding importance of political interests compared to most traditional DAC donors.

Finally, we test whether our results hold when we estimate the gate-keeping decision and the allocation decision in one single regression framework. Specifically, we estimate the amount of aid in constant 2000 US dollars provided to a particular recipient country with Poisson Pseudo Maximum Likelihood (PPML). This means that we keep all countries that do not receive aid from a particular donor in the allocation equa-

Table 8. *Comparison of India's aid allocation with other donors (PPML, 2008–10)*

| | India | United States of America | European Union-3 | Good donors | Japan | Korea | United Arab Emirates |
|---|---|---|---|---|---|---|---|
| (log) GDP per capita | −0.502** | −0.548*** | −0.834*** | −0.868*** | −0.479*** | −0.609** | −1.207*** |
| | (0.049) | (0.994) | (0.035) | (0.011) | (0.108) | (0.429) | (0.027) |
| | | *0.877* | *0.203* | *0.211* | *0.944* | *0.773* | *0.045* |
| (log) Affected from disasters | −0.019 | 0.131* | 0.025 | 0.062 | 0.083* | 0.099 | −0.213 |
| | (0.703) | (0.083) | (0.705) | (0.342) | (0.056) | (0.278) | (0.188) |
| | | *0.301* | *0.779* | *0.065* | *0.508* | *0.445* | *0.422* |
| (log) Population | −0.065 | 0.868*** | 0.543** | 0.567*** | 0.312** | 0.841*** | −0.256 |
| | (0.765) | (0.005) | (0.013) | (0.001) | (0.020) | (0.000) | (0.507) |
| | | *0.150* | *0.460* | *0.483* | *0.158* | *0.724* | *0.165* |
| (log) Distance | −3.595*** | 0.184 | −0.535 | −1.139** | −1.467*** | −1.336*** | −2.001* |
| | (0.000) | (0.798) | (0.317) | (0.022) | (0.000) | (0.002) | (0.072) |
| | | *0.000* | *0.000* | *0.000* | *0.000* | *0.000* | *0.018* |
| UN voting (key votes) | 5.851*** | 4.023 | −0.383 | 0.717 | −0.076 | 10.602** | −1.883 |
| | (0.000) | (0.165) | (0.880) | (0.766) | (0.964) | (0.016) | (0.678) |
| | | *0.001* | *0.000* | *0.001* | *0.000* | *0.060* | *0.493* |
| Common colonial history | −0.868*** | 4.189*** | 1.039** | 2.681*** | 10.602** | −1.883 | 0.606 |
| | (0.004) | (0.007) | (0.050) | (0.000) | (0.016) | (0.678) | (0.519) |
| | | *0.003* | *0.001* | *0.000* | *0.001* | *0.038* | *0.047* |
| (log) Bilateral exports | −0.143 | 0.043 | 0.506*** | 0.311*** | 0.220*** | 0.217* | 0.231** |
| | (0.234) | (0.858) | (0.009) | (0.002) | (0.003) | (0.074) | (0.014) |
| | | *0.397* | *0.000* | *0.070* | *0.029* | *0.031* | *0.001* |
| (log) Resource depletion | −0.064*** | 0.037 | 0.012 | −0.030 | −0.019 | −0.031 | 0.020 |
| | (0.009) | (0.253) | (0.630) | (0.291) | (0.164) | (0.222) | (0.618) |
| | | *0.005* | *0.015* | *0.015* | *0.017* | *0.049* | *0.012* |
| Political rights | −0.347** | −0.026 | 0.083 | 0.141 | −0.052 | 0.186 | −0.499 |
| | (0.025) | (0.897) | (0.410) | (0.251) | (0.474) | (0.177) | (0.190) |
| | | *0.015* | *0.004* | *0.090* | *0.453* | *0.128* | *0.086* |
| Control of corruption | 1.466*** | 0.175 | 0.972** | 1.321*** | 0.573** | −0.267 | −1.157 |
| | (0.000) | (0.805) | (0.021) | (0.005) | (0.048) | (0.607) | (0.398) |
| | | *0.002* | *0.000* | *0.003* | *0.000* | *0.010* | *0.008* |
| Donor country dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Number of observations | 1623 | | | | | | |
| Number of recipients | 126 | | | | | | |

Estimation technique: PPML, seemingly unrelated estimations with standard errors clustered by recipient country.
Dependent variable: Aid commitments to recipient country, sum 2008–10.
We report coefficients of the explanatory variables (corresponding *p*-values in parentheses).
In italics: *p*-values of a Wald test of equal coefficients of the respective donor (group) compared to India.
* Indicates significance at the 10% level.
** Indicates significance at the 5% level.
*** Indicates significance at the 1% level.

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tion. In these cases, our dependent variable takes a value of zero. By employing PPML, we build on Santos Silva and Tenreyro (2006), who found that PPML outperforms simple OLS and Tobit approaches with heteroskedasticity and many zero observations in the data. We estimate aid allocation by donor as seemingly unrelated estimations to be able to compare the coefficients across donors. Standard errors are clustered by recipient country. One advantage of this approach is that the sample is the same across all donors—in contrast to the results reported in Table 4. Note, however, that this approach comes with the disadvantage that we lump together the decision to provide aid on the one hand and the decision of how much aid to give on the other. This implies that we are not able to account for differential determinants of both decisions.

As can be seen in Table 8, most of the PPML results are in line with our previous findings. Since we estimate selection and allocation in one single regression, one can recognize elements from both the selection equation (Table 3, columns 1–4) and the allocation equation (Table 3, columns 5–8). An interesting difference emerges with respect to political rights. Not only do we again find that India provides more aid to less corrupt countries, we also find a positive impact (negative sign) of political rights on India's aid amounts. This strengthens our previous result that aid allocation from the world's largest democracy is not independent from institutions in recipient countries. Most importantly, we again find that political interests, as proxied by bilateral voting alignment in the UNGA, play a larger role for India than for any traditional DAC donor under analysis. The difference in coefficients between India and all traditional DAC donors is statistically significant at the 1% level (see again *p*-value of a Wald test reported in italics). It is only with respect to Korea that our findings for UN voting differ from previous results (Table 4). Specifically, we find that the coefficient on voting alignment is larger for Korea than for India. Moreover, the PPML results confirm the outstanding role that distance plays in India's aid allocation. The coefficient on distance is larger in absolute size than the corresponding coefficient for any of the other donors under analysis and the difference is again statistically significant at conventional levels.

## 5. CONCLUSIONS

Despite having a large amount of its population suffering from underdevelopment, chronic poverty and mal-governance, India has jumped on the bandwagon in the "business" of development aid. This is puzzling. According to a recent World Bank report on India, about 37% of the Indian population lives on less than US$ 1.25 a day (World Bank, 2011). Although India has a large number of anti-poverty schemes and programs to tackle these problems, the progress made in domestic poverty reduction is rather small. Against this background, it is ironic that India provides development aid to other developing countries. It is of even greater surprise that many of India's aid recipients have a larger income per capita than India. [29]

With the intension of understanding why poor countries such as India provide foreign aid, this paper has empirically analyzed India's aid allocation decisions. We utilized data on aid commitments by the Ministry of External Affairs to 127 developing countries in US dollars, obtained from the AidData database for the 2008–10 period. To examine whether India is different, we also compared India's aid allocation decisions with those of other donors. Our empirical results show that India's aid allocation is partially in line with our expectations of the behavior of a "needy" donor. Commercial and political self-interests dominate India's aid allocation. We find the importance of political interests, proxied by UNGA voting alignment, to be significantly larger for India than for all traditional DAC donors that were investigated. Moreover, India favors countries that are geographically closer, and countries at a similar developmental stage are more likely to one of India's aid recipients.

From our results, it appears that India predominantly cares about its own needs rather than the needs of others. Given India's domestic problems, this is understandable. Considering their own aid practices over the last decades, Western observers have no moral high-ground from which to cast blame on India for serving its self-interests. One needs only to look to the example of early DAC aid, which was largely tied (and continues to be tied today to a certain degree). Indeed it appears as if India and other emerging donors are following the example set by DAC donor countries in the past. As Kragelund (2011, p. 587) observes, aid from emerging donors (Brazil, South Africa, India, and China) "strongly resembles" the aid activities that DAC donors provided 20–30 years ago.

Although we find that India's own interests dominate its aid allocation, it may nevertheless be the case that India's assistance is effective in terms of poverty reduction and other developmental goals with respect to recipient countries. [30] This merits further investigation. Concerning political self-interest, Agrawal (2007) raises doubts over the long-term political gains resulting from India's engagement. Future research may also evaluate whether Indian aid, officially aimed at the promotion of India's welfare in addition to that of aid recipients, actually supports India's own development. Our understanding of India's role in development cooperation would also benefit from a better understanding of the functioning of the Exim Bank and how its allocation compares with aid in the strict sense as provided by the MEA. This leaves room for future research.

While we find that India's aid allocation is partially in line with our expectations of a "needy" donor, India itself does not want to be perceived as such. This is made clear by the comments of India's Minister of Finance, Pranab Mukherjee, who in February 2012 characterized British aid to India as a "peanut" compared to India's own development expenditures. [31] In November 2012, the United Kingdom responded with the announcement to end all financial aid programs with India by 2015. [32] India welcomed this decision, taking it as a sign of India's transition from being on the receiving end of development cooperation to becoming an important provider of foreign assistance. Moreover, India has begun to set up a foreign aid agency, which, it is expected, will manage the distribution of aid flows amounting to US$ 11 billion over the next 5–7 years. [33] The "needy" donor is preparing to become one of the big players in international development cooperation.

## NOTES

1. The DAC is a donor organization that consists of the European Union and 23 OECD countries. Specifically, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, South Korea, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States are currently DAC members.

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2. India is not the only country that provides aid to countries wealthier than itself. For example, almost every country in the world acts as a provider of humanitarian aid (Fuchs & Klann, 2012). However, India is the largest provider of foreign assistance in the group of low-income and lower-middle-income countries. Note also that India avoids the term "donor." It rather perceives itself as a partner in South–South Cooperation (see Chaturvedi, 2008 for a discussion).

3. See website of India's new aid agency "Development Partnership Administration": http://www.mea.gov.in/development-partnership-administration.htm (accessed: November 15, 2012).

4. Given that India is poorer in terms of income per capita than any of the donors covered in Dreher et al. (2011), India serves as an excellent case to study the behavior of "needy" donors.

5. For 1958, Chanana (2009) highlights Indian aid commitments of about 100 million Indian rupees (US$ 21 million) in multi-year grants to Nepal, 200 million Indian rupees (US$ 42 million) to Myanmar, and the financing of 60% of Bhutan's budget.

6. Taking the OECD's definition of ODA as a benchmark, values for grant-in-aid to the Indian Council of Cultural Relations (ICCR) and support to the African National Congress are excluded from our analysis. With respect to the former, recall that "[c]ultural programmes in developing countries whose main purpose is to promote the culture or values of the donor are not reportable as ODA" (see OECD's definition of ODA, available at http://www.oecd.org/dac/aidstatistics/34086975.pdf, accessed: November 16, 2012). Unfortunately, we cannot account for scholarships from the ICCR that should be reported as ODA. See also Agrawal (2007) for a discussion of limitations of the use of data from MEA annual reports as a proxy for India's aid budget.

7. Using data on India's GDP deflator and exchanges rates obtained from the World Development Indicators (available at http://databank.worldbank.org/ddp/home.do, accessed: May 2012), we converted all aid values from Indian rupees to constant 2000 US$.

8. According to Sinha and Hubbard, the grant element varies between 41.25% for Heavily Indebted Poor Countries (HIPC) and 17.11–24.56% for middle-income countries with medium to high levels of debt.

9. Quoted on several websites of Indian embassies, e.g., the Indian embassy in Azerbaijan (available at http://indianembassybaku.org/en/8/, accessed: February 8, 2012).

10. Some project descriptions directly reflect India's goal to serve "mutual benefit." For example, the objective of the aid project provided to establish the Bhutan Institute of Medical Sciences is not only to be "beneficial for the local population of Bhutan," but also to benefit "Indians working in Bhutan" (AidData ID 40285990). Similarly, a 0.9 million US$ grant to build the Akhaura–Agartala rail link aims to "provide better connectivity" between India and Bangladesh (AidData ID 40286130).

11. Since India refuses to accept tied aid, this implies that India applies different standards in its roles as donor and recipient of development aid.

12. The Techno Economic Approach for Africa India Movement (TEAM-9) program offers LOCs to nine West African countries.

13. Price (2004) hypothesizes that India, as an aid recipient, only accepts aid from three current permanent Council members and from two proposed Council members for the very same reason.

14. Contrasting these views, Banerjee (1982, p. 54) argues that "India does not provide aid to its neighbors with the hope of extending its influence in the region." He criticizes allegations that India's aid was motivated by selfish motives. Moreover, he claims that India does not make recipient countries dependent on its assistance, but instead strengthens their self-reliance, and that India has not installed any military bases in a major recipient country.

15. For example, the supply of a coastal radar system to Mauritius aims to "deepen our [i.e., India's] relationship with Mauritius and generate goodwill towards India among people of Mauritius" (see official project description, AidData ID 4717660). Similar objectives can be found in many project descriptions of the Ministry of External Affairs.

16. While we expect a "needy" donor to be more exposed to domestic criticism, this effect may be mitigated if voters lack sufficient information on aid activities due to a less- or non-transparent government. We thank an anonymous referee for pointing this out.

17. About 5% of the total aid amount is not traceable to recipient countries.

18. The DAC List of ODA Recipients is available at http://www.oecd.org/dataoecd/23/34/37954893.pdf, as of January 1, 2006 (accessed: February 14, 2011).

19. The results of the Heckman estimation are very similar to the Probit/OLS results. Results are available upon request.

20. As defined in Mayer and Zignago (2006), bilateral distances are computed as the average of the distance between the major cities of the two countries, which are weighted by the share of the city in the overall population.

21. Note that we also report the results with all votes as a robustness check.

22. See UNDEF webpage, available at http://www.un.org/democracyfund/Donors/donors_index.html (accessed February 11, 2012).

23. The "Bandung conference" was a large meeting of African and Asian states and took place in the Indonesian city of Bandung in 1955. The 29 participating countries agreed to not interfere in the internal affairs of other countries. The meeting is said to have laid the foundations for the Non-Aligned Movement.

24. Note that the coefficient on disasters becomes statistically significant in column 2, at the ten-percent level. The significant negative sign provides strong evidence against the hypothesis that disaster-stricken countries are more likely to enter India's aid program.

25. Control of corruption is positively correlated with the other governance indicators from Kaufmann *et al.* (2009): political stability (63.5%), voice and accountability (65.6%), regulatory quality (75.5%), government effectiveness (86.1%), and rule of law (88.4%). To test whether the positive effect of the corruption variable on aid amounts is driven by its correlation with other governance indicators, we run five additional regressions, each adding one of the alternative indicators to our regression model. We find that the coefficient on control of corruption remains statistically significant at the one-percent level in all five regressions and that none of the alternative measures reaches statistical significance at conventional levels (detailed results available upon request).

26. Note that doubts have been raised as to whether the positive image of these donor countries is warranted (see, for example, Neumayer (2003b) with respect to human rights, or Strømmen, de Soysa, and Vadlamannati

(2011) with respect to peace and human security). Similarly, in their ranking of aid agency practices, Easterly and Williamson (2011) find that Scandinavian donors perform surprisingly poorly.

27. See Shushan and Marcoux (2011) for a recent overview on aid activities of Arab donor countries.

28. We also considered the construction of a voting alignment index based on the instances in which India and Pakistan voted differently. There are, however, only very few instances in which India and Pakistan showed opposite voting behavior during our period of analysis.

29. Twenty-three recipients of Indian aid had a larger income per capita than India (based on 2007 values of GDP per capita in international dollars and purchasing power parity): Armenia, Belarus, Bhutan, Botswana, Cape Verde, Cuba, Ecuador, El Salvador, Fiji, Grenada, Indonesia, Jamaica, Maldives, Marshall Islands, Mauritius, Namibia, Samoa, Sao Tome and Principe, Seychelles, Sri Lanka, Tonga, and Turkmenistan.

30. If this is the case, India's aid would differ from DAC aid. Analyzing the effect of aid on growth, empirical evidence in Kilby and Dreher (2010) suggests that donor motives matter for aid effectiveness.

31. "India tells Britain: We don't want your aid," *The Telegraph*, February 4, 2012, available at http://www.telegraph.co.uk/news/worldnews/asia/india/9061844/India-tells-Britain-We-dont-want-your-aid.html (accessed: May 28, 2012).

32. See press release by the UK Department for International Development, available at http://www.dfid.gov.uk/Documents/publications1/press-releases/Greening-announces-new-development-relationship-with-India.pdf (accessed: November 15, 2012).

33. "Aid 2.0," *The Economist*, August 13, 2011, available at http://www.economist.com/node/21525899 (accessed: May 28, 2012).

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