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

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

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**Abstract:** It is puzzling that India, which has a large domestic constituency of people suffering from underdevelopment, chronic poverty and mal-governance, is emerging as an important aid donor. With the intension of understanding why poor countries provide foreign aid, this article is the first to econometrically analyze India's aid allocation decisions. First, we utilize cross-sectional data on aid commitments by the Ministry of External Affairs to 125 developing countries, obtained in US dollars from AidData for the 2008-2010 period. Second, we compare India's aid allocation with that of other donors. 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 to be significantly larger for India than for all donors of the Development Assistance Committee. Moreover, we find that countries which are closer geographically are favored, and that 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.

**JEL classification:** F35

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## 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 and Maertens 2007; Basu 2008; 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 and 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 and 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).<sup>1</sup> At US\$ 630 million, India is still the single largest recipient of development aid from the United Kingdom (OECD 2012).<sup>2</sup> That being said, it is puzzling to note that India itself is an aid donor.<sup>3</sup> In fact, Indian engagement in delivering foreign aid goes back to the 1950s, with its primary target being to provide development assistance to

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<sup>1</sup> 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, Korea, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States are currently DAC members.

<sup>2</sup> 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).

<sup>3</sup> Note that India avoids the term 'donor'. It rather perceives itself as a partner in South-South cooperation (see Chaturvedi 2008 for a discussion).

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 provided under the umbrella of the Ministry of External Affairs (MEA) amounted to 18,950 crores Indian rupees (US\$ 4.47 billion) according to its annual reports (MEA 1993-2010). The Ministry allocated 2,359 crores Indian rupees (US\$ 444 million) to aid-related activities in the 2009 financial year alone (MEA 2010). According to Manning (2006: 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 by 2012 in order to oversee the aid allocation process (Patel 2011).

In contrast to the extensive empirical literature on the allocation of development aid from Western donor countries (e.g., Alesina and Dollar 2000), studies on development assistance provided by non-DAC donors lack rigorous empirical analysis. Notable exceptions 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 (excluding India).<sup>4</sup> 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

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<sup>4</sup> 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.

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 and Dollar 2000; Neumayer 2005; Kuziemko and Werker 2006), as well as for multilateral organizations (e.g., Dreher et al. 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 DAC donors. Moreover, we find that the "needy" donor favors countries which are closer geographically and that countries at a similar developmental stage are more likely to enter India's aid program.

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 2008-2010 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.<sup>5</sup> 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.<sup>6</sup> 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.

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 five selected countries or the European Union. 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

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

<sup>6</sup> According to Dutt (1980), a total of 1,442 people received technical training in India under the Colombo Plan up until 1960. According to the Colombo Plan Reports (as cited in Dutt 1980), this number increased to 3,550 between 1961 and 1971.

cooperation. The provision of credit lines via India's 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).<sup>7</sup> This information needs to be interpreted with caution because of significant changes over time in the way the ministry categorizes its aid amounts.<sup>8</sup> Apart from that, note that the data exclude aid flows from institutions other than the MEA. Moreover, we lack detailed information on which fraction of the calculated aggregated aid values satisfy the OECD's definition of Official Development Assistance (ODA). Nevertheless, the figures should provide the reader with an intuition of the overall evolution of the size of India's aid program.

As can be seen from Figure 1, there is a spike in India's aid budget in 1972.<sup>9</sup> This is largely due to the additional external assistance provided by India to Bangladesh, which obtained independence from then 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 onwards, 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.

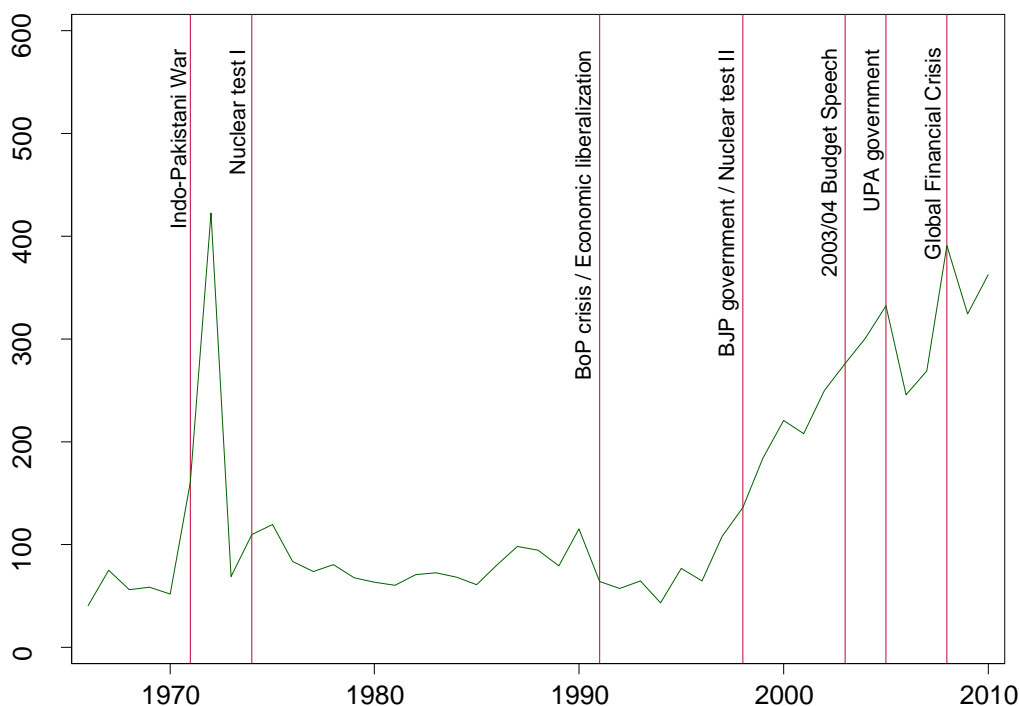
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<sup>7</sup> Note that the DAC defines ODA as financial flows to developing countries provided by official agencies with the objective to promote economic development and welfare, and that contain a grant element of at least 25% (see <http://stats.oecd.org/glossary/detail.asp?ID=6043>, accessed: July 2012). Although we lack detailed information on the concessionality of each individual loan, it seems that aid provided by the MEA by and large qualifies as ODA. According to a study by ECOSOC (2008), 80% of India's total aid disbursed is grants. The remaining fraction is loans with an estimated grant element of 53-57%.

<sup>8</sup> Values for grant-in-aid to the Indian Council of Cultural Relations and support to the African National Congress are excluded from our analysis. See Agrawal (2007) for a discussion of limitations of the use of data from MEA annual reports as a proxy for India's aid budget.

<sup>9</sup> 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 in current prices to constant 2000 US\$.

**Figure 1: Aid provided by the MEA in millions of constant 2000 US\$ (1966-2010)**



**Note:** BJP: Bharatiya Janata Party; UPA: United Progressive Alliance led by Indian National Congress.

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, which is roughly 0.04% of India’s GDP. 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).<sup>10</sup>

In addition to the MEA, India provides concessional finance via its Export-Import (Exim) Bank. The sum of all financial flows provided by the Exim Bank between 2005 and 2009 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

<sup>10</sup> A comparison with the figures on non-DAC donors provided in Dreher et al. (2011: 1952) underlines that India is one of the most important providers of development assistance outside the DAC.



satisfy the criteria 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.<sup>11</sup> 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 and Dollar 2000; Kuziemko and Werker 2006; Dreher et al. 2009; Kilby 2009a). 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.

Referring to the role that Indian values might play in India's aid provision, Meier and Murphy (2011: 7) point out that, "Hinduism, Buddhism, Islam and Sikhism all espouse solidarity with the suffering and giving without expectations for return." In line with this, the Indian government claims that its aid program indeed responds to the economic needs of developing countries. For example, the MEA describes the ITEC program as "an earnest attempt by India to

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<sup>11</sup> According to Sinha and Hubbard, the grant element varies between 41.25% for Heavily Indebted Poor Countries (HIPC) and 17.11% to 24.56% for middle income countries with medium to high levels of debt.

share the fruits of its [i.e., India's] socio-economic development and technological achievement with other developing countries" (ITEC 2011). According to Banerjee (1982: 27), India provides aid to neighboring countries "with the sole objective of restoring the local citizens to a place of primacy." If this is the case, India's aid should be targeted to needier countries.<sup>12</sup> We test the following hypothesis:

***Hypothesis 1a:*** *India's aid allocation responds to the economic needs of developing countries.*

In this regard, Banerjee (1982: 55) claims that India's aid is particularly need-oriented since it provides the "appropriate technology and managerial experience" to other developing countries. He argues that India's aid is more need-oriented than aid provided by "rich" donors as its economic and political structure is closer to that of other developing countries. Similarly, 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."<sup>13</sup> 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 to India's own development level. We will test the following hypothesis:

***Hypothesis 1b:*** *The "needy" donor India allocates more aid to countries at a similar stage of development.*

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. In this regard, the MEA (2004: 133) openly admits that "[t]he Government has been using development aid, including grants and LOCs on concessional terms as tools for 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

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<sup>12</sup> Dreher et al. (2011), in turn, find that non-DAC donors care less for recipient need than traditional DAC donors. Note, however, that their study excludes aid from India.

<sup>13</sup> 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).

for Indian investment abroad (Price 2004; Agrawal 2007; Kragelund 2008). The fact that India's aid is mainly 'tied aid' suggests that commercial interests play a dominant role. Moreover, India's aid is said to be targeted at developing countries possessing oil and other natural resources in order to meet the rising demand for energy resources back home (e.g., Chanana 2009). While the MEA (2009: 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." With respect to the TEAM-9<sup>14</sup> 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 recognized in 2003 that the Jammu and Kashmir regions are a part of India. Aid is considered a part of India's efforts to obtain support for the country's bid for a permanent seat in the United Nations Security Council (e.g., Kragelund 2008).<sup>15</sup> Moreover, India perceives its aid program as a tool to improve its image around the world. In this regard, the MEA states 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: 2), India aims to "develop a viable 'pro-India' constituency among key decision makers in recipient countries." Contrasting these views, Banerjee (1982: 54) argues that "India does not provide aid to its neighbours with the hope of extending its influence in the region." He criticizes allegations that India's aid was motivated by selfish motives.<sup>16</sup> Focusing on how India can actually use aid as a foreign policy

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<sup>14</sup> The Techno Economic Approach for Africa India Movement (TEAM-9) program offers LOCs to nine West African countries.

<sup>15</sup> Price (2004) hypothesizes that India, as an aid recipient, only accepts aid from three current permanent Council members and from three proposed Council members for the very same reason.

<sup>16</sup> Banerjee (1982) claims that India does not make recipient countries dependent on its assistance, instead strengthening their self-reliance. Moreover, he argues that India has not installed any military bases in a major recipient country.

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. 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 "needy" donor is more exposed to public criticism of its aid allocation because of domestic deficiencies. In order to defend its aid allocation vis-à-vis its electorate, the country might be more 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. 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 "needy" 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 a "needy" donor like India compared to "rich" donors, the opposite is true for political and commercial factors in regards to their respective aid allocations.*

## 4. Empirical Analysis

### 4.1 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).<sup>17</sup> Data are available for the 2008-2010 period.<sup>18</sup> In what follows, we only analyze aid projects traceable to countries, thus excluding aid provided to world regions if we lack information on the country breakdown.<sup>19</sup> 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.<sup>20</sup> Our 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.

The lion's share (89.7%) of India's aid administered by the MEA was allocated to South Asian countries (see Figure 2). With the exception of Pakistan, all six South Asian countries were 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. 2.2% of the Ministry's total aid amount has been received by 38 Sub-Saharan African countries, and 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 benefited from Indian aid (1.2% of India's total aid amount in the 2008-2010 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 were made available to 10 Latin American countries. Taken together, it is evident that India strongly favors countries in its neighborhood, as has been argued previously (e.g., Price 2005; Katti et al. 2009; Meier and Murphy 2011).

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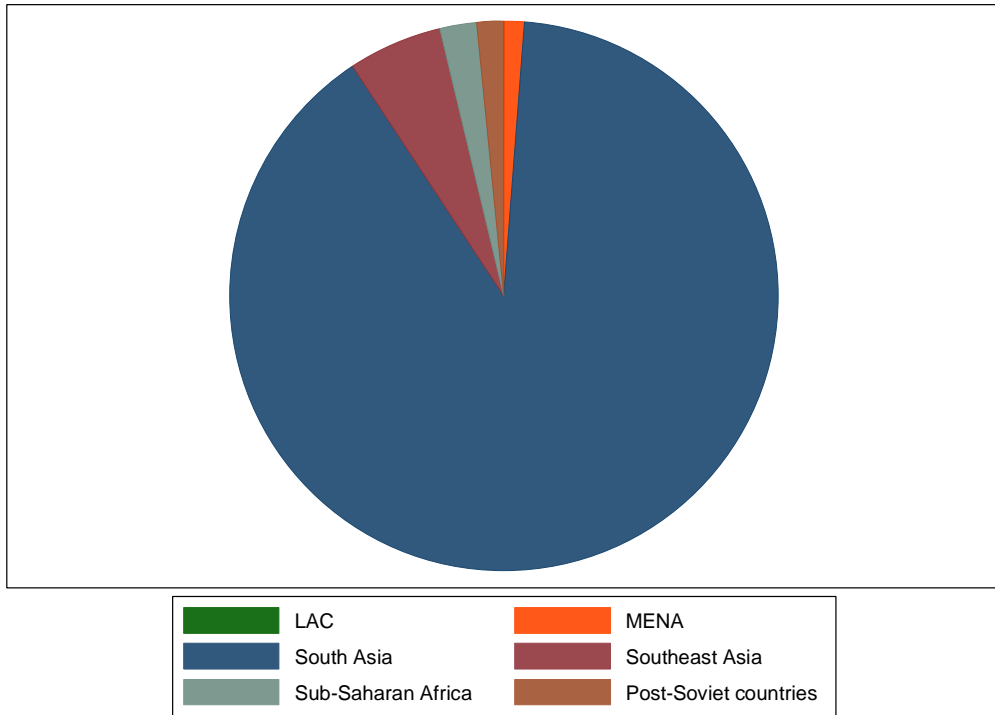
<sup>17</sup> While the first entry in the aid database is "Welfare Activities for the Muktiyoddhas (Freedom Fighters)" in Bangladesh in 2008, the database ends with an IT center in Osh in the Kyrgyz Republic in 2010.

<sup>18</sup> Note that our study period coincides with the Global Financial Crisis. This might have an effect on the aid allocation decisions made by India. Nevertheless, the drop in India's aid budget during this period is not substantial compared to previous years as we will see later in Figure 1.

<sup>19</sup> About 5% of the total aid amount is not traceable to recipient countries.

<sup>20</sup> 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).

**Figure 2: India's aid allocation by region (MEA, 2008-2010)**



**Figure 3: India's aid allocation by sector (MEA, 2008-2010)**

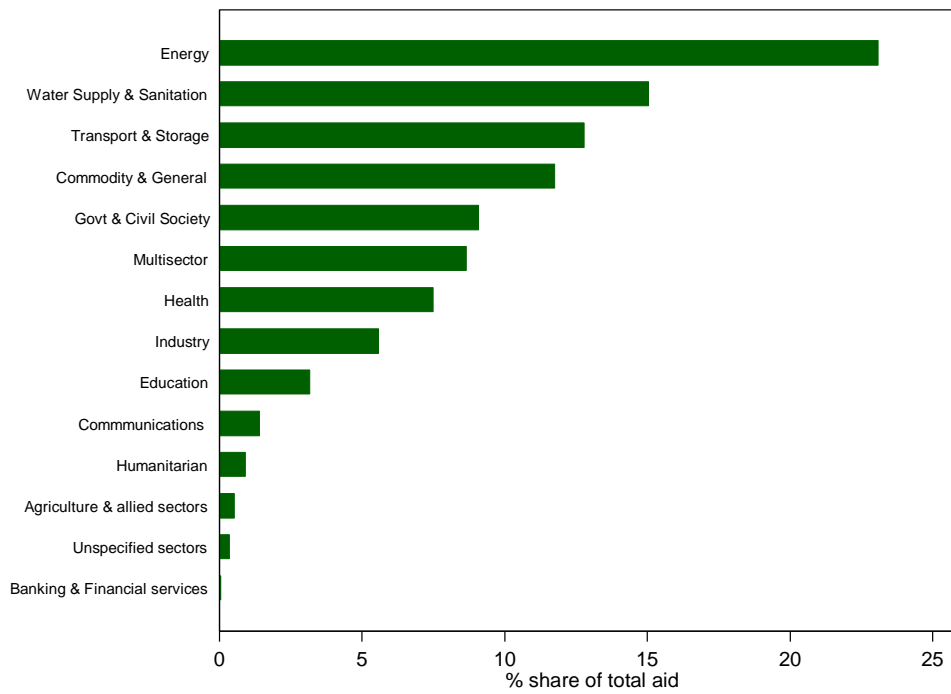
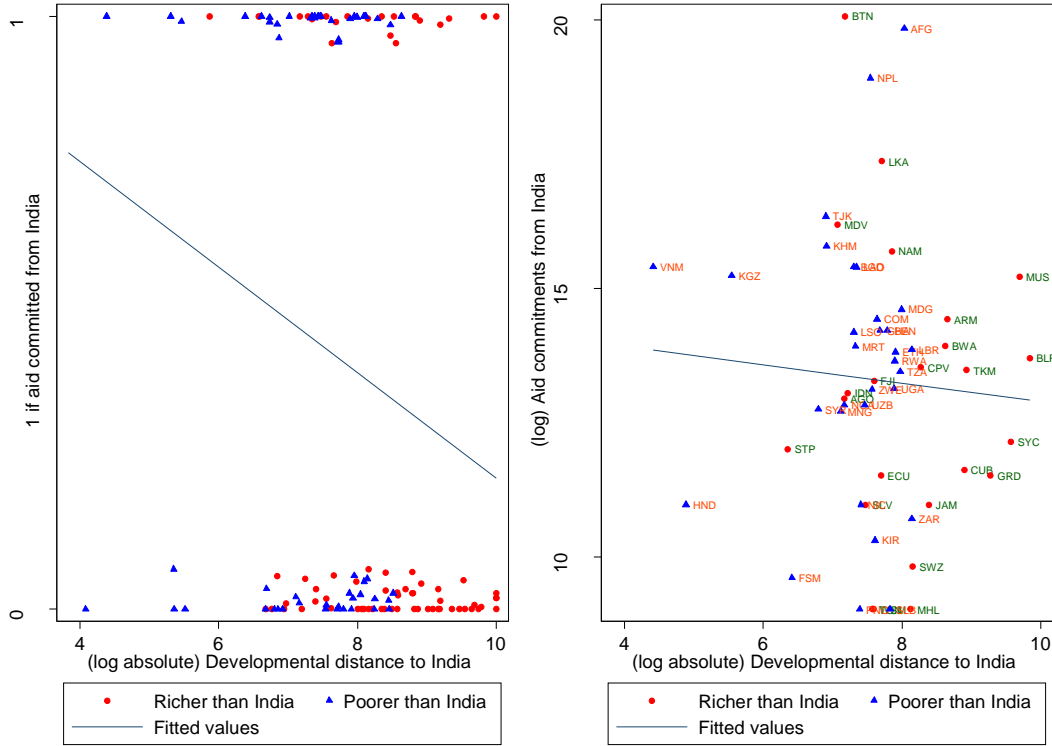


Figure 3 puts the spotlight on sectoral aid allocations. As can be seen, 23.1% of the aid committed was targeted to the energy sector (DAC purpose code: 230), covering both the production and distribution of energy in recipient countries. The second most important sector was drinking water provision and sanitation facilities (DAC 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 (DAC code: 210), closely followed by 11.8% earmarked for commodity aid and general program assistance (DAC code: 500). We also find that about 9.5% of total aid was allocated towards the development of activities associated with strengthening the administrative apparatus and government planning, activities promoting good governance, strengthening civil society, and other social infrastructure projects in the recipient countries, respectively (DAC codes: 150 and 160). 8.7% of the Ministry's aid was allocated to multi-sector activities (DAC code: 400), and 7.5% to the development of health-related activities such as building hospitals and health centers, and the provision of other health infrastructure (DAC code: 120). The MEA also earmarked 5.6% for industrial development (DAC codes: 321-323). The remaining sectors are: education (3.2%, DAC code: 110), communications (1.4%, DAC code: 331-332), agriculture, forestry and fishing (0.5%, DAC code: 311-313), humanitarian purposes (0.9%, DAC code: 700) and unspecified (0.5%, DAC code: 998). Finally, less than 0.1% is targeted at banking and financial services (DAC code: 240).

These numbers serve as a first indication that India's foreign aid is motivated to a higher extent by commercial interests in comparison to need-based issues plaguing recipient countries. This is reflected in the fact that about 45% of the Ministry's aid has been directed at commercial sectors. Nevertheless, the development aid provided by the MEA also covers sectors concerned with the overall development of basic public goods (such as health, drinking water, education and agriculture), which made up about 24% of total aid allocations.

With respect to the role of developmental distance between India and recipient countries for aid allocation, Figure 4 provides first descriptive evidence in favor of hypothesis 1b. The graph on the left shows the expected strong negative link between the (logged absolute) developmental distance and the probability of receiving aid from India. The graph on the right, however, shows only a weak negative correlation between developmental distance and (logged) aid commitments from India. We now turn to the econometric analysis.

**Figure 4: Aid allocation and developmental distance (2008-2010)**



#### 4.2 Data and Methodology

We follow a common practice in the aid allocation literature and estimate India’s aid allocation in two steps (e.g., Neumayer 2002). First, we estimate which countries enter India’s aid program. Our dependent variable is a dummy that takes a value of 1 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).<sup>21</sup> Therefore, we opt for an Ordinary Least Squares (OLS) estimation of the aid amount allocated to a recipient country.

For our econometric analysis, we sum bilateral aid allocation over the 2008-2010 period since it is difficult to explain aid allocation on a yearly basis due to its volatility (see also Gupta et al. 2006; Dreher et al. 2011). Concerning the selection of our explanatory variables, we follow the previous literature on aid allocation, in particular that on emerging donors (e.g., Dreher et al. 2011; Dreher and Fuchs 2011). To control for the effect of geographic proximity, we account for the (logged) distance between the recipient and donor country.<sup>22</sup> 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. Apart from this explanation, 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. 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 several 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). A need-oriented donor should provide more aid to poorer countries. Thus, we expect a negative sign for this income measure. Next, we control for the (log) population of recipient countries. The intuition here is that larger countries need more resources to obtain visible effects of aid provision. 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. Furthermore, we include developmental distance, which is measured as the (log) absolute difference between the income per capita of India and that of a

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<sup>21</sup> Results available upon request.

<sup>22</sup> 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.

particular recipient country. Hypothesis 1b implies that India's aid decreases with the developmental distance to a recipient country.

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 "marshalling support for Indian positions in forums such as the UN take up much of India's diplomatic effort" (Dutt 1980: 678). Relying on 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 U.S. State Department (Kilby 2009b).<sup>23</sup> Various empirical studies find that developing countries are favored in donors' aid allocation decisions when they have closer political ties (Thacker 1999; Alesina and Dollar 2000; Barro and Lee 2005; Dreher et al. 2009; Kilby 2009a). We also include a dummy variable that takes a value of 1 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 and Kumar 2011). Beyond that, referring to colonization, Banerjee (1982: 54) 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 et al. (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

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<sup>23</sup> Note that we also report the results with all votes as a robustness check.

less aid to autocratic countries in comparison. 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 underlines the importance that India attributes to the support of democratization.<sup>24</sup> 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. If this is the case, we would expect India to be unresponsive to corruption in the 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 issues. 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 three years preceding our period of investigation (2005-2007). All definitions and sources of variables are provided in Appendix A1. For descriptive statistics, please refer to Appendix A2.

#### *4.3 Main Results*

Table 1 displays our results. While columns 1-3 show the results for the gate-keeping stage, columns 4-6 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 ten-percent level. 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 enters India’s aid program, at conventional levels of significance.<sup>25</sup>

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<sup>24</sup> See UNDEF webpage, available at: [http://www.un.org/democracyfund/Donors/donors\\_index.html](http://www.un.org/democracyfund/Donors/donors_index.html) (accessed February 11, 2012).

<sup>25</sup> Note that the coefficient on disasters becomes statistically significant in column 2, at the ten-percent level. The significant negative sign is strong evidence against the hypothesis that disaster-stricken countries are more likely to enter India’s aid program.

**Table 1: Allocation of India's aid commitments (2008-2010)**

|                               | SELECTION            |                      |                      | ALLOCATION           |                      |                      |
|-------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                               | (1)                  | Probit<br>(2)        | (3)                  | (4)                  | OLS<br>(5)           | (6)                  |
| (log) GDP per capita          | -0.315*<br>(0.060)   | -0.244<br>(0.182)    |                      | -0.241<br>(0.226)    | -0.243<br>(0.209)    |                      |
| (log) Developmental distance  |                      | -0.228*<br>(0.097)   | -0.268**<br>(0.039)  |                      | 0.012<br>(0.936)     | -0.015<br>(0.924)    |
| (log) Affected from disasters | -0.060<br>(0.137)    | -0.079*<br>(0.059)   | -0.063<br>(0.126)    | 0.111**<br>(0.037)   | 0.112*<br>(0.055)    | 0.126**<br>(0.015)   |
| (log) Population              | 0.028<br>(0.852)     | 0.060<br>(0.697)     | 0.113<br>(0.438)     | -0.526***<br>(0.002) | -0.530***<br>(0.004) | -0.451**<br>(0.012)  |
| (log) Distance                | -0.847***<br>(0.001) | -0.798***<br>(0.004) | -0.802***<br>(0.003) | -1.668***<br>(0.000) | -1.670***<br>(0.000) | -1.695***<br>(0.000) |
| UN voting (key votes)         | 0.364<br>(0.747)     | 0.526<br>(0.647)     | 0.689<br>(0.542)     | 6.918***<br>(0.000)  | 6.911***<br>(0.000)  | 6.631***<br>(0.000)  |
| Commonwealth                  | 0.434<br>(0.146)     | 0.464<br>(0.132)     | 0.503<br>(0.101)     | -1.203***<br>(0.001) | -1.209***<br>(0.001) | -1.182***<br>(0.001) |
| (log) Indian exports          | -0.152<br>(0.123)    | -0.157<br>(0.117)    | -0.197**<br>(0.036)  | 0.398***<br>(0.001)  | 0.400***<br>(0.002)  | 0.359***<br>(0.003)  |
| (log) Resource depletion      | 0.002<br>(0.924)     | -0.002<br>(0.895)    | -0.011<br>(0.488)    | -0.019<br>(0.339)    | -0.019<br>(0.355)    | -0.024<br>(0.217)    |
| Political rights              | -0.140<br>(0.173)    | -0.144<br>(0.165)    | -0.145<br>(0.157)    | 0.037<br>(0.798)     | 0.038<br>(0.800)     | 0.039<br>(0.801)     |
| Control of corruption         | -0.228<br>(0.421)    | -0.177<br>(0.557)    | -0.289<br>(0.307)    | 1.474***<br>(0.000)  | 1.469***<br>(0.000)  | 1.459***<br>(0.000)  |
| Constant                      | 12.592***<br>(0.000) | 13.075***<br>(0.000) | 11.043***<br>(0.001) | 26.284***<br>(0.000) | 26.253***<br>(0.000) | 24.308***<br>(0.000) |
| Number of observations        | 125                  | 125                  | 125                  | 51                   | 51                   | 51                   |
| Prob>Chi2 / Prob>F            | 0.002                | 0.000                | 0.000                | 0.000                | 0.000                | 0.000                |
| (Pseudo) R-Squared            | 0.17                 | 0.19                 | 0.18                 | 0.83                 | 0.82                 | 0.82                 |

Note: \* (\*\*, \*\*\*) indicates significance at the ten (five, one) percent level

To test whether India favors countries at a similar developmental stage (hypothesis 1b), we add the developmental distance to India to our regression in column 2. The corresponding coefficient shows the expected negative sign and is statistically significant, at the ten-percent 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 five-percent 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 ten-percent decrease in developmental distances increases to 0.01 percentage points.

According to all three specifications (columns 1-3), countries which are closer to India geographically are favored. The probability that a country receives aid from India decreases with distance, at the one-percent level of significance. Holding all other explanatory variables constant at their mean and computing the marginal effects, a ten-percent 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 five-percent 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 aid of today still follows the 'spirit of Bandung', with the principle of non-interference in internal affairs.

Focusing on the sample to India's recipient countries, we analyze the subsequent allocation decision. As can be seen from column 4, 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 6), or if we include both variables at the same time (column 5). While this finding questions India's commitment towards 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 enter India's aid program, countries suffering from more severe natural disasters receive larger aid amounts if they are already among India's aid recipients. If the number of people affected increases by one percent, India's aid commitments increase by about 0.1 percent. Our results also show that larger countries are disfavored as the coefficient on population is negative and statistically significant, at the one-percent level. While this result seems surprising at first, it is in line with empirical evidence for China (Dreher and Fuchs 2011) and six other so-called new donors (Dreher et al.

2011). As was the case in the gate-keeping stage, geographic proximity is also an important determinant of aid amounts. A one-percent increase in the distance from India to a particular recipient country decreases India's aid commitments by about 1.6 percent, 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 one-percent level. If the voting alignment on key votes increases by ten percentage points, India increases its aid commitments by roughly 0.7%, on average. Accordingly, if Indian exports grow by one percent, 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 one-percent level. Our results indicate that India donates strategically in order to strengthen ties with developing countries with which it does not already share common ties with through being members of the Commonwealth. In these cases, the marginal benefit of 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 one-percent level of significance, and in contrast to our findings at the gate-keeping stage.

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 (but do not receive larger aid amounts). Moreover, political and commercial interests have an impact on the size of India's aid flows, which is empirical evidence in favor of 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).

#### *4.4 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.<sup>26</sup> 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 EU countries (EU-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 said to provide development aid predominantly based on humanitarian motives.<sup>27</sup> 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.

Data on ODA from these donors again cover the 2008-2010 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 and Fuchs 2011 for a discussion). We use a similar set of explanatory variables as in our baseline model in column 1 of Table 1. 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.

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<sup>26</sup> We obtained data on aid allocation from the countries under comparison from the OECD (2012).

<sup>27</sup> 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 Strømme et al. (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 badly.

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 et al. 2011; Dreher and Fuchs 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 (in italics).

Table 2 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 than of all donors under investigation. The coefficient on GDP per capita for India is the smallest in absolute terms and significantly different from the EU-3 and the “good” donors, at least at the five-percent 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 can be interpreted as evidence that aid costs matter more for a “needy” donor than for “rich” donors. The p-values of the Wald test in italics show that the distance coefficient for India is significantly different, at least at the five-percent level, from the U.S., the EU-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 EU-3 and the “good” donors provide significantly more aid to countries which have had a colonial relationship with the respective donor country.



**Table 2: Comparison of India's aid allocation with other donors (2008-2010)**

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

Notes:

- Estimation technique: Nested OLS model with standard errors clustered by recipient country
- Dependent variable: (log) Aid commitments to recipient country, sum 2008-2010
- We report coefficients of the explanatory variables (corresponding p-values in parentheses)
- In italics: p-values of a Wald test of equal marginal effects of the respective donor (group) compared to India
- \* (\*\*, \*\*\*) indicates significance at the ten (five, one) percent level

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 neither of the

donors 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. Finally, 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.

#### *4.5 Robustness Checks*

Next, we examine the robustness of our findings. To begin with, we analyze nine additional variables that might influence India's aid commitments in addition to those included in Tables 1 and 2, respectively. First, Indian aid allocation decisions are said to be related to the prevalence of Indian diaspora communities (e.g., Dutt 1980; Banerjee 1982; Lafargue 2006).<sup>28</sup> The (log) Indian migrant stock in recipient countries is obtained from two sources, namely the Global Migrant Origin Database (Parsons et al. 2007) and 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 and Fuchs 2011). A positive sign could suggest aid competition between the two emerging Asian powers, as suggested by some scholars (see Cheru and 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 replace the UNGA voting alignment index covering key votes with an index that covers all votes. Sixth, 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,

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<sup>28</sup> Lafargue (2006) identifies Indian diaspora as intermediaries for Indian investments in their respective host country.

India and China vote ‘yes’ and the United States votes ‘no’ (or vice versa).<sup>29</sup> This measure 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). Seventh, we replace the Commonwealth dummy with a dummy that takes a value of 1 if India and a recipient country share a common language (i.e., English). Eighth, the Commonwealth dummy is substituted by a dummy variable that takes a value of 1 if the recipient country and India had a common colonizer after 1945 (i.e., the British Crown). Ninth, we replace the political rights measure with a dummy capturing whether a recipient country qualifies as a democracy as defined in Cheibub et al. (2010).

Detailed tables containing the regression results are reported in Appendices B1 and B2. In the gate-keeping stage (see Appendix B1), we do not find any statistical significance for the variables listed above, at conventional levels of significance. For example, neither Indian diaspora communities nor 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, 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 one-percent 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.

Finally, we run a sub-sample analysis by restricting our sample to those countries that receive aid from India (see Appendix B3). Aware that this approach has its limitations, we intend to control for differences between the sample of India’s aid recipients and that of other donors.<sup>30</sup> 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 2. With respect to per-capita GDP, the respective coefficients for the

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<sup>29</sup> 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.

<sup>30</sup> Our sample includes 51 countries that receive aid from India in the 2008-2010 period.

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 five-percent 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 EU-3, South Korea and UAE 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 one-percent level. Finally, we also find some changes with respect to the corruption variable. We now find that the coefficients for the EU-3 and the "good" donors (along with India and Japan) become positive and statistically significant, at least at the five-percent level of significance. With respect to population size, mineral and energy depletion, and political rights, our results largely mimic those in Table 2. 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.

## **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 poverty reduction is rather small. Against this background, it is ironic that India

provides development aid to other developing countries. Many of India's aid recipients even have a larger income per capita than India.<sup>31</sup>

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 2008-2010 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 under investigation. Moreover, India favors countries which are geographically closer, and countries at a similar developmental stage are more likely to enter India's aid program.

From our results, it appears that the "needy" donor India predominantly cares about its own needs rather than the needs of others. Given India's domestic problems, this is understandable. Although 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.<sup>32</sup> 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.

While we find that India's 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 characterized British aid to

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<sup>31</sup> 23 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.

<sup>32</sup> 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.

India as a “peanut” compared to India’s own development expenditures.<sup>33</sup> Moreover, India made its ambitions clear by announcing to setup a foreign aid agency, which is said to manage the distribution of aid flows amounting to 11 billion US dollars over the next five to seven years.<sup>34</sup> If India aspires to be recognized as one of the big aid donors, it would be beneficial from India’s point of view to, first, establish clearly outlined aid legislation, and second, increase its aid transparency. Clearly identified goals and the provision of detailed and transparent aid records will not only alleviate India’s credibility as an emerging aid donor, but will also enhance the scope for coordination with other aid donors.

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<sup>33</sup> “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).

<sup>34</sup> “Aid 2.0,” *The Economist*, August 13, 2011, available at: <http://www.economist.com/node/21525899> (accessed: May 28, 2012).

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## Appendix A1: Definitions and sources

| Variable  | Description  | Source   |
|---|--|--|
| <i>Explained variables</i>                      |  |  |
| 1 if aid commitment                             | 1 if aid committed to recipient country, 2008-2010   | AidData (Tierney et al. 2011)  |
| (log) Aid commitment                            | (log) Aid commitments to recipient country (constant 2000 US\$), sum, 2008-2010                    | AidData (Tierney et al. 2011)  |
| <i>Explanatory variables: Main results</i>      |  |  |
| (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 and Zignago 2006)   |
| UN voting alignment (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                                  | <a href="http://www.thecommonwealth.org">www.thecommonwealth.org</a> , internet research             |
| Common colonial history                         | 1 if donor and recipient have had a colonial relationship or a common colonizer after 1945         | CEPII (Mayer and Zignago 2006)   |
| (log) Indian/Bilateral exports                  | (log) Total exports from donor to recipient country, lag   | UN Comtrade via WITS ( <a href="http://wits.worldbank.org">http://wits.worldbank.org</a> )           |
| (log) Resource depletion                        | (log) Product of unit resource rents and physical quantities of energy and minerals extracted, lag | World Bank ( <a href="http://data.worldbank.org/indicator">http://data.worldbank.org/indicator</a> ) |
| 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)   |
| <i>Explanatory variables: Robustness checks</i> |  |  |
| (log) Indian migrants (def. 1)                  | (log) Indian migrant stock in recipient country, 2000 round of population censuses                 | Global Migrant Origin Database (Parsons et al. 2007)   |
| (log) Indian migrants (def. 2)                  | (log) Estimated size of Indian community in recipient country, 2001                                | MEA (2001b)  |
| Chinese aid projects                            | Number of Chinese aid projects completed in recipient country (% of total), 1996-2005              | Dreher and Fuchs (2011)  |
| (log) Under-5 mortality Rate                    | (log) Mortality rate, under 5 years (per 1000), lag  | World Bank ( <a href="http://data.worldbank.org/indicator">http://data.worldbank.org/indicator</a> ) |
| Neighbor  | 1 if donor and recipient share a border  | CEPII (Mayer and Zignago 2006)   |
| UN voting                                       | UNGA voting alignment between donor and recipient, lag   | Voeten and Merdzanovic (2009), Kilby (2009b)   |
| UN voting (BRIC vs USA)                         | UNGA voting alignment between donor and recipient (disagreement between BRIC and USA), lag         | Voeten and Merdzanovic (2009), Kilby (2009b)   |
| Common language                                 | 1 if e if a language is spoken by at least 9% of the population in donor and recipient country     | CEPII (Mayer and 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

## Appendix A2: Descriptive statistics

|                                   | <b>Obs</b> | <b>Mean</b> | <b>Std. Dev.</b> | <b>Min</b> | <b>Max</b> |
|-----------------------------------|------------|-------------|------------------|------------|------------|
| 1 if aid commitment               | 125        | 0.41        | 0.49             | 0.00       | 1.00       |
| (log) Aid commitment              | 51         | 13.28       | 2.45             | 9.02       | 20.07      |
| (log) GDP per capita              | 125        | 8.37        | 0.97             | 5.95       | 10.16      |
| Control of corruption             | 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       |
| Common colonial history           | 125        | 0.30        | 0.46             | 0.00       | 1.00       |
| (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 (def. 1)    | 125        | 6.17        | 2.99             | 0.00       | 13.86      |
| (log) Indian migrants (def. 2)    | 125        | 4.73        | 4.24             | 0.00       | 14.33      |
| Chinese project aid               | 124        | 0.75        | 0.94             | 0.00       | 4.62       |
| (log) Under-5 mortality Rate      | 125        | 3.84        | 0.90             | 1.76       | 5.57       |
| Neighbor                          | 125        | 0.04        | 0.20             | 0.00       | 1.00       |
| UN Voting alignment               | 125        | 0.79        | 0.10             | 0.38       | 0.89       |
| UN Voting alignment (BRIC vs USA) | 125        | 0.92        | 0.12             | 0.37       | 1.00       |
| Common language                   | 125        | 0.31        | 0.47             | 0.00       | 1.00       |
| Democracy                         | 125        | 0.52        | 0.50             | 0.00       | 1.00       |

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

### Appendix B1: Allocation of India's aid commitments (Probit, 2008-2010): Robustness checks

|                                | baseline             | (1a)                 | (1b)                 | (2)                  | (3)                  | (4)                  | (5)                  | (6)                  | (7)                  | (8)                  | (9)                  |
|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| (log) GDP per capita           | -0.315*<br>(0.060)   | -0.308*<br>(0.067)   | -0.313*<br>(0.061)   | -0.247<br>(0.165)    | -0.469**<br>(0.037)  | -0.315*<br>(0.059)   | -0.316*<br>(0.057)   | -0.321*<br>(0.053)   | -0.331*<br>(0.052)   | -0.320*<br>(0.059)   | -0.319*<br>(0.054)   |
| (log) Affected from disasters  | -0.060<br>(0.137)    | -0.057<br>(0.170)    | -0.060<br>(0.139)    | -0.066<br>(0.102)    | -0.058<br>(0.145)    | -0.060<br>(0.134)    | -0.062<br>(0.128)    | -0.060<br>(0.139)    | -0.058<br>(0.151)    | -0.058<br>(0.152)    | -0.053<br>(0.177)    |
| (log) Population               | 0.028<br>(0.852)     | 0.015<br>(0.924)     | 0.031<br>(0.837)     | 0.062<br>(0.681)     | 0.007<br>(0.963)     | 0.028<br>(0.852)     | 0.022<br>(0.883)     | 0.028<br>(0.850)     | -0.027<br>(0.854)    | -0.009<br>(0.950)    | 0.016<br>(0.914)     |
| (log) Distance                 | -0.847***<br>(0.001) | -0.806***<br>(0.004) | -0.847***<br>(0.001) | -0.783***<br>(0.003) | -0.825***<br>(0.002) | -0.841***<br>(0.003) | -0.873***<br>(0.001) | -0.850***<br>(0.001) | -0.852***<br>(0.001) | -0.852***<br>(0.001) | -0.797***<br>(0.001) |
| UN voting (key votes)          | 0.364<br>(0.747)     | 0.375<br>(0.738)     | 0.337<br>(0.767)     | 0.157<br>(0.889)     | 0.610<br>(0.590)     | 0.365<br>(0.746)     |                      |                      | 0.602<br>(0.590)     | 0.530<br>(0.641)     | 0.380<br>(0.727)     |
| Commonwealth                   | 0.434<br>(0.146)     | 0.408<br>(0.169)     | 0.424<br>(0.162)     | 0.432<br>(0.150)     | 0.494<br>(0.100)     | 0.432<br>(0.146)     | 0.436<br>(0.140)     | 0.448<br>(0.128)     |                      |                      | 0.549*<br>(0.061)    |
| (log) Indian exports           | -0.152<br>(0.123)    | -0.166<br>(0.102)    | -0.157<br>(0.128)    | -0.165*<br>(0.092)   | -0.148<br>(0.135)    | -0.152<br>(0.124)    | -0.162<br>(0.101)    | -0.144<br>(0.137)    | -0.126<br>(0.197)    | -0.136<br>(0.166)    | -0.152<br>(0.121)    |
| (log) Resource depletion       | 0.002<br>(0.924)     | 0.002<br>(0.908)     | 0.001<br>(0.948)     | 0.001<br>(0.940)     | 0.003<br>(0.885)     | 0.002<br>(0.923)     | 0.002<br>(0.896)     | 0.002<br>(0.920)     | 0.003<br>(0.877)     | 0.003<br>(0.864)     | 0.003<br>(0.852)     |
| Political rights               | -0.140<br>(0.173)    | -0.136<br>(0.184)    | -0.139<br>(0.175)    | -0.133<br>(0.201)    | -0.135<br>(0.190)    | -0.140<br>(0.173)    | -0.142<br>(0.153)    | -0.131<br>(0.171)    | -0.163<br>(0.124)    | -0.162<br>(0.116)    |                      |
| Control of corruption          | -0.228<br>(0.421)    | -0.237<br>(0.404)    | -0.231<br>(0.415)    | -0.211<br>(0.452)    | -0.315<br>(0.291)    | -0.230<br>(0.423)    | -0.250<br>(0.378)    | -0.212<br>(0.450)    | -0.205<br>(0.467)    | -0.219<br>(0.440)    | -0.114<br>(0.670)    |
| (log) Indian migrants (def. 1) |                      | 0.026<br>(0.662)     |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| (log) Indian migrants (def. 2) |                      |                      | 0.005<br>(0.883)     |                      |                      |                      |                      |                      |                      |                      |                      |
| Chinese project aid            |                      |                      |                      | 0.190<br>(0.174)     |                      |                      |                      |                      |                      |                      |                      |
| (log) Under-5 mortality Rate   |                      |                      |                      |                      | -0.246<br>(0.291)    |                      |                      |                      |                      |                      |                      |
| Neighbor                       |                      |                      |                      |                      |                      | 0.035<br>(0.961)     |                      |                      |                      |                      |                      |
| UN voting                      |                      |                      |                      |                      |                      |                      | 0.978<br>(0.492)     |                      |                      |                      |                      |
| UN voting (BRIC vs USA)        |                      |                      |                      |                      |                      |                      |                      | 0.073<br>(0.950)     |                      |                      |                      |
| Common language                |                      |                      |                      |                      |                      |                      |                      |                      | 0.039<br>(0.894)     |                      |                      |
| Colonial relationship          |                      |                      |                      |                      |                      |                      |                      |                      |                      | 0.148<br>(0.624)     |                      |
| Democracy                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      | 0.442<br>(0.133)     |
| Constant                       | 12.592***<br>(0.000) | 12.416***<br>(0.000) | 12.632***<br>(0.000) | 11.210***<br>(0.002) | 14.607***<br>(0.000) | 12.546***<br>(0.000) | 12.617***<br>(0.000) | 12.704***<br>(0.000) | 13.218***<br>(0.000) | 13.031***<br>(0.000) | 11.524***<br>(0.000) |
| Number of observations         | 125                  | 125                  | 125                  | 124                  | 125                  | 125                  | 125                  | 125                  | 125                  | 125                  | 125                  |
| Prob>Chi2                      | 0.002                | 0.003                | 0.003                | 0.003                | 0.001                | 0.003                | 0.002                | 0.002                | 0.002                | 0.002                | 0.002                |
| Pseudo R-Squared               | 0.17                 | 0.17                 | 0.17                 | 0.18                 | 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 2008-2010 period / \* (\*\*, \*\*\*) indicates significance at the ten (five, one) percent level

## Appendix B2: Allocation of India's aid commitments (OLS, 2008-2010): Robustness checks

|                                | baseline             | (1a)                 | (1b)                 | (2)                  | (3)                  | (4)                  | (5)                  | (6)                  | (7)                  | (8)                  | (9)                  |
|--------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| (log) GDP per capita           | -0.241<br>(0.226)    | -0.235<br>(0.251)    | -0.240<br>(0.233)    | -0.214<br>(0.292)    | -0.047<br>(0.880)    | -0.230<br>(0.246)    | -0.317<br>(0.126)    | -0.286<br>(0.175)    | -0.233<br>(0.340)    | -0.249<br>(0.208)    | -0.251<br>(0.201)    |
| (log) Affected from disasters  | 0.111**<br>(0.037)   | 0.112**<br>(0.041)   | 0.111**<br>(0.040)   | 0.109**<br>(0.042)   | 0.106**<br>(0.034)   | 0.108**<br>(0.043)   | 0.077<br>(0.162)     | 0.075<br>(0.173)     | 0.101*<br>(0.060)    | 0.097*<br>(0.063)    | 0.110**<br>(0.036)   |
| (log) Population               | -0.526***<br>(0.002) | -0.533***<br>(0.004) | -0.526***<br>(0.002) | -0.531***<br>(0.003) | -0.532***<br>(0.003) | -0.522***<br>(0.002) | -0.502***<br>(0.003) | -0.465***<br>(0.008) | -0.363**<br>(0.037)  | -0.483***<br>(0.004) | -0.542***<br>(0.003) |
| (log) Distance                 | -1.668***<br>(0.000) | -1.646***<br>(0.000) | -1.669***<br>(0.000) | -1.630***<br>(0.000) | -1.660***<br>(0.000) | -1.529***<br>(0.000) | -1.997***<br>(0.000) | -2.053***<br>(0.000) | -1.857***<br>(0.000) | -1.634***<br>(0.000) | -1.635***<br>(0.000) |
| UN voting (key votes)          | 6.918***<br>(0.000)  | 6.968***<br>(0.000)  | 6.907***<br>(0.000)  | 6.933***<br>(0.000)  | 6.858***<br>(0.000)  | 7.215***<br>(0.000)  |                      |                      | 5.926***<br>(0.000)  | 6.826***<br>(0.000)  | 6.941***<br>(0.000)  |
| Commonwealth                   | -1.203***<br>(0.001) | -1.214***<br>(0.002) | -1.210***<br>(0.002) | -1.210***<br>(0.001) | -1.236***<br>(0.001) | -1.199***<br>(0.001) | -1.050***<br>(0.003) | -1.000***<br>(0.006) |                      |                      | -1.292***<br>(0.000) |
| (log) Indian exports           | 0.398***<br>(0.001)  | 0.394***<br>(0.001)  | 0.395***<br>(0.001)  | 0.398***<br>(0.001)  | 0.413***<br>(0.001)  | 0.383***<br>(0.002)  | 0.365***<br>(0.003)  | 0.378***<br>(0.003)  | 0.292**<br>(0.015)   | 0.401***<br>(0.001)  | 0.412***<br>(0.002)  |
| (log) Resource depletion       | -0.019<br>(0.339)    | -0.019<br>(0.325)    | -0.019<br>(0.316)    | -0.019<br>(0.350)    | -0.019<br>(0.349)    | -0.019<br>(0.347)    | -0.010<br>(0.625)    | -0.011<br>(0.622)    | -0.014<br>(0.534)    | -0.027<br>(0.153)    | -0.020<br>(0.303)    |
| Political rights               | 0.037<br>(0.798)     | 0.038<br>(0.797)     | 0.037<br>(0.802)     | 0.039<br>(0.788)     | 0.030<br>(0.849)     | 0.035<br>(0.812)     | 0.072<br>(0.568)     | 0.096<br>(0.447)     | 0.052<br>(0.750)     | 0.056<br>(0.703)     |                      |
| Control of corruption          | 1.474***<br>(0.000)  | 1.473***<br>(0.000)  | 1.470***<br>(0.000)  | 1.465***<br>(0.000)  | 1.426***<br>(0.000)  | 1.403***<br>(0.000)  | 1.508***<br>(0.000)  | 1.587***<br>(0.000)  | 1.505***<br>(0.000)  | 1.481***<br>(0.000)  | 1.461***<br>(0.000)  |
| (log) Indian migrants (def. 1) |                      | 0.011<br>(0.892)     |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| (log) Indian migrants (def. 2) |                      |                      | 0.004<br>(0.920)     |                      |                      |                      |                      |                      |                      |                      |                      |
| Chinese project aid            |                      |                      |                      | 0.080<br>(0.551)     |                      |                      |                      |                      |                      |                      |                      |
| (log) Under-5 mortality Rate   |                      |                      |                      |                      | 0.341<br>(0.267)     |                      |                      |                      |                      |                      |                      |
| Neighbor                       |                      |                      |                      |                      |                      | 0.682<br>(0.268)     |                      |                      |                      |                      |                      |
| UN voting                      |                      |                      |                      |                      |                      |                      | 8.478***<br>(0.000)  |                      |                      |                      |                      |
| UN voting (BRIC vs USA)        |                      |                      |                      |                      |                      |                      |                      | 5.854***<br>(0.000)  |                      |                      |                      |
| Common language                |                      |                      |                      |                      |                      |                      |                      |                      | -0.239<br>(0.486)    |                      |                      |
| Common colonial history        |                      |                      |                      |                      |                      |                      |                      |                      |                      | -1.219***<br>(0.001) |                      |
| Democracy                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      | -0.259<br>(0.498)    |
| Constant                       | 26.284***<br>(0.000) | 26.111***<br>(0.000) | 26.321***<br>(0.000) | 25.727***<br>(0.000) | 23.238***<br>(0.000) | 24.922***<br>(0.000) | 28.461***<br>(0.000) | 29.206***<br>(0.000) | 27.486***<br>(0.000) | 25.511***<br>(0.000) | 26.396***<br>(0.000) |
| Number of observations         | 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                |
| R-Squared                      | 0.83                 | 0.82                 | 0.82                 | 0.82                 | 0.83                 | 0.83                 | 0.84                 | 0.84                 | 0.77                 | 0.83                 | 0.83                 |

Notes: Dependent variable: (log) Aid commitments to recipient country, sum 2008-2010 / \* (\*\*, \*\*\*) indicates significance at the ten (five, one) percent level



**Appendix B3: Comparison of India's aid allocation with other donors  
(Indian aid recipients only, 2008-2010)**

|                               | <b>India</b>                       | <b>USA</b>          | <b>EU-3</b>         | <b>Good donors</b>  | <b>Japan</b>                | <b>Korea</b>                | <b>UAE</b>          |
|-------------------------------|------------------------------------|---------------------|---------------------|---------------------|-----------------------------|-----------------------------|---------------------|
| (log) GDP per capita          | <b>-0.249</b><br><b>(0.191)</b>    | 0.003<br>(0.994)    | -0.628**<br>(0.035) | -0.647**<br>(0.011) | -0.314<br>(0.108)           | -0.237<br>(0.429)           | -1.174**<br>(0.027) |
| (log) Affected from disasters | <b>0.097*</b><br><b>(0.053)</b>    | 0.131*<br>(0.083)   | 0.025<br>(0.705)    | 0.062<br>(0.342)    | 0.083*<br>(0.056)           | 0.099<br>(0.278)            | -0.213<br>(0.188)   |
| (log) Population              | <b>-0.483***</b><br><b>(0.002)</b> | 0.868***<br>(0.005) | 0.543**<br>(0.013)  | 0.567***<br>(0.001) | 0.312**<br>(0.020)          | 0.841***<br>(0.000)         | -0.256<br>(0.507)   |
| (log) Distance                | <b>-1.634***</b><br><b>(0.000)</b> | 0.184<br>(0.798)    | -0.535<br>(0.317)   | -1.139**<br>(0.022) | <b>-1.467***</b><br>(0.000) | <b>-1.336***</b><br>(0.002) | -2.001*<br>(0.072)  |
| UN voting (key votes)         | <b>6.826***</b><br><b>(0.000)</b>  | 4.023<br>(0.165)    | -0.383<br>(0.880)   | 0.717<br>(0.766)    | -0.076<br>(0.964)           | 10.602**<br>(0.016)         | -1.883<br>(0.678)   |
| Common colonial history       | <b>-1.219***</b><br><b>(0.000)</b> | 4.189***<br>(0.007) | 1.039**<br>(0.050)  | 2.681***<br>(0.000) |                             |                             | 0.606<br>(0.519)    |
| (log) Bilateral exports       | <b>0.401***</b><br><b>(0.001)</b>  | 0.043<br>(0.858)    | 0.506***<br>(0.009) | 0.311***<br>(0.002) | 0.220***<br>(0.003)         | 0.217*<br>(0.074)           | 0.231**<br>(0.014)  |
| (log) Resource depletion      | <b>-0.027</b><br><b>(0.137)</b>    | 0.037<br>(0.253)    | 0.012<br>(0.630)    | -0.030<br>(0.291)   | -0.019<br>(0.164)           | -0.031<br>(0.222)           | 0.020<br>(0.618)    |
| Political rights              | <b>0.056</b><br><b>(0.692)</b>     | -0.026<br>(0.897)   | 0.083<br>(0.410)    | 0.141<br>(0.251)    | -0.052<br>(0.474)           | 0.186<br>(0.177)            | -0.499<br>(0.190)   |
| Control of corruption         | <b>1.481***</b><br><b>(0.000)</b>  | 0.175<br>(0.805)    | 0.972**<br>(0.021)  | 1.321***<br>(0.005) | 0.573**<br>(0.048)          | -0.267<br>(0.607)           | -1.157<br>(0.398)   |
| Donor country dummies         | <b>Yes</b>                         | 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                |                             |                             |                     |

Notes:

- Estimation technique: Nested OLS with standard errors clustered by recipient country
- Dependent variable: (log) Aid commitments to recipient country, sum 2008-2010
- We report coefficients of the explanatory variables (corresponding p-values in parentheses)
- In italics: p-values of a Wald test of equal marginal effects of the respective donor (group) compared to India
- \* (\*\*, \*\*\*) indicates significance at the ten (five, one) percent level