

The Spanish pattern of aid giving
Sergio Tezanos Vázquez
WP 04/08

Abstract

The geographical allocation of Spanish aid has been little studied, despite the fact that it is unusually concentrated on middle-income countries. This paper sets out a model of Spanish ODA policy based on a mixture of *recipient needs*, *donor interests* and *effectiveness* considerations. Moreover it analyses both the aid-partner selection process and the eventual aid-quota allocation. The results show that Spain has followed an eclectic pattern of aid allocation, involving recipient needs, but where self-interest predominates and performance criteria are absent. The apparently insufficient progressiveness of the Spanish allocation is due mainly to the influence of the post-colonial links –although these links have characterized the geographical specialization of all donor countries that were once colonial metropolises.

Key words. Official development assistance (ODA), aid allocation, geographical specialization, aid effectiveness, recipients' needs, donor's interests

Resumen

La asignación geográfica de la ayuda española ha sido poco estudiada, a pesar de su inusual concentración en los países de ingreso medio. Este artículo propone un modelo explicativo del patrón de asignación de la AOD española que combina variables relativas a las *necesidades* de los países socios, variables de *interés* de política exterior española y condicionantes de *eficacia*. Asimismo, se analiza tanto el proceso de selección de países socios, como la decisión final de asignación de cuotas de ayuda. Los resultados muestran que España ha seguido un patrón ecléctico de asignación, en el que se combinan factores de necesidad relativa de los países socios e intereses de política exterior, pero preponderándose estos últimos y desconsiderándose, en ocasiones, otros criterios de eficacia. La aparentemente insuficiente progresividad de la ayuda española se debe principalmente a la influencia de los vínculos post-coloniales –vínculos que han caracterizado los patrones de especialización geográfica del resto de países donantes que fueron *metrópoli* coloniales.

Palabras claves. Ayuda oficial al desarrollo (AOD), asignación de la ayuda, especialización geográfica, eficacia de la ayuda, necesidades de los receptores, intereses de los donantes.

I would like to especially thank José Antonio Alonso and Valpy FitzGerald for their careful assistance in this piece of research; also José Félix Tezanos, Juan Manuel Moreno, Pedro José Gómez, Paul Mosley, Adrian Wood, John Toye, Christopher Adam, Howard White, Oliver Morrissey and Rogelio Madrueño for their comments. I also gratefully acknowledge the financial support of the Spanish *Ministry of Education* and the institutional support of the *Instituto Complutense de Estudios Internacionales* (ICEI) and the *Queen Elizabeth House* (University of Oxford). The views expressed in this paper, however, remain solely those of the author. Of course, the usual caveats apply.

Sergio Tezanos Vázquez

Instituto Complutense de Estudios Internacionales (ICEI)

Universidad Complutense de Madrid

Finca Mas Ferré, Edificio A, Campus de Somosaguas

28223 Pozuelo de Alarcón, Madrid, SPAIN

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ISBN: 978-84-691-4735-1

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1. INTRODUCTION

The analysis of the geographical aid allocation patterns of the different donor countries started in the late 1960s with the aspiration to improve the management of the *-per se* scarce- resources committed to furthering the progress of the developing world. To date, the Spanish aid giving pattern has been little studied, in spite of its unusual concentration on middle-income countries, a fact which brings about an apparent “regressive bias” of aid allocation and blurs Spain’s commitment with the *Millennium Development Goals* (MDG) and its special attention to the poorest countries. However, more than 41% of the world’s poor population lives in middle-income countries on less than 2 dollars a day, a fact that contrasts with the decreasing emphasis that these countries are receiving from the international aid community. In this context, some kind of specialization is needed within the international co-operation system, in order to support the development processes of those countries that are closer to the “border” of the developed world and thus boosting the creation of a framework of incentives which encourages national efforts. Therefore, Spain’s aid specialization in middle-income countries may be advisable, provided that it responds to a balanced pro-developmental strategy and not primarily to other –self– foreign policy interests.

This paper analyses the Spanish *official development assistance* (ODA) pattern of geographical specialization within an “integrated” *recipients’ needs and donor’s interests approach* (RN–DI). After this first introductory section, the second summarizes the studies applied to the Spanish case. Section 3 develops a *geographical allocation framework* for Spain’s aid, simplifying the complex Spanish policy in a three-step decision process. The fourth section sets out the econometric procedures used for the estimation of an accurate RN–DI model of Spanish assistance. Section 5 offers the empirical results, analysing, on the one hand, the *aid selection stage* and, on the other, the *aid-quotas stage*, distinguishing between two groups of partner countries in terms of their post-colonial links. Finally, section 6 points out the main conclusions of the analysis and proposes policy criteria that seek to improve the impact of the geographical allocation of Spanish aid.

2. STUDIES OF THE GEGRAPHICAL ALLOCATION OF SPANISH AID

Although a number of studies have analysed the geographical aid allocation patterns of the main bilateral and multilateral donors, the Spanish case has received very limited attention¹. Only two pieces of research have particularly studied this donor’s pattern of aid giving:

Alonso (1999) carried out a cross-section analysis of the Spanish 1996 ODA allocation, verifying that, although the aid distribution was guided by both “aid demand and supply factors”, the foreign policy’s regional preferences determined, to a great extent, the allocation pattern. However, once this regional factor was considered, the aid disbursements were directly related to the recipients’ developmental needs. As a conclusion –the author claimed– “it is necessary to correct the historical regional preferences of the Spanish co-operation system if we want to put an end to the bias that, to-date, can be found in its geographical distribution and grant a clearer priority to the less developed countries” (pp. 135-136).

Sánchez Alcázar (1999) studied the Spanish aid disbursed to Latin America between 1989 and 1993, ascertaining that the donor’s self-interests (exports, especially) determined the aid allocation, whereas the recipients’ needs did not affect the distribution. These results partially disagree with those offered by Alonso (1999), although these two studies refer to different periods, and therefore the discrepancies can be explained by changes in the allocation pattern over time. In any event, the trade bias pointed out by Sánchez Alcázar belongs to the “gestation period” of the Spanish co-operation system, when aid loans contributed to 60% of the gross bilateral ODA disbursements (in contrast with the 32.2% share in 1998–99 and the 19% in 2004–05).

Other studies have compared the allocation patterns of different donors, using “standard” models of analysis –i.e. applying the same general model to different bilateral and multilateral donors–, although few of them have specifically looked into the case of Spain:

¹ McGillivray and White (1993), Tarp *et al.* (1998), McGillivray (2003a), Jones *et al.* (2005) and Tezanos (2008) review the economic contributions to the studies of aid allocation.

Berthèlemy and Tichit (2002) carried out a panel-data analysis of the aggregated ODA allocation of the 22 DAC donors for the period 1980–99, using the same set of explanatory variables for each donor country (and, therefore, “assuming that all the donors have the same behaviour”, p. 9), but included dummy variables in order to reflect their peculiar interests, such as the colonial links. In accordance with their Tobit estimates, Spain was strongly specialized in its former colonies –as has occurred with other former metropolises–, giving them, on average, during the 1990s decade, between 2.3 and 2.7 additional dollars of *per capita* aid.

Alesina and Weder (2002) analyzed the aid allocation of 13 DAC donors using a Tobit panel data model for the period 1970–94. In the case of Spain (with the analysis restricted to the period 1990–94), none of the considered explanatory variables (*per capita* income, population, trade openness and political rights) were found statistically significant in the aid *per capita* allocation. However, as they used the same “standard” model for analysing different donors’ allocations, they did not consider the colonial past as an explanatory variable in the Spanish specialization, which may bias the estimates due to the omission of a relevant regressor². In any case, this failure to identify a systematic pattern of aid allocation responds –to a great extent– to the high resources’ fragmentation among those countries that do not share post-colonial links with Spain.

Isopi and Mavrotas (2006) analysed the ODA *per capita* allocation of 20 DAC donors during the period 1980–2003 using a Tobit panel data model. Regarding the Spanish case, they conclude that –for the period 1991–2003– “the elements that influence Spain’s aid allocation are a mixture of the donor self-interests and recipient needs” (p. 14). This analysis includes different model specifications and uses several sets of explanatory variables. In accordance with their full-model, Spanish aid allocation has been positively related to the share of “social aid” (the percentage of bilateral ODA devoted to the sector of “social infrastructure

² Alesina and Weder measured the historical links by means of the number of years that the developing countries were colonies of the metropolises during the 20th Century, thus excluding all Spanish colonies. They also used a variable of political alliances (the frequency of cases in which the receiving country voted in the UN in the same way as the donor) that could not be used in the case of Spain due to the lack of information.

and services”), although Isopi and Mavrotas emphasize that “the trade relations seem to play a leading role in foreign aid allocation” (p. 14), which –in their opinion– is due to the strong trade links maintained with the former colonies. The allocation also favours the countries with more egalitarian income distributions and higher growth rates in the previous year. They also included two additional regressors in the model: the aid “past outcomes” (i.e. aid effectiveness³) and the infant mortality rate, which were shown to be significant and positively related with the *per capita* aid distribution. Finally, arms transfers, *per capita* income, population and the quality of democratic institutions were found irrelevant in the allocation, thus concluding that “political and strategic factors do not exert a relevant impact in the allocation process” (p. 15). However, Isopi and Mavrotas do not include any cultural affinity variable, although they mention the post-colonial links in order to explain most of their results. Moreover, they introduce assumptions that are not appropriate for the particular Spanish co-operation policies (among others, the assumption that the effectiveness of the World Bank’s projects is equivalent to that of Spain’s projects is far from clear, given the strong discrepancies that can be found in the geographical interests of both donors).

All in all, the Spanish pattern of aid giving shows some similarities with those of the USA, Japan and France –which are also strongly determined by their preferences towards their respective geographical interests– and differs greatly from the aid allocation of the Scandinavian countries, UK, the Netherlands and Canada –which are, to a larger extent, oriented towards the most needed developing countries.

3. THE ALLOCATION FRAMEWORK OF SPANISH ODA

This section proposes a geographical allocation framework for the Spanish ODA which follows the seminal contribution of Dudley and Montmarquette (1976) by focusing the analysis on the economic behaviour of the

³ Isopi and Mavrotas used the World Bank’s *Operations and Evaluations Department* calculations of the aid projects’ rates of return, assuming that the levels of effectiveness obtained by the analyzed bilateral donors are identical to those of the World Bank (*inter alia* effectiveness).

decision-makers responsible for the aid allocation⁴. However, contrary to other theoretical contributions, the model proposed in this paper puts forward a *specific* framework for a Spanish co-operation policy, understanding that more general approaches do not consider the peculiarities of the policy management of the donor States, thus offering less precise interpretations of their specialization patterns⁵. The model conceives the Spanish ODA geographical allocation as a *three-step decision process*, taking into account the censored nature of the dependent variable –an approach that has not been previously applied to the study of the Spanish case⁶–: in the first stage, the Spanish Government decides both the total amount of resources that will be devoted to international co-operation, and the share of multilateral and bilateral aid; in the second stage, the Government chooses the group of partner countries which will receive bilateral aid from the list of “eligible” developing countries according to the OECD DAC’s directives; finally, in the third stage, the aid-quotas of each partner country in the Spanish budget are determined.

3.1. First decision stage: determination of the Spanish ODA budget and the shares of multilateral and bilateral aid

Given the particularities of the Spanish aid management policy, it is assumed that the first-step decision is *exogenous* to the geographical allocation of aid: the Spanish Government decides annually both the total ODA budget, and the share that will be actually managed by the Spain’s public sector (bilateral aid) and that by international organizations (multilateral aid), independently

of the eventual geographical distribution of resources among developing countries.

The Government decides on the annual aid budget within the Spain’s General Public Budget (*Presupuestos Generales del Estado*), within the “foreign policy” item⁷. The Public Budget specifies the endowment of the several Central Government aid agents that carry out bilateral policies (therefore not including local and regional governments’ aid budgets) and the contributions to international organizations (multilateral aid). The Budget is finally approved by the Parliament and, thus, the Government decides the geographical allocation of aid as far as it determines the endowment of the main aid instruments managed by the different aid decision-makers.

Moreover, the Government is also responsible for elaborating the Spanish Aid Strategic Plan (*Plan Director de Cooperación*), which specifies the strategy for the next 4 years, including the geographical priorities. Finally, the Spanish Aid Department (*SECI*) elaborates the Annual Plan of International Co-operation (*PACI*), which details the aid budget and the endowments of the different official aid policy agents (including, in this case, the local and regional governments), with the purpose of advancing towards fulfilling the goals set forth in the four-year Aid Plan.

All in all, the central Government is the first “aid policy-maker”, deciding both the volume of resources, and its preliminary geographical distribution. Nevertheless, eventually different economic agents take charge of the aid administration: these are mainly the Spanish Aid Agency (AECI, attached to the *Ministry of Foreign Affairs and Co-operation*), several Ministries, local and regional governments, NGOs and the international organizations financed by Spain.

The proposed model considers that the result of this first-step decision is determined *ex ante*. The Government decides every year the amount of ODA in accordance with its own preferences for different public policies that compete for the resources endowment⁸.

⁴ Other theoretical models that followed Dudley and Montmarquette are: Trumbull and Wall (1994), Tarp *et al.* (1999), Feeny and McGillivray (2002) and Feeny (2003). Based on this model, several empirical applications have been carried out, using increasingly sophisticated econometric techniques, from the initial regression analyses with cross-section data (see, for example, Levitt, 1968; Mckinlay and Little, 1977; Maizels and Nissanke, 1984; and Alonso, 1999), to the most complex panel data models with limited dependent variables (such as Tarp *et al.*, 1999; Berthélemy and Tichit, 2002; Alesina and Weder, 2002; Neumayer, 2003; and Isopi and Mavrotas, 2006).

⁵ Only Tarp *et al.* (1999) developed a theoretical model adapted to the singular characteristics of the analysed donor: the Danish State.

⁶ Neither Alonso (1999), nor Sánchez Alcázar (1999), considered in their studies the censored nature of aid.

⁷ However, there are also extra-budgetary items, such as debt forgiveness, which is internationally coordinated.

⁸ It should be recalled that the Spanish ODA/GNI ratio has been increasing in the last two decades, from 0.08% in 1986-87 to 0.27% in 2005. Moreover, there is a recent political commitment that determines the aid budget: achieving the 0.5% ODA/GNI ratio by 2008 (as foreseen by the Aid Plan) and the 0.7% by 2012.

Finally, the ODA budget (\tilde{A}_t) is specified each year in the PACI, delimiting the maximum amount of resources finally distributed among international organizations or directly managed by the different public agents of the Spanish State. This trade-off can be written as follows:

$$\tilde{A}_t \leq \sum_j^J A_{jt} + \sum_m^M A_{mt} \quad [1]$$

where $\sum_j^J A_{jt}$ is the *total bilateral ODA* allocable among J possible developing countries and $\sum_m^M A_{mt}$ is the *multilateral ODA* available for financing M different international organizations⁹.

In particular, during the period 2000–05, Spain distributed, on average, almost 40% of its resources via multilateral organizations (well above the average of most donor countries), despite the fact that the Spanish geographical priorities have not always matched the multilateral interests¹⁰. This discrepancies were remarkable during the period 2000–05: the main recipient regions of *aggregated multilateral* ODA were Africa (especially the Sub-Saharan region) and Asia (especially South and Central Asia), which shared 43% and 34% of the total net disbursements, respectively; on the other hand, *Spanish bilateral ODA* went mainly to Latin America (totalling 45%, almost 6 times more than multilateral aid), followed, at great distance, by Africa (21%, i.e. less than half of the multilateral allocation), being specially lower the participation of the Sub-Saharan region (15.5%).

Moreover, it should be born in mind that, to a large extent, financial contributions to international organizations are compulsory for their members, and have previously determined quotas and time schedules

⁹ There are also aid resources committed to finance *horizontal co-operation strategies* that cannot be geographically allocated to specific recipient countries.

¹⁰ See Tezanos (2007, pp 8-10) for further explanations on the Spanish multilateral-bilateral trade-off, and the different patterns of geographical aid allocation between multilateral and Spanish ODA.

(usually, biannual), that cannot be easily affected by individual bilateral donors¹¹. All in all, it is assumed that the decision on how much aid to allocate to multilateral organizations (as a share of the Spanish total aid budget) is “predetermined”, and, therefore, its effect on Spain’s geographical allocation is *exogenous*, given the limited influence that bilateral donors exert on the orientation of multilateral aid¹². Thus, the first summing-up expression of equation [1] yields the *geographically allocable bilateral ODA* – exogenous and politically predetermined– that constitutes the dependent variable of this analysis.

3.2. Second decision stage: selection of aid-partner countries

Secondly, the model assumes that the Spanish State selects the group of aid-partner countries each year. The *selection stage* can be analysed according to the following *attraction index*¹³:

$$\Lambda_{jt} = e^{\alpha_j} \cdot N_{jt}^\beta \cdot I_{jt}^\delta \cdot G_{jt}^\varphi \cdot H_{jt}^\theta$$

$$0 \leq \alpha_j \leq 1; \quad 0 \leq \beta \leq 1; \quad 0 \leq \delta \leq 1; \\ 0 \leq \varphi \leq 1; \quad 0 \leq \theta \leq 1 \quad [2]$$

where Λ_{jt} measures the interest of the donor for a developing country j . N , I , G and H are vectors of explanatory variables regarding the recipient countries’ needs, the donor’s interests, the aid effectiveness determining factors and the allocation’s path dependence (history), respectively. β , δ , φ , and θ are sets of weights; all of them are constrained within the interval [0, 1] so as to reflect the possible existence of decreasing marginal returns¹⁴. The parameter α_j measures the fixed effects associated with each recipient country that are not determined by the variables N , I , G and H .

¹¹ However, donor countries can make voluntary subscriptions to multilateral institutions. They can also voluntarily contribute to funds and programmes, which are recorded by the DAC as “multi-bilateral aid” –therefore, as the recipient countries are identifiable, these resources are included in the present analysis.

¹² Nevertheless, it is possible that Spain conceives the pattern of multilateral ODA allocation as *complementary* to its own geographical preferences. This way, the large share of Spanish assistance received by Latin America would compensate for the lower attention received by this region on the part of the multilateral co-operation.

¹³ The use of a “selection threshold” follows the approach of Tarp *et al.* (1999).

¹⁴ The existence of decreasing marginal returns guarantees that the donor will not concentrate all its resources in one recipient: the one with the highest score in the attraction index.

Once the donor estimates the attraction indexes for each partner country, the following selection rule is applied:

$$\begin{aligned}
 D_{jt} = 1 & \quad \text{if} \quad \Lambda_{jt} \geq k \cdot A_{Bt}^{\mathcal{G}} \\
 D_{jt} = 0 & \quad \text{if} \quad \Lambda_{jt} < k \cdot A_{Bt}^{\mathcal{G}} \\
 \Pr(D_{jt} = 1) & = \Pr(\Lambda_{jt} \geq k \cdot A_{Bt}^{\mathcal{G}}) = \\
 & \Pr(\Lambda_{jt} - k \cdot A_{Bt}^{\mathcal{G}} \geq 0); -\infty < \mathcal{G} < \infty \\
 & [3]
 \end{aligned}$$

where $D_{jt} = 1$ indicates that country j is chosen as a partner, A_{Bt} is the predetermined amount of bilateral ODA geographically allocable among J possible developing countries, and k is a constant. Recipient countries are ranked following their respective scores on the attraction indexes, which determine their selection probabilities, so that those above the *selection threshold* $k \cdot A_{Bt}^{\mathcal{G}}$ are finally chosen as aid-partners.

The parameter \mathcal{G} reflects the donor's *aversion/predisposition to disperse* its aid budget among the J eligible countries: if $\mathcal{G} > 0$, there is *aversion* to dispersion (as \mathcal{G} tends to ∞ , the dispersion of the resources is penalized and the selection probability decreases); on the other hand, if $\mathcal{G} < 0$, there is *predisposition* to dispersion (as \mathcal{G} tends to $-\infty$, both the dispersion of the resources and the probability of being chosen as an aid-partner increases). Also, if $\mathcal{G} = 0$, the selection rule does not depend on the volume of aid. This parameter of aversion to dispersion is especially outstanding in the context of a donor, as Spain, that is experiencing a gradual increase of its resources: as the volume of ODA increases, so does the financial capacity to disburse aid to a greater number of countries and –therefore– the probability of being selected as a partner. Nevertheless, if $\mathcal{G} > 0$, the donor's aversion to dispersion will compensate the previous effect.

The result of choosing the country j as a partner is thus interpreted as the difference in the utility obtained by Spain between giving and not giving aid to this country, being positive in the event of selection and zero or negative otherwise.

Substituting [2] into [3] and using logarithms yields the following linear probability function:

$$\begin{aligned}
 \Pr(D_{jt} = 1) & = \\
 & \Pr(\alpha_j + \beta \ln N_{jt} + \delta \ln I_{jt} + \phi \ln G_{jt} + \theta \ln H_{jt} - \ln k - \mathcal{G} \ln A_{Bt} \geq 0) \\
 & j = 1, 2, \dots, J \\
 & t = 1, \dots, T \\
 & [4]
 \end{aligned}$$

The following relations in the process of selecting aid-partners are expected:

$$\begin{aligned}
 \frac{\partial \Pr(D_{jt} = 1)}{\partial N_{jt}} & > 0; & \frac{\partial \Pr(D_{jt} = 1)}{\partial G_{jt}} & > 0; \\
 \frac{\partial \Pr(D_{jt} = 1)}{\partial I_{jt}} & > 0; \\
 \frac{\partial \Pr(D_{jt} = 1)}{\partial H_{jt}} & > 0 & [5]
 \end{aligned}$$

i.e. the probability of being selected as a partner for Spanish assistance depends on, simultaneous and positively, the developing country's relative level of aid need, the interest it has for Spanish foreign policy and the factors determining aid effectiveness. Moreover, the allocation's path dependence directly affects probability of being “re-selected”.

3.3. Third decision stage: allocation of aid-quotas

Once a subset of K -partner countries has been selected (being $K \leq J$), the Spanish State passes to the *aid-quotas stage*, in which it decides the specific quotas of each country in the ODA budget:

$$\begin{aligned}
 a_{jt} & = \frac{A_{jt}}{A_{Bt}} \leq 1 \\
 & [6]
 \end{aligned}$$

where a_{jt} measures the share of country j in Spain's aid and A_{Bt} is the total amount of *bilateral ODA* geographically allocable among

$$K\text{-recipient economies: } A_{Bt} = \sum_{j=1}^K A_{jt} .$$

The Spanish objective function for geographical aid allocation is then defined as follows:

$$\Phi_a = f(a, N, I, G, H)$$

[7]

where the variables are interpreted as in previous equations. Specifically, the objective function can be written as:

$$\Phi_a = \sum_{j=1}^K \left(a_{jt}^{\alpha_j} \cdot N_{jt}^{\beta} \cdot I_{jt}^{\delta} \cdot G_{jt}^{\varphi} \cdot H_{jt}^{\theta} \right)$$

$$0 \leq \alpha_j \leq 1; \quad 0 \leq \beta \leq 1; \quad 0 \leq \delta \leq 1; \quad 0 \leq \varphi \leq 1; \quad 0 \leq \theta \leq 1$$

[8]

where the parameters α_j , β , δ , φ and θ are constrained within the interval [0, 1] so as to indicate the possible existence of decreasing marginal returns.

The aim of the Spanish co-operation policy is to maximize the total utility derived from the aid allocations to K -partner countries, subject to the budget constraint (assuming that the aid budget is totally disbursed):

$$\text{s.t.} \quad \sum_{j=1}^K a_{jt} = 1$$

[9]

This restriction implies that a marginal increase in the aid-quota assigned to a specific partner country will decrease the share of, at least, another country.

The *lagrangian* resulting of maximizing [8] subject to [9] is:

$$\text{Max} \quad L = \sum_{j=1}^K \left(a_{jt}^{\alpha_j} \cdot N_{jt}^{\beta} \cdot I_{jt}^{\delta} \cdot G_{jt}^{\varphi} \cdot H_{jt}^{\theta} \right) + \lambda \left(1 - \sum_{j=1}^K a_{jt} \right)$$

[10]

The first order conditions are:

$$\frac{\partial L}{\partial a_{jt}} = \alpha_j \cdot a_{jt}^{\alpha_j-1} \cdot N_{jt}^{\beta} \cdot I_{jt}^{\delta} \cdot G_{jt}^{\varphi} \cdot H_{jt}^{\theta} - \lambda,$$

and

[11]

$$\frac{\partial L}{\partial \lambda} = 1 - \sum_{j=1}^K a_{jt}$$

[12]

Working out the value of a_{jt} we get the shares received by each developing country from the Spanish ODA:

$$a_{jt} = \left(\frac{\lambda}{\alpha_j \cdot N_{jt}^{\beta} \cdot I_{jt}^{\delta} \cdot G_{jt}^{\varphi} \cdot H_{jt}^{\theta}} \right)^{\frac{1}{1-\alpha_j}} = \left(\frac{\alpha_j \cdot N_{jt}^{\beta} \cdot I_{jt}^{\delta} \cdot G_{jt}^{\varphi} \cdot H_{jt}^{\theta}}{\lambda} \right)^{\frac{1}{1-\alpha_j}}$$

[13]

Taking logarithms in equation [13] yields the linear function:

$$\ln a_{jt} = \alpha_j^* + \beta^* \ln N_{jt} + \delta^* \ln I_{jt} + \varphi^* \ln G_{jt} + \theta^* \ln H_{jt}$$

$$j = 1, 2, \dots, K$$

$$t = 1, \dots, T$$

[14]

where:

$$\alpha_j^* = \frac{\ln \left(\frac{\alpha_j}{\lambda} \right)}{1 - \alpha_j}; \quad \beta^* = \frac{\beta}{1 - \alpha_j};$$

$$\delta^* = \frac{\delta}{1 - \alpha_j}; \quad \varphi^* = \frac{\varphi}{1 - \alpha_j}; \quad \theta^* = \frac{\theta}{1 - \alpha_j}$$

The expected relations in the allocation of the aid-quotas are¹⁵:

$$\frac{\partial a_{jt}}{\partial N_{jt}} > 0; \quad \frac{\partial a_{jt}}{\partial I_{jt}} > 0; \quad \frac{\partial a_{jt}}{\partial G_{jt}} > 0;$$

$$\frac{\partial a_{jt}}{\partial H_{jt}} > 0$$

[15]

Therefore, equations [4] and [14] specified a *RN-DI hybrid* model, and its specification allows us to consider a different set of explanatory variables in each decision-step¹⁶.

¹⁵ We could also define *cross-elasticities* so as to reflect the fact that the allocation to a particular partner country does not depend only on its *RN-DI* scores, but also on the scores of the $K-1$ remaining recipients. For reasons of simplicity, the model only considers the direct elasticities indicated in equation [17].

¹⁶ i.e. there is not an *a priori* reason for the parameters of these two equations to be the same.

Finally, Tarp *et al.* (1999) pointed out that there is a potential econometric risk of *simultaneity* in the determination of the total aid budget (\tilde{A}_i , see equation [1]) and the share of aid finally allocated to each partner (a_{jp} , see equation [13]). This problem would be serious if, either the total aid budget or the distribution among bilateral and multilateral aid, were to depend also on the same *RN-DI* function.

3.4. Determinant factors for Spanish aid allocation

As equations [2] and [7] establish, Spain's aid allocation decision depends on several variables that, for reasons of simplicity, may be grouped into four explanatory factors: recipient countries' needs, donor's foreign policy interests, aid effectiveness determining factors and the allocation's path dependence:

i) Regarding the *recipient countries' relative needs*, aid should be concentrated in the poorest countries, as it is explicitly pointed out by the OECD, which attributes to the ODA "the promotion of the economic development and welfare of developing countries as its main objective" (OECD: DAC, 2007, <http://www.oecd.org/dac>). In the particular case of Spain, the Aid Law establishes that the main objective of aid is to contribute to the "eradication of the World poverty, in all its manifestations" (*1st article*), and understands that the human being is the main protagonist of the co-operation policies. Especially clear is the aspiration to allocate the resources in accordance with the basic criterion established in the *article 5*: "[...] less economically and socially developed countries will receive special attention from the Spanish co-operation".

Moreover, Spain should take into account the relative level of need of each partner country in terms of their *share in the global ODA* (i.e. the total aid disbursed by multilateral and bilateral donors). On this matter, there are two possible scenarios:

- A negative relation between the Spanish allocation and the rest of the donors' allocations shall reflect certain coordination among donors' interventions, avoiding *infra* and *supra*-allocations in specific regions. In this

scenario, it is reasonable to consider that the Spanish *middle-income country orientation* is due to a specialization pattern with Latin America, agreed within an international coordination scheme.

- On the contrary, a positive relation shall reflect the existence of the so-called "bandwagon effect". As Dudley and Montmarquette (1976) first explained, this behaviour implies that the donor's perception of the impact of its aid on a specific developing country is positively influenced by the volume of aid that this country attracts from the rest of donors.

ii) With regard to *foreign policy interests*, traditionally Spain has oriented its aid towards Latin America, Equatorial Guinea, the Philippines and Morocco, due to the historical links. The Spanish Aid Law clearly establishes that the geographical priorities are "[...] Latin American countries, the Arab countries of North Africa and Middle East, as well as other less developed countries that maintain special historical and cultural links with Spain" (*6th article*). These historical links are determined by a series of cultural affinities, such as language, religion and legislative tradition; factors that Spain has considered facilitate more effective co-operation relations. Supporting this argument, the DAC's review on Spanish aid (2002) pointed out the existence of a "comparative advantage" with Latin America, based on strong linguistic, cultural and historical ties.

Furthermore, Spain may be stimulating its *trade and investment interests* through the allocation of aid to its main economic partners. In fact, this was the original aim of the *Development Assistance Found* (the so-called FAD loans), which was set up in 1976 in order to foster the exports of the Spanish enterprises.

iii) Regarding the *determinant factors of aid effectiveness*, the international community has increasingly reached a consensus on the significance of the recipient countries' economic, social, political and institutional environment in the development process and the effectiveness of aid¹⁷. Good governance has been one of the main DAC's concerns since 1989, which points out the existence of a "vital connection between open, democratic and

¹⁷ Good reviews on aid effectiveness literature can be found in Alonso (2003) and McGillivray (2003b).

accountable political systems, individual rights and the effective and equitable operation of economic systems”¹⁸. Thus, Spanish aid should promote good public policies, as is expressly ratified both in the Aid Law and the current Aid Plan: the latter claims that one of the aid’s main goals is “[...] the promotion of democracy and the respect of the fundamental rights, from a real and effective citizen participation, and the exercise and respect of human rights, as they are recognized within the United Nations framework” (MAE, 2005, p. 37). Moreover, the Plan claims that the geographical specialization should be guided by the “greater commitment of recipient countries to the development goals, and, in particular, the adoption of appropriate policies to fulfil the goals of the Millennium Declaration and other international agreements signed by the country” (p. 99).

In the end, it is assumed that aid is more effective in those countries with sound political and institutional environments. This assumption is the heir of the pioneer studies on aid effectiveness carried out by Burnside and Dollar (1997 and 2004) –promoted by the World Bank’s *Development Research Group*– which claimed that the impact of aid on growth depends both on the recipient countries’ policies and institutions, and on the management by the donor. Although these results have been highly controversial, Collier and Dollar (2001 and 2002) developed the so-called “anti-poverty efficient allocations”, which were published in the World Bank’s report *Assessing Aid* (World Bank, 1998), arguing that a re-allocation towards poor countries with sound policies could free from poverty a greater number of people than the current resource allocation.

Furthermore, the recipient economy’s *absorptive capacity* is included in the model so as to take into account the productive constraints of additional aid allocations and the existence of decreasing marginal returns on aid¹⁹.

¹⁸ Policy statement by DAC aid ministers and heads of aid agencies on development co-operation in the 1990s, reprinted in the 1989 *DAC Development Co-operation Report*, OECD (1989). Available in: http://www.oecd.org/LongAbstract/0,2546,en_2649_34435_275_5285_119814_1_1_1,00.html

¹⁹ See, among others, the studies of Dudley and Montmarquette (1976), Lensink and White (2001) and Hansen and Tarp (2000).

iii) With regard to the *aid’s path dependence*, the proposed model measures the “inertial effect” exerted by previous allocations, which has several explanations:

a) Donors tend to co-operate with a steady group of partner countries so as to minimize the aid administrative costs; i.e. adding new partners means incurring in additional expenses due to the necessity of implementing new bilateral mechanisms in order to assure that aid is effective. Moreover, the donor’s aid management may be benefited by “learning economies”, based on previous experiences of assisting the same group of countries, which lead to increased administrative efficiency levels. Spain’s current effort of acquiring greater administrative capacity in the so-called “priority countries” determines, to some extent, these countries future probabilities of being aid recipients – and, in the end, their permanence in the list of priorities²⁰.

b) Closely related to the previous argument, the donor is responsible for providing their partners with a stable assistance so as to generate long-term sustainable development processes – provided that the terms of co-operation are fulfilled–. This is the case of Spanish aid which is reinforced by the current increasing emphasis on *programme* aid, instead of short-term *projects*. A greater stability in the relations with partner countries is also caused by the use of new aid instruments (such as global funds, budget support and sector wide approaches), which have longer term perspectives.

c) The inertia is led by previous experiences where aid was shown to be particularly effective. Thus it may include the factor of “previous results” identified by Isopi and Mavrotas (2006), but without the controversial assumption of *inter alia* effectiveness²¹.

d) Spain’s co-operation with Latin America has been especially stable over time. The Aid Plan gives a set of institutional and geo-strategic reasons, which constitute an inertial movement

²⁰ Most of these countries already have *in situ* technical co-operation offices and country strategic plans.

²¹ In this respect, the current Aid Plan is committed to make progress in aid planning and management procedures, based on previous results, in order to increase the effectiveness levels.

in the assistance and why “Latin America has been, and will be, a priority region for Spanish aid” (MAE, 2005, p. 104). Moreover, Spanish NGOs’ assistance to Latin America also has a structural character, and the inertia of this co-operation is partially due to the reduced size of these organizations (which determines their specialization in this region) and the cultural and linguistic affinities with the Latino countries.

e) Long-running political commitments between donor and recipient have an outstanding importance in the allocation process and contribute to an additional factor of stability, as it is specially complicated to retract resources from a long-running aid-partner.

4. EMPIRICAL MODEL OF SPANISH ODA GEOGRAPHICAL ALLOCATION

4.1. Econometric specification of the model

The estimation of the allocation framework explained in the preceding section requires tackling the *censored nature* of ODA allocations –i.e. the exclusion of some developing countries from the Spanish assistance implies that aid is partially continuous with positive probability mass at the value of zero–. Thus aid flows are represented by the selection of a *threshold* – which is a *latent variable*– where the donor starts to disburse positive amounts of aid (see the *attraction index* defined in equation [3]). If the observations for $a_{jt} = 0$ were excluded from the sample, the estimates will be biased and inconsistent, as would be the case of an *ordinary least square* estimation. By contrast, *limited dependent variable regression models* do not omit these null observations, allowing the “latent” decision of excluding those countries that lie under the threshold level to be analysed.²² For this reason, the present

²² Three alternative econometric models have been previously used in the aid allocation analysis: the TOBIT model; the type 2 TOBIT model (HECKMAN or sample selection model); and the two-part model. Neumayer (2003) offers a good review of the econometrics of these models within the context of the aid allocation analysis.

analysis uses a two-part model for the estimation²³.

The *aid selection stage* defined in equation [4] is therefore estimated by means of the following regression function with a binary dependent variable and a panel data set²⁴:

$$\Pr(D_{jt} = 1) = \alpha_j + \beta \ln N_{jt} + \delta \ln I_{jt} + \varphi \ln G_{jt} + \theta \ln H_{jt} + u_{jt} \quad [16]$$

where α_j , β , δ , φ and θ are the parameters to estimate

The *aid share stage* defined in equation [14] is estimated separately for the group of partner countries that has post-colonial links with Spain and those countries without these historical ties. This procedure avoids the constraint of the fixed-effect model regarding the estimation of explanatory variables which do not vary over time. The panel data regression function used in both cases is written as²⁵:

$$a_{jt}^* | (D_{jt}=1) = \alpha'_j + \beta' \ln N_{jt} + \delta' \ln I_{jt} + \varphi' \ln G_{jt} + \theta' \ln H_{jt} + u_{jt} \quad [17]$$

$$a_{jt} = a_{jt}^* \rightarrow \begin{matrix} \text{if} & D_{jt} = 1 \\ 0 & \text{otherwise} \end{matrix}$$

where the variables are defined as in previous equations and a_{ij}^* represents the potential aid endowments.

4.2. Measurement of the dependent variable: Spanish bilateral ODA

This paper analyses the *bilateral resources* classified by the DAC as *official development assistance* (ODA). As Spain does not report on commitments, the study uses aid disbursements. However, while aid

²³ See Tezanos (2007, pp- 17-18) for further explanations on the selection of the econometric model.

²⁴ Specifically, equation [16] is estimated by means of a *logit* regression model. As there is not an easy routine implemented in *STATA 9.2* for *logit* (unconditional) fixed-effect estimation, it uses a random-effects model.

²⁵ In accordance with the results of the *Hausman specification tests*, the allocation equation for the ex-colonial countries is estimated by means of a fixed-effects panel data model and the equation for countries without historical links uses a random-effects model (*results available upon request*).

commitments and *gross* disbursements are strictly positive, *net* disbursements can be negative due to the paying-off of previous “concessional loans” computed as ODA. Spain’s gross disbursements have been historically much greater than its net disbursements, and the proportional difference between both amounts has been well above the average of the UE and DAC donors. Given the historical importance of the FAD loans within the Spanish assistance, gross disbursements may be a biased measure of the real transfer of resources to developing countries. Nevertheless, the FAD loans are managed by the *Ministry of Industry, Tourism and Trade* with a high degree of independence with respect to the *Ministry of Foreign Affairs*. The latter does not directly consider in its geographical orientations the loans pay-off schedule so as to compensate the negative disbursements²⁶. Thus, in order to analyse the most realistic image of the aid transfers and the Spanish aid management policy, the proposed model uses ODA gross disbursements as the dependent variable of the model.

Emergency aid is subtracted from the ODA gross disbursements because it is assumed to be disbursed to countries under emergency situations in an “additive” way –i.e. additional to the resources that were already allocated to them–, being its geographical distribution independent of the previously resolved one.

With regard to the *debt relief actions*, these are multilateral programs in which the Spanish State is taking part (mainly, the HIPC Initiative and the negotiations of the Paris Club), that impose a specific calendar and map of execution, where individual donors cannot exert a direct influence on the geographical orientations. However, debt forgiveness cannot be considered as strictly *exogenous* from each bilateral donor’s process of allocating aid, as donors could bring forward the amount of resources previously assigned to the countries favoured by debt cancellations. In fact, multilateral debt programmes specify detailed time schedules for the relief flows, which are often negotiated in international forums before bilateral donors decide the geographical allocation of their own resources. Despite this fact, the Spanish geographical allocation has

²⁶ This fact explains the incoherencies between the Spanish geographical priorities defined in the Aid Plan and the aid eventually disbursed: e.g. there is a number of “preferential countries” that have received negative net disbursements, such as Mexico in the last 7 years.

occasionally been affected by major debt actions²⁷, partially because debt relief programmes are managed by the *Ministry of the Exchequer* irrespectively of the *Ministry of Foreign Affairs and Co-operation*. This highly independent management implies a lack of coordination between both Ministries, which consequently impedes anticipating the eventual aid allocation to those countries benefited by debt relief. Thus, the present analysis detracts debt actions from the ODA gross disbursement and considers that the resulting amount is a better approximation of the resources finally allocated by the aid decision-makers.

Once the Spanish ODA gross disbursements are obtained –netted of emergency aid and debt cancellations–, the dependent variable of the *aid-partners selection stage* is computed by means of a dummy variable that classifies developing countries into two possible categories: “ $D = 1$: selected partner country” and “ $D = 0$: otherwise”. The classification rule is the existence of a “significant” disbursement of aid. As McGillivray and Oczkowski (1992) pointed out, it is convenient to use a “minimum threshold” of aid receptions so as to compensate the limited impact of highly scattered aid allocations that renders a certain number of recipients with particularly low shares –as is generally the case among the largest donors, although it is also typical of Spain–. While choosing a specific threshold level can be, ultimately, an arbitrary procedure, it is especially convenient in the case of the Spanish ODA, given the high level of geographical dispersion. Therefore, the first-step estimation defines a partner country only if it receives, at least, a 1% share of Spain’s ODA. Otherwise, the *logit* regression would be seriously unbalanced, with a greater share of category 1 (i.e. the number of selected countries are greatly superior to the number of non-selected ones), over-estimating the probabilities of being selected²⁸.

The dependent variable of the *aid share stage* is measured as each partner country’s quota in the predetermined annual amount of Spanish aid. This definition in percentage terms has

²⁷ Especially outstanding were the debt relief of Guatemala, in 2001, and Iraq, Madagascar and the Republic of Congo, in 2005, which turned these countries into the main recipients of Spanish ODA.

²⁸ Different threshold values change the probability of being selected as an aid-partner. However, they do not considerably affect the magnitudes and signs of the estimated parameters. Therefore, the model remains consistent.

two relevant virtues. On one hand, it eliminates the bias introduced by the comparison of figures coming from different years, being possible to use gross disbursements data in current dollars; and it also eliminates the measurement error due to the fluctuations of the euro/dollar exchange rate. On the other hand, it avoids the bias due to the fact that the Spanish aid budget is increasing over time. Ultimately, since the aid figures reported by the DAC are measured in current dollars, we assume for simplicity that the euro/dollar real exchange rate remains constant among the recipient countries, not considering the discrepancies in the aid “real purchasing power”.

4.3. Measurement of the explanatory variables

The selection of the corresponding proxy variables for the determinant factors of the Spanish aid allocation explained in *section 3.4* follows three different criteria: firstly, it includes those variables that best capture the peculiarities and interests of the Spanish ODA policy. Secondly, it is guided by the literature review of precedent studies on geographical aid allocation. Finally, –from a more practical perspective– it tries to both maximize the data available for developing countries (avoiding in this way a sample selection bias due to a non-random omission of data), and to avoid informative redundancy (that may cause multicollinearity problems). The variables included in the analysis are listed in Table 1.

Table 1. Variables and sources of the *RN–DI* model

Variable	Code	Estimation stage	Kind of variable	Number of lags	Main source
Dummy: Spanish aid-partner	<i>D</i>	SE	dependent variable	...	OECD: DAC (2007)
Share on Spanish ODA gross disbursements	<i>A</i>	QE	dependent variable	...	OECD: DAC (2007)
GDP <i>per capita</i> (USA constant dollars 2000, PPP)	<i>GDPpc</i>	SE, QE	RN	2	WORLD BANK (2006)
Population	<i>POP</i>	SE, QE	RN	2	WORLD BANK (2006)
Death rate	<i>DR</i>	SE, QE	RN	2	WORLD BANK (2006)
Share on global ODA (excluding Spanish aid)	<i>a_others</i>	SE, QE	RN	...	OECD: DAC (2007)
Colonial <i>dummy</i>	<i>d_COL</i>	SE, QE	DI	...	CIA (2007)
Share on Spanish exports	<i>EXP</i>	SE, QE	DI	1	UN ComTrade DataBase (2007)
Cumulative net <i>stock</i> of Spanish foreign investment	<i>FDI</i>	SE, QE	DI	1	Ministerio de Industria, Turismo y Comercio (2007)
POLITY2	<i>P2</i>	SE, QE	AE	1	MARSHALL and JAGGERS (2005)
Absorptive capacity (ODA/GDP)	<i>AC</i>	SE, QE	AE	2	WORLD BANK (2006)
Share on Spanish ODA _{<i>t-1</i>} gross disbursements	<i>a_t_1</i>	SE	H	1	OECD: DAC (2007)

Notes: SE: selection stage; QE: aid-quotas stage; RN: recipients’ needs; DI: donor’s interests; AE: aid effectiveness determinants; H: aid’s path dependence

4.3.1– Recipients’ needs

The present model proxies the recipient countries’ relative needs of aid by means of the following variables:

The *per capita* GDP (USA constant dollars 2000, PPP) is used as an indicator of the average economic welfare of the recipient societies. It tests the existence of a “progressive distributional criterion” in relation to the partner countries’ income

levels, assessing the coefficient of the income's natural logarithm²⁹.

Recipient countries' population sizes are included so as to test the sensitivity towards the most populated countries. Given the special interest of Spain in its former colonies (the majority of which were, except Mexico and Philippines, countries of less than 45 million inhabitants in 2005), it tests the existence of a *small countries bias* (i.e. whether the population coefficient is smaller than 1).

As *per capita* income levels only offer average information on economic wellbeing, other aspects of social wellbeing are approximated by means of the death rate. This variable is both less correlated with *per capita* income than other synthetic indicators (such as the *Physical Quality of Life Index* and the *Human Development Index*), therefore reducing the risk of multicollinearity, and is widely available among developing countries, thus reducing the risk of a no-random sample selection bias³⁰.

The share of each recipient country on the global ODA (i.e. total aid disbursed by multilateral and bilateral donors), excluding Spanish aid, is included in the analysis so as to test the existence of a "bandwagon effect" in the allocation.

4.3.2– Donor's interests

Spain's economic and geo-strategic interests are proxied by means of the following variables:

The importance of the special historical and cultural links is tested by means of a qualitative, dummy, variable, with two categories: " $d_col = 1$, if the country was part of the Spanish colonial Empire" and " $d_col = 0$, otherwise".

Trade interests are evaluated by means of the share of each developing country on Spanish exports; on the other hand, the investment interests are measured by the net stock of

Spanish investment in each developing country, accumulated since 1990. It should be pointed out that, given that part of the ODA consists of "tied loans", there is a potential risk of simultaneity between exports and aid disbursements. Nevertheless, exports are lagged one year, which reduces the risk of simultaneity, since tied aid stimulates, mainly, the current year exports.

4.3.3– Determinant factors of aid effectiveness

In order to approximate the partner countries' commitment with democracy and the respect of human rights, this paper uses the aggregate indicators of the *Polity IV Project* (Marshall and Jaggers, 2005), which offer comprehensive information on the characteristics of the different countries' political regimes. In particular, it will use the *POLITY2* synthetic indicator, which treats different aspects related to the institutionalization of democratic and autocratic regimes, codifying them within the interval between -10 (strong autocratic regime) and $+10$ (strong democratic regime). Thus, the coefficient of this variable is expected to be positive, reflecting Spanish support for more democratic countries. However, it should be pointed out that the level of democracy can also be interpreted as indicative of a country's need for aid, thus expecting an indirect relation with the allocation. In fact, the Spanish Aid Plan defines the so-called group of countries "with special attention" as those suffering "special circumstances", such as the necessity of preventing conflicts or contributing to building peace and the weak respect for human rights and the democratic system.

Moreover, the recipient economy's absorptive capacity is proxied by means of the ratio of the total ODA –bilateral and multilateral– received by the country to its GNI (ODA/GNI ratio), which is widely available among developing countries and offers a reasonable measure of the recipient economy's aid-dependency level³¹.

²⁹ As the model is specified in natural logarithms (both the dependent variable and the independent variables), it thus facilitates the interpretation of the coefficients in terms of elasticities.

³⁰ The use of the infant mortality rate raises serious concerns, as there are not available complete time series data, but five-year values.

³¹ High rates of ODA/GNI may stem from a "bandwagon effect" among donors' allocations; however, this variable, in the case of Spanish aid, is not significantly correlated with the ODA received by the rest of the donors ($r^2 = -0.0304$), ruling out the existence of a simultaneity problem.

4.3.4– Aid’s path dependence

The previous year ODA-quota ($A_{j,t-1}$) is included in the aid-partners selection stage in order to capture the path dependence of the geographical allocations, assuming that previous disbursements positively influence the probability of being “re-selected” as a aid-partner³². However, the lagged dependent variable is not included in the aid-quotas allocation stage since, within a panel data model, it introduces an important bias in the estimation due to the existence of autocorrelation.

4.4. Model specification, sample and period of analysis

As equations [4] and [14] specify, the model is transformed in a linear function by means of the natural logarithm, thus facilitating the interpretation of the coefficients in terms of elasticities and reducing the heteroskedasticity among observations³³.

In order to access the information available for the Spanish aid decision-makers in a realistic way, the explanatory variables are specified with different time lags. As was previously explained, the Spanish co-operation budgetary process begins with the approval, at the end of the preceding year, of the General Public Budget. Furthermore, the lengths of the lags are specified in accordance with the time-delay that takes place in the provision of international statistics³⁴: in the case of *per capita* incomes, population levels, death rates and absorptive capacities, decision-makers faced a 2-year information lag (see Table 1). The share on Spanish exports, foreign investment and *POLITY2* are lagged one year³⁵.

³² In the Spanish context, there has been a high year-by-year variation of the aid-quotas, in contrast with the relative stability of the list of partner countries. In fact, the average coefficient of variation of these quotas between 1993 and 2005 was 0.655: i.e. on average, the inter-annual variation of a partner country’s quota was 65.5%. In this sense, the aid’s inertia has been especially important in the selection stage, but not as much in the aid-quota stage, which vary considerably year by year *Author calculations* with OECD: DAC (2007) data: developing countries’ quotas on Spanish ODA gross disbursements.

³³ The only exception is the *POLITY2*, which is expressed in its original rank units, since it does not accept reasonable interpretations in terms of elasticities.

³⁴ In fact, the Aid Plan explicitly points out that less developed countries will be identified by means of the socioeconomic indicators elaborated by international organizations.

³⁵ The share on global ODA is not lagged. The specification test pointed out that the Spanish aid allocation is specially related to the current year aid disbursements of the rest of the donors;

This lag structure also reduces the potential simultaneity bias between the aid allocation and the explanatory variables.

The analysis includes the 178 developing economies referred by the successive DAC lists of ODA recipient countries, published from 1993 to 2005. 130 of these countries received Spanish ODA at least one year. 74 countries were eventually excluded from the analysis due to a lack of information; nevertheless, the missing countries respond to very different socio-demographic and economic profiles, a fact which limits the existence of a sample selection bias: they are countries in conflict or post-conflict situations (such as Iraq, Afghanistan and Somalia), territories whose independence have not been formally reconnoitred (Palestine and Western Sahara), countries which lack statistical information (Cuba, North Korea, East Timor, Liberia and Libya) and/or islands and regions with less than one million inhabitants (a great deal of them are least-developed countries: Wallis and Futuna, Turks and Caicos Islands, Tuvalu, Tokelau, Santa Helena, Niue, Nauru, Montserrat, Mayote, Cook Islands and Anguila), which have received very limited attention from Spanish co-operation.

The period of analysis comprises from 1993 to 2005 (the last year with available information). For those variables with one or two year lags, the information was analyzed starting from 1992 or 1991, respectively. This period excludes the first “gestation” stage of the Spanish aid system (1986–92), so as to focus the study on the time when it was already consolidated.

5. THE SPANISH PATTERN OF GEOGRAPHICAL AID ALLOCATION

5.1. Selection of aid-partner countries

During the period 1993–2005 Spain has selected its aid-partners mainly guided by factors of interest and inertia of its foreign policy (Table 2): in particular, it has been directly influenced by the post-colonial links, the reception of Spanish aid and exports in the

moreover, the estimation results do not change upon the number of lags included in this variable.

previous year, and the resources received by the rest of the donors. Nevertheless, the selection process has neither systematically

taken into account the recipients' needs variables, nor their level of democracy

Table 2. Estimation of the Spanish selection of aid-partner countries. 1993–2005

Random-effects logistic regression	Number of obs	=	1279
Group variable (i): n	Number of groups	=	104
Random effects u_i ~ Gaussian	Obs per group: min	=	4
	avg	=	12.3
	max	=	13
	LR chi2(10)	=	245.43
Log likelihood = -255.15245	Prob > chi2	=	0.0000

D	OR	Std. Err.	z	P> z	[95% Conf. Interval]
lnGDPpc _{t-2}	1.237373	.456867	0.58	0.564	.600091 2.551433
lnPOP _{t-2}	.8354529	.1471694	-1.02	0.307	.5915321 1.179955
lnDR _{t-2}	1.381162	.5396969	0.83	0.409	.6421441 2.970684
lna_others	1.410425	.227055	2.14	0.033	1.028776 1.933657
lnEXP _{t-1}	1.338513	.192901	2.02	0.043	1.009139 1.775392
lnFDI _{t-1}	.8846312	.0908555	-1.19	0.233	.723336 1.081893
d_COL	5.772276	2.516516	4.02	0.000	2.456135 13.56569
P2 _{t-1}	.9966861	.0264699	-0.12	0.901	.9461332 1.04994
lnAC _{t-2}	1.238793	.2931163	0.91	0.365	.7790985 1.969724
lna _{t-1}	3.714909	.504239	9.67	0.000	2.847156 4.847134
/lnsig2u	-2.015583	1.722081			-5.390799 1.359633
sigma_u	.3650243	.3143006			.0675154 1.973515
rho	.0389244	.0644219			.0013836 .5420965

Note: White's (heteroskedasticity-adjusted) robust errors

The *OR* column shows the *odds ratio* of being selected as a partner country (i.e. the ratio between the probability of being selected and the probability of not being so) when one of the explanatory variables of the model increases one-unit, *ceteris paribus*³⁶. Hence the highest odds ratio is associated to the variable of Spanish colonial past. The interpretation of this coefficient in the case of two-category dummy variables is relatively simple: for two developing countries with identical values in the set of explanatory variables, but with different post-colonial links, it shows the difference between their probabilities of being selected partners. According to the estimation, the odds ratio for a former colony is 5.8 times greater than for a country without this historical link, a result that stems from the fact

that only 79 of the 273 observations of the colonial past included in the panel data set (20

ex-colonies analyzed along 13 years³⁷) did not –significantly– participate in the Spanish AOD³⁸.

The aid's path dependence also exerts an outstanding effect, imprinting a certain character of “persistence” in the selection process, in such a way that a one-percentage increase in the Spanish ODA-quota allocated the previous year to a developing country multiplies by 3.7 its odds of being re-selected as a partner. This path dependence of the Spanish aid is strongly linked to the special inclination towards the ex-colonial countries, which is further reinforced by the strong

³⁷ Cuba is not included in the analysis due to the lack of information.

³⁸ Particularly: Argentina (1999–2001), Colombia (1993), Costa Rica (1992–95, 1998, 2001, 2004 and 2005), Cuba (1992–94), Chile (1997–2005), Dominican Republic (1992–94), El Salvador (1992–94), Equatorial Guinea (2003), Guatemala (1992–94), Honduras (1992), Mexico (1996, 1997, 1999–2001, 2003 and 2004), Nicaragua (1992), Panama (1992–95 and 2002–05), Paraguay (1992–94, 1996, 2000, 2002, 2004 and 2005), Peru (1992–94), Philippines (1992 and 1996), Uruguay (1996–2002 and 2004) and Venezuela (1992–95, 1998, 2004 and 2005).

³⁶ Formally, when variable x_i increases one-unit, *ceteris paribus*, the odds ratio is multiplied by a factor equal to e^{x_i} .

specialization of the Spanish NGOs' in Latin America, Equatorial Guinea and North Africa.

The other two statistically significant variables have a less decisive influence in the selection process: on the one hand, a one-percent increase in the share of Spanish exports increases the odds of selection by 34%, which, to a great extent, reflects the convergence of trade and aid interests. On the other hand, a one-percent increment in the share of global aid increases the odds of selection by almost 41%. This result confirms that Spain has been influenced by a “bandwagon effect”, which suggests three –not necessarily exclusive– possible explanations: either Spain perceives that ODA is more effective in those countries that receive more resources from the rest of the donors; or that the donors' international community –including Spain– agrees when assisting the “neediest” countries, thus selecting a fairly similar group of partners; or, finally, that the regions where donors share strong geo-strategic interests (mainly, the Middle East and the largest developing countries) are, in turn, regions of interest for Spain; such is the case of countries like Israel (which received ODA until 1996, being one of the world's main aid recipients), Egypt, China, India and Indonesia, which –except for India– have been aid partners during the 13 years analysed³⁹. In the end, a positive coefficient of this variable reflects a lack of coordination with the rest of international donors in the definition of their “intervention areas”, which may reinforce the existence of “aid darling and “orphan countries”, or a excessive fragmentation of the Spanish interventions due to the attempts to catch up with the interests of the international community, even at the expense of over-scattering the resources.

Regarding the *goodness-of-fit* of the model, the χ^2 test of overall significance rejects the hypothesis that all the variables exert a simultaneously null effect in the selection (see *p*-value in Table 2). Moreover, the model correctly classifies 91.8% of the cases, offering a reasonable fit that allows us to trust the accuracy of the estimates⁴⁰.

There is, however, a certain number of observations that deviate from the historical

³⁹ Since this estimation-stage only analyses whether a developing country is chosen or not as aid-partner, it does not consider the amount of resources finally disbursed.

⁴⁰ *Results available upon request.*

criteria. According to the value of the Cook's *dD* distance statistic (which measures to what extent an individual observation affects the model's estimation, identifying the outliers), only 4 observations may exert considerable influence (with *dD* statistics greater than 7)⁴¹: the selection of Kazakstan (KAZ) in 2001, since its share of the global aid decreased to less than half the percentage of 2000, and its share of Spanish exports increased more than 64% coinciding with the boom of the energy sector; Pakistan (PAK), which was selected as an aid partner for the first time in 1995, despite the 52% reduction of its share of the global aid (remaining constant its share of Spanish exports); Serbia and Montenegro (YGU), which participated for the first time in Spain's aid in 1999 (the same year of the NATO's bombing and the eventual withdrawal of Serbian military forces from Kosovo); and Zimbabwe (ZWE), which only in 1998 received more than 1% of the Spanish resources, just before its involvement in the war in the Democratic Republic of the Congo between 1998 and 2002, which drained hundreds of millions of dollars from the economy (including ODA)⁴². All in all, it should be noticed that all these outliers are not Spanish ex-colonies⁴³.

5.2. Allocation of aid-quotas among partner countries

The analysis of the second-step allocation decision distinguishes between two groups of partner countries: those that have post-colonial links with Spain, and those without this historical legacy⁴⁴. These two groups received, respectively, 57.8% and 42.2% of the accumulated aid resources during 1993–2005, despite their unequal participation in the sample, both in terms of the number of countries (20 and 84 countries, respectively, in

⁴¹ Since the binary variable of colonial past does not vary over time, the prediction errors stem from the time changes in the rest of the explanatory variables, mainly in the previous year Spanish aid-quota (which is the variable that exerts a greater influence in the selection process, after the colonial past).

⁴² In 1998, the Spanish aid to Zimbabwe was especially high due to the financing of two NGO projects that amounted for 504.779 euros (i.e. 78% of the aid).

⁴³ However, these 4 especially influential outliers do not significantly affect the estimates (*results available upon request*).

⁴⁴ Spain's ex-colonial countries are: Argentina, Bolivia, Colombia, Costa Rica, Chile, Dominican Rep., Ecuador, El Salvador, Equatorial Guinea, Guatemala, Honduras, México, Morocco, Nicaragua, Panama, Paraguay, Peru, Philippines, Uruguay and Venezuela.

the panel data set of the first-step estimation), and population (which, consequently, implies a strong ODA *per capita* allocation bias in favour of the ex-colonies, which, on average, received 12.91 dollars per person, in contrast with the 0.95 dollars received by the second group of partners)⁴⁵.

Firstly, 25 countries without post-colonial links took part, for at least one year, in Spain's ODA with quotas greater than 1%.

The analysis reveals the lack of a systematic pattern of *humanitarian* aid allocation which has not been guided by the recipients' needs and specially benefits those countries with higher levels of income *per capita*, although it has been sensitive to population sizes. Spanish trade interests have reinforced the aid allocation, unlike the investment interests, which have been inversely related to aid. Moreover, Spain has benefited those countries with higher aid dependency ratios (Table 3).

Table 3. Estimation of the Spanish pattern of ODA geographical allocation. Countries without post-colonial links. 1993–2005

Random-effects GLS regression	Number of obs	=	117
Group variable (i): n	Number of groups	=	25
R-sq: within = 0.1802	Obs per group: min =		1
between = 0.5000	avg =		4.7
overall = 0.5417	max =		13
Random effects u_i ~ Gaussian	Wald chi2(8)	=	72.75
corr(u_i, X) = 0 (assumed)	Prob > chi2	=	0.0000

lna	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
lnGDPpc _{t-2}	.5626937	.1562729	3.60	0.000	.2564044	.8689829
lnPOB _{t-2}	.2797479	.0836134	3.35	0.001	.1158687	.4436272
lnDR _{t-2}	.0419105	.2226739	0.19	0.851	-.3945223	.4783433
lna_others	.0548938	.10018	0.55	0.584	-.1414554	.251243
lnEXP _{t-1}	.1549511	.0553858	2.80	0.005	.046397	.2635052
lnFDI _{t-1}	-.3356915	.0741509	-4.53	0.000	-.4810246	-.1903583
P2 _{t-1}	-.0173776	.0113052	-1.54	0.124	-.0395354	.0047801
lnAC _{t-2}	.3900336	.115643	3.37	0.001	.1633775	.6166897
_cons	-7.419358	2.126794	-3.49	0.000	-11.5878	-3.250919
sigma_u	.22739736					
sigma_e	.42330668					
rho	.2239497	(fraction of variance due to u_i)				

Note: White's (heteroskedasticity-adjusted) robust errors

⁴⁵ Calculations based on accumulated 1993–2005 aid gross disbursements –netted of emergency aid and debt relief.

In particular, a one-percentage increase in the recipient country's *per capita* income –*ceteris paribus*– has been associated with a 0.56% increase in the ODA disbursements, which does not correspond with a progressive allocation criterion. By contrast, Spanish assistance has been sensitive to the partners' different population sizes, although a one-percentage increase in the receiving population has led to a less than proportional increase in the aid disbursement (0.28%).

These last two results are due to, to a large extent, the distribution pattern with the highly populated countries: on the one hand, Spain has continuously co-operated with China (which has attracted a large share of the FAD loans), and, for several years, with Indonesia, Brazil, Pakistan, Vietnam, Egypt and Turkey (each of these countries had more than 75 million inhabitants in 2005, and only two of them are not middle-income economies: Pakistan and Vietnam); on the other hand, the poorest and highly populated countries (especially India, Nigeria and Bangladesh) did not ever receive aid-quotas greater than 1% (thus, not being considered in this estimation stage). These facts explain the preference for the more populated partners and the regressive middle-income countries bias.

The aid-exports elasticity has been positive (0.15%), thus supporting Spanish trade interests, which coincides with the previously remarked result of the partners' selection process. At the same time, some of the main trade partners are middle-income and highly populated countries (particularly China, Brazil and Turkey) that offer especially attractive markets for Spanish products.

Furthermore, a one-percentage increase in the stock of Spanish investment has led to a –0.34% decrease in the aid-quota, and a similar increase in the partner country's ODA/GNI ratio has increased it by 0.39%. These results reflect a special attention towards those highly aid-dependent developing economies that attract less investment. In some ways, the lower provision of financial resources (mainly, foreign direct investment) is being compensated by disbursing greater amounts of concessional resources. This has been the case of highly aid-dependent economies (with ODA/GNI ratios over 20% in several years) that have been aid partners of Spain, such as

Mozambique, Bosnia-Herzegovina, Equatorial Guinea and, more recently, Mauritania,

Senegal and Angola, which, besides, have attracted less Spanish investment than other developing economies⁴⁶. All these countries are, on the other hand, prioritised in the current Aid Plan.

Secondly, there is a significantly different pattern of aid allocation regarding the 20 *countries with post-colonial links with Spain*, which corresponds to a more balanced strategy of *altruist* motivations and foreign policy interests (Table 4). The aid-quotas have been distributed in direct proportion to the partner countries' needs (assessed by means of the *per capita* GDP and the population size), and have backed Spanish trade interests, being, by contrast, inversely related to the investment orientations. However, other variables related to the recipients' absorptive capacity and level of democracy have not exerted a significant influence in the distribution.

In particular, regarding the variables related to the recipients' needs, the following results are worth remarking: on the one hand, a one-percentage increase in the partner's *per capita* income –if other variables stay the same– has been less than proportionally compensated by a –0.46% decrease in the aid-quota. This result shows certain sensitivity towards the recipients' levels of economic development, although it does not characterize a strictly progressive allocation, since the *per capita* income coefficient is smaller than one. Furthermore, a one-percentage increase in the population size has led to a more than proportional (4%) increase in the aid-quota, which rules out the existence of a small country bias within the group of ex-colonies; on the contrary, countries with higher populations have tended to receive proportionally greater amounts of resources than the smaller ones –once the effects of the rest of the explanatory variables are controlled.

Regarding the trade and investment interests, on the one hand, Spain has tended to concentrate its aid on its main trade partners (with the export coefficient equal to 0.34%).

⁴⁶ However, Equatorial Guinea has gradually reduced its aid-dependency ratio since the late 1990s.

Table 4. Estimation of the Spanish pattern of ODA geographical allocation. Countries with post-colonial links. 1993–2005

Fixed-effects (within) regression	Number of obs	=	193
Group variable (i): n	Number of groups	=	20
R-sq: within = 0.2677	Obs per group: min	=	4
between = 0.2727	avg	=	9.7
overall = 0.1045	max	=	13
	F(8,165)	=	6.50
corr(u_i, Xb) = -0.9962	Prob > F	=	0.0000

<i>lna</i>	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
lnGDPpc _{t-2}	-.4640383	.1414169	-3.28	0.001	-.7432582	-.1848184
lnPOB _{t-2}	4.021031	.9840364	4.09	0.000	2.078105	5.963958
lnDR _{t-2}	.1085396	.9641113	0.11	0.911	-1.795046	2.012125
lna_others	-.0354341	.0574121	-0.62	0.538	-.1487912	.077923
lnEXP _{t-1}	.3359423	.082892	4.05	0.000	.1722765	.4996081
lnFDI _{t-1}	-.2550163	.0555764	-4.59	0.000	-.3647489	-.1452836
P2 _{t-1}	-.0357236	.0306168	-1.17	0.245	-.0961749	.0247277
lnAC _{t-2}	-.0028646	.1268188	-0.02	0.982	-.2532614	.2475322
_cons	-58.12898	16.52016	-3.52	0.001	-90.74714	-25.51082
sigma_u	4.8877226					
sigma_e	.41780618					
rho	.99274605	(fraction of variance due to u_i)				

Note: White's (heteroskedasticity-adjusted) robust errors

This result is due to, to a certain extent, the distribution criteria in proportion to the recipient's population, since the largest countries offer broader markets for Spanish products. Moreover, it should be born in mind that Spanish exports are specially concentrated on the group of ex-colonies: these 21 economies (among 126 countries included in the initial data set, i.e. without excluding those that lack the necessary information) absorbed, on average, 5.82% of the period's aggregated exports, in contrast with the 9.36% of the remaining 105 countries. Consequently, given the high concentration of resources in this group of recipients –both in terms of aid and exports–, trade interests have exerted a greater influence among the former colonies than among the more heterogeneous group of non ex-colonial countries. On the other hand, a one-percentage increase in the stock of investment has led to a marginal decrease in the aid-quota (–0.25%), since the lower relative development of the ex-colonies that received higher shares of aid implies less

opportunities for Spanish investors. In the end, both results show that trade and investment priorities have two different association patterns with aid –as also happened in the selection stage.

Moreover, it should be pointed out that, although Spain's selection of aid-partners has been affected by the “bandwagon effect” –as it was shown in the previous section–, this has not been the case in the process of allocating the aid-quotas. This is due to, on the one hand, the different “implications” of both decision-steps: the first stage deals with the partners selection, but does not measure the “intensity” of the eventually established co-operation relations (i.e. the model captures the similarities between Spain's and the rest of donors' selections, without assessing the final disbursements). On the other hand, the separate estimation of the aid-quota stage between countries with historical links with Spain (most of them middle-income countries) and countries without these links hinders the geographical coincidences with the rest of the

donors. In fact, the partial correlation between the Spanish and the rest of donors aid allocations has been positive (0.23), although it has not been possible to estimate its effect on the full sample of partner countries due to the impossibility of including the colonial dummy variable in the fixed-effects panel data model. When the group of ex-colonial countries is separately analysed (as in Table 4), Spanish aid disbursements appear to have been negatively correlated with those of the rest of donors, although its effect has been economically and statistically non significant. In any event, the aid bias towards middle-income countries –consequence of the specialization in the ex-colonies, with only Equatorial Guinea classified as a non middle-income economy– cannot be interpreted as an effort to coordinate the Spanish interventions with the rest of the donors, but it may rather respond to the interest of both compensating these countries for their lower participation in the global aid (especially Latin Americans), and taking advantage of the cultural affinities –affinities that, on the other hand, this group of countries does not share with any other donor.

With respect to the model's goodness-of-fit, the overall *F test* is flatly rejected in both estimation groups (*vid p-values* = 0,0000 in the upper-left corners of Tables 3 and 4). Also, both estimations offer reasonable adjustments, although there is a certain number of outliers that should be carefully analysed⁴⁷:

With regard to the countries without Spanish post-colonial links, 5 countries have outliers that may especially influence the estimation (with residuals greater than |0.8|): in first place, China (CHN) in 1993 and 1994, which received 15.8% and 20.4% of the Spanish ODA, respectively, whereas the model predicts quotas of less than 2%. These discrepancies owed to the 140.1 and 153.12 million dollars of FAD loans granted in these two years (that amounted to 99.12% and 99.18% of the Spanish aid disbursed to China, respectively). Nevertheless, one year later (1995), Spain's ODA decreased almost to a third of its previous-year value, so that the gross disbursements have been, up to 2005, around 50 million dollars per year (which represents between 4.6% and 8.9% of the donor's aid).

In second place, Indonesia (IDN), in 2000, received 10.14% of the Spanish aid, in contrast to the 1.25% predicted quota, thus increasing 4.8 times its 1999 share due to the grant of a 65.87 million FAD loan, which amounted to 99.7% of the received aid. Nevertheless, three years later (2003), Spain had to condone 6.52 millions of this debt.

In third place, in 1999, Serbia and Montenegro (YUG) received an aid-quota 12 times greater than the predicted one. In this case, most of the resources were grants aimed at promoting the peacemaking process of the Balkans.

In fourth place, Turkey (TUR) received in 2003 and 2004 much greater quotas than the predicted ones, due to the grant of 40.32 and 48.1 million dollar FAD loans, respectively, that almost tripled their receptions of Spanish aid in 2002.

In fifth place, Vietnam (VNM) received in 2001 an aid-quota 20% smaller than the predicted one. This country has only taken part in the Spanish aid for two years with quotas greater than 1%: in 1998, due to the grant of a 10.79 million FAD loan (99.4% of the donor's aid disbursed to Vietnam), and in 2001, with another loan of 5.38 million (76.5% of the ODA).

All in all, the characteristics of these outliers point to three conclusions: firstly, there is an obvious divergence of geographical priorities between the concessional loan scheme (independently managed by the *Ministry of Industry, Tourism and Trade*) and the rest of the Spanish bilateral ODA. Secondly, most of the outliers are cases of "over-allocation" (in comparison with the historical pattern identified by the model), which indicates that these observations are causing an "over-prediction" of the parameters showed in Table 3; this way, the allocation bias that favours those countries with relatively higher income levels and population sizes is reinforced by the presence of outliers among middle-income and highly populated countries, such as China, Indonesia and Turkey. Finally, it stands out that, in spite of the erratic –in terms of developmental criteria, but not in terms of the donor's economic interests– allocation pattern detected with this group of partners, the current Aid Plan includes all of them in some of the three levels of Spain's aid geographical priorities.

⁴⁷ See Tezanos (2007, pp. 35-38) for further explanations on the outliers.

Regarding the countries with post-colonial links, 5 observations have a special influence in the estimation (with residuals greater than $|0.8|$): firstly, Mexico (MEX), which received 24.4% of the Spanish ODA in 1993, and 19.6% in 1994, well above the predicted quotas due to the FAD loans granted gradually since 1992 (which amounted to 162.65, 216.69 and 144.65 million dollars in 1992, 1993 and 1994, respectively). Although in the 10 following years Mexico has received additional loans for 14.33 million dollars, the magnitudes disbursed at the beginning of the 1990s explain its position as a “long-term debtor” of the Spanish assistance, as well as the existence of another atypical observation in 2005, in this case due to an aid “infra-allocation” (8.7 times smaller than the predicted one).

Secondly, Venezuela (VEN) in 2000 received an aid-quota greater than the predicted one, again due to the grant of a FAD loan that amounted to 21.39 million dollars (77.1% of the Spanish aid disbursed to this country).

Other outliers of smaller influence in the analysis belong to Argentina (ARG, 2002 for the revitalization of ODA disbursements experienced during the economic crisis), Bolivia (BOL, 1997 and 1999, for the decrease in aid disbursements that especially affected the FAD loans), El Salvador (SLV, 2002, due to the grant of 31.54 million dollars of FAD loans, 57% of their aid that year) and Morocco (MAR, 2004, which tripled the 2003 quota, mainly due to the disbursement of further grants).

6. CONCLUSIONS

The geographical allocation of Spanish aid has been little studied by the specialized literature, despite the fact that it is unusually concentrated on middle-income countries. The present analysis contributes additional elements to understand this peculiar middle-income specialization, offering statistical evidence which points out that the geographical orientation of the ODA has not been specially determined by “altruistic” criteria –i.e. development promotion and poverty reduction, as the Spanish International Co-operation Law advocates–, but neither by merely “self-interest” criteria –the promotion of Spain’s foreign policy conveniences–. Consequently, the resource allocation has followed a “hybrid” pattern,

although it does not seem to have considered those aspects related to the partners’ levels of democracy and absorptive capacities. In particular, the allocation among the group of *countries without post-colonial links with Spain* reveals that, until a recent period, the Spanish co-operation system lacked a clear selectivity –pro-developmental– strategy. In contrast, regarding the group of *countries with post-colonial links*, Spain has had a more progressive and balanced pattern of allocation in comparison with the previous group of partners.

The identification of a hybrid pattern in the case of the Spanish aid allocation coincides with the results obtained by previous studies (Alonso, 1999; Sánchez Alcázar, 1999; Berthèlemy and Tichit, 2002; Alesina and Weder, 2002; and Isopi and Mavrotas, 2006), which estimated different weights of the *RN* and *DI* factors, but agreed by pointing out the importance of the foreign policy interests and the insufficient attention paid to issues related to the recipient Governments’ governance.

All in all, the concurrence of self foreign policy interests and developmental motivations identified in the Spanish aid geographical specialization does not have to infringe the main goal of supporting the progress of developing countries, but, rather, the synergies of these different motivations should be channelled so that they redound in a full conception of “partnership” between recipients and donor. Nevertheless, given the strong specialization in those countries with greater cultural affinities with Spain, the geographical priorities should be defined in a clearer and more selective way, explicitly including considerations about the capacity of effectively using the resources –both on the part of the recipients, and on the part of the donor–, as well as the existence of sound governance policies and institutions in the partner countries.

The insufficient progressiveness of the Spanish allocation is mainly driven by the influence of the post-colonial links; links that are, in a certain way, “revitalized” and “re-updated” by means of the international assistance. Nevertheless, post-colonial links have characterized the allocation patterns of all donor countries that were colonial metropolises. The peculiarity of the Spanish case is that the countries that were part of its Empire have, precisely, higher income levels

than the former colonies of other European donors. This fact brings about the apparent regressive bias of the allocation, and blurs Spain's commitment with the MDG and the special attention to the poorest countries. These historical links –which not only affect aid policies, but influence the entire Spanish foreign policy– have acquired a structural character for the partner economies, and represent a long-run political commitment of the Spanish State, thus stamping certain “persistence” on the aid geographical priorities.

Nevertheless, these links have to be updated in order to develop “dynamic” co-operation partnerships, which should evolve as the relative necessities of the recipient countries change. Spain's aid policy towards its ex-colonies have positively advanced in recent years, more clearly defining its geographical strategy and committing itself to concentrate the resources on the list of “high-priority” partners, which has been recently expanded to more relatively needed countries, thus shaping a process of –necessarily gradual– adaptation of its international specialization. Moreover, Spain has improved its co-operation strategy with middle-income countries, advocating for a greater specialization of the interventions, according to the levels of development of the partners.

Regarding the most heterogeneous group of developing countries without historical links to Spain, the developmentally undefined aid allocation strategy is due to –to a large extent– the excessive fragmentation of the resources and the divergent geographical interests of the concessional FAD loan scheme. However, Spain has recently added some of these countries to its regional priorities, integrating them in the resource's planning and evaluation cycle. Although this has implied an increase in the number of prioritized countries –which, in the end, determines the level of dispersion–, this process can contribute to strengthen the effectiveness and reduce the excessive aid fragmentation, as long as the bulk of the resources is reallocated to the 54 economies prioritized by the Aid Plan, and where Spain's co-operation has better chances of optimizing its resources in terms of developmental outcomes. Furthermore, the policies carried out in the broad group of partners receiving marginal aid-quotas needs to be more selective, specific and clearly oriented towards contributing to overcome their peculiar situations of vulnerability.

Regarding the FAD loans, although their participation in Spanish aid has been considerably reduced, it is still necessary to integrate their geographic priorities within the whole co-operation strategy, which in turn implies a greater co-ordination between the *Ministry of Foreign Affairs and Co-operation* – genuine co-ordinator of the Spanish aid– and the *Ministry of Industry, Trade and Tourism* – responsible for the loan scheme.

However, this aid specialization pattern towards ex-colonial countries –and consequently towards middle-income economies– cannot be interpreted as an effort to coordinate the Spanish interventions with the rest of the donors. It may rather respond to the interest of both compensating these countries for their lower participation in the global aid (especially Latin Americans), and taking advantage of the cultural affinities – affinities that, on the other hand, this group of countries does not share with any other donor–. However, the definition of a more effective strategy of Spanish ODA geographical specialization will also require a greater co-ordination among the donors' international community, which should aim to avoid the existence of “aid darling and orphan countries”, as well as taking advantage of the synergies of the different donors' interventions, allowing less fragmentation of the Spanish resources and greater effectiveness of the interventions. Therefore, some kind of aid specialization is advisable, and, within this context, Spain will need to improve its developmental strategy in order to contribute to build a cooperation system which is incentive-compatible with the development aims, specializing its support on those countries that are close to the “border” of the developed world.

Finally, the integrated *RN-DI* model for the Spanish ODA proposed in this paper contributes some methodological advantages. Firstly, it develops an allocation model adapted to the political and management peculiarities of the Spanish official co-operation system, thus offering more precise interpretations than “standardized” models. Secondly, it uses a wide panel data set that covers the last 13 years of Spanish assistance to 104 developing economies. Thirdly, it appropriately considers the censored nature of the dependent variable, both analysing the decision of selecting aid partners, and the

decision of allocating aid-quotas. Fourthly, it uses a coherent set of explanatory variables that captures the especial relations maintained with the former colonies, the inertia of the allocations, and the information lags faced by the aid policy-makers. However, a few words of caution are worth mentioning since there is a series of inherent limitations to the study of the geographical aid allocation:

On the one hand, in spite of the increasing sophistication of the econometric procedures available for the analysis, it is complicated to control the different factors of heterogeneity existing among the aid receiving countries; heterogeneity that is not only captured by the variables included in the model, but is also present in the different capacities of the recipients economies to efficiently take advantage of external resources, the existence of *difficult aid partnership* relations between donor and recipients, as well as other qualitative variables of difficult quantification –such as ethical and institutional factors, political affinities, the existence of immigrant lobbies in the donor country, etc.–. Furthermore, it should be born in mind that the eventual allocation of aid is contingent on its *fungible* character, which hinders, in some circumstances, the assurance that the resources disbursed to the neediest countries finally benefit their poorest citizens⁴⁸.

Moreover, it would be necessary to consider, in the particular case of Spain, that the recent escalation of the immigration flows may constitute a decisive variable in the evolution of the pattern of aid giving, which may be affected by the arrival of immigrants of nationalities different from those historically linked with Spain⁴⁹.

On the other hand, this paper contributes an analytical model of the geographical aid specialization that allows the identification of the particular –current– orientations of the official Spanish co-operation and assesses them with respect to the –by law– aid strategy and the international commitments and consensus ratified by Spain. However, although the model identifies different types of determinants that capture the

heterogeneous interests that are present in the allocation, it does not control other “qualitative” aspects of aid, such as its composition –grants and loans; tied status; etc.–, its sectorial distribution, the use of appropriate aid instruments, the efficiency levels of the different interventions, the donor’s self-capacity to usefully administrate the disbursed resources, etc.

⁴⁸ See the studies on aid fungibility of Feyzioglu *et al.* (1998), Devarajan and Swaroop (1998) and Pack and Pack (2003).

⁴⁹ Lahiri and Raimondos-Møller (2000) developed an aid allocation model focusing on the influence exerted by the different immigrant nationalities present in the donor country. Nevertheless, in the case of Spain, the information that facilitates the *State Secretary of Immigration and Emigration* does not offer complete time series data on the immigrants’ countries of origin, which is limited to the most recent years.

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