Do donor countries consider personal freedom for Official Development Aid?

Evidence from a panel analysis

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Yannik Obelöer investigates whether the level of freedom within an Official Development Aid recipient country impacts the level of aid received. While there is an ample literature on the role of aid in promoting economic development, little research has been conducted on whether or not donor countries consider a recipient country's human rights record when making aid allocation decisions. Obelöer, employing a Feasible Generalised Least Squares approach with Fixed Effects (FE), finds that there is evidence that donor countries consider human rights records when making aid allocation decisions, with countries which have higher freedom scores having a higher proportion of ODA to GNI. However, it is suggested that further research into individual donor countries' aid practices must be done in order to disaggregate standard ODA from "strategic" aid, thus giving a more complete picture of how ODA is distributed. Ghana is the world's second largest producer of cocoa beans, with the commodity dominating its economy.

I. Introduction

In recent decades, Official Development Aid (ODA) has often been critically viewed as an instrument to induce policy change in receiving countries. While there is extensive literature on the effectiveness of such aid, there has been less analysis on whether the decision-making process of donor countries maps the endeavour of encouraging policy change. Acknowledging that events specific to donor countries such as financial crises can negatively affect ODA by up to 28% (Dang et al., 2013), the focus of this study will lie on the characteristics of the recipient countries. More specifically, this paper investigates whether donor countries seem to make decisions factoring in the level of personal freedom that is present in the recipient country. For some time already, the quality of institutions became more important to donor countries to assess the effectiveness of aid (Collier & Dollar, 2002), as tying aid to some conditionality such as specific humanitarian and economic indicators is increasingly advised by academics since the early 2000s (Dollar & Svensson, 2000). Therefore, this paper will shed more light onto whether donor countries have followed these recommendations. Key to the analysis are the aspects of political and personal liberty, which both may in fact make aid more effective in increasing the quality of life (Kosack, 2003). In order to control for characteristics affecting personal freedom as well as the level of aid, variables such as the income level, education or being a former colony are added to the model. An additional unique aspect of this study is to include a variable for rents on natural resources. This serves as a proxy for political participation. Moreover, a high coefficient has the potential to identify profit orientated investment strategy of donor countries in the primary sector. In order to answer the question of aid and freedom, the paper utilises a rich data set of 144 receiving ODA countries, which was compiled over a nine-year time span from 2009 to 2017. This paper will find some evidence that among ODA receiving countries, those with higher personal freedom scores are able to secure more aid relative to Gross National Product (GNI).

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II. Background

The Development Assistance Committee (DAC) of the OECD defines ODA as "government aid that promotes and specifically targets the economic development and welfare of developing countries" (OECD, 2019a). Institutions such as the World Bank argue that aid ought to be selective depending on certain characteristics of the recipient country in order to incentivise improvement of institutions of specific agencies as well as the overall state (Annen & Knack, 2018). This conditional aid should not be confused with tied aid, whereby recipients may only utilise funds for business with the donor country. The latter strategy is

opposed by both the academic community and international NGOs due to the scope for restriction of freedom and inefficiencies (OECD, 2019a). Hence, it is crucial to investigate the factors actually playing a role in the donor behaviour of OECD countries in term of ODA as a percentage of Gross National Income (GNI).

Answering the question of the most efficient way to distribute aid, Collier and Dollar (2002) find that the focus should be on states facing stark poverty but showing suitable policies. Thus, countries with high levels of personal freedom should be targeted strongly after controlling for other country-specific aspects. Lumsdaine (1993) pioneered the idea of the level of democracy in a country being instrumental in how much ODA it receives. In addition, a higher index-level for institutional strength positively and significantly correlates with ODA as a percentage of GDP (Collier and Dollar, 2002). In case studies in Mali and Ethiopia, policy improvement was observed to correlate with increases in aid (Devarajan et al., 2002). However, there is also some literature strongly opposing this more altruistic motivation of aid arguing for strategic gains from aid by donor countries. The United States' engagement in the Middle East may be an example of such behaviour (Alesina & Dollar, 2000). This paper will add to the literature by offering an econometric investigation which utilizes a rich dataset to form a more sophisticated view on overall donor behaviour.

Other often-cited aspects that may influence the level of ODA are the level of poverty and colonial history (ibid.). Moreover, ODA as percentage of GDP correlates positively with higher poverty levels. The OECD (2017) found that comparatively lower-income countries received disproportionally more ODA than other LDCs.

While there are some instances in which the positive effect of aid on democracy may be proven, a general problem of reverse causality is not shown by the literature. As aid does not have a clear direct effect on policy improvement (Burnside & Dollar, 2004), there are instances where ODA both fostered a positive impact on policies concerning personal freedom and where it was harmful to policy reform (Devarajan et al., 2001). However, this paper does not seek to reach a verdict on the effect of aid but rather on the motivation of donor countries.

III. Empirical Approach

This paper utilizes a dataset collected from different sources encompassing all countries which have at least once received ODA (144) during the period 2009-2017. In order to face data availability challenges, two different independent variables are used to assess the impact on ODA distribution. On the one hand, personal freedom is tested using the Freedom House ranking. On the other hand, a dummy variable approach using the categories "Free", "Partly Free" and "Not Free" is utilised. While the ranking showed more variation, the categorical data used had fewer missing values. Moreover, donor countries may also rather think in one of the three categories when making decisions about ODA rather than in a precise ranking. In addition, due to a lack of observations on colonies, some were grouped together into the dummy variable $col\_notgbfra_{it}$ indicating a colonial past where neither Great Britain nor France were the colonizers.

Moreover, different statistical approaches are used to find that a Feasible Generalised Least Squares approach with Fixed Effects (FE) is the preferred specification. However, due to the nature of FE, historical invariant data on colonies could not be included in the specification. In order to capture these effects, cross sectional models for each year were used (see Appendix, Table A1). The succession of specifications of the different models is shown in the results section, but only the preferred specification will be interpreted.

Model Freedom House Ranking

The FE model where the variables denote the within estimators, i.e. the difference between the value at time t and the mean is the following:

$$ODA_{it} = \alpha_0 + \alpha_1\, frhs\_free_{it} + \alpha_2\, frhs\_prtlyfree_{it} + \alpha_3\, lmi_{it} + \alpha_4\, umi_{it} + \alpha_5\, lfexpec_{it} + \alpha_6\, yrs\_schlng_{it} + \alpha_7\, natres\_rent_{it} + v_{it}$$

Model Freedom House Brackets

Similarly, for testing whether different freedom brackets were significant the following model was used:

$$ODA_{it} = \beta_0 + \beta_1 frhs\_hmnfreedm_{it} + \beta_2 lmi_{it} + \beta_3 umi_{it} + \beta_4 lfexpec_{it} + \beta_5 yrs\_schlng_{it} + \beta_6 natres\_rent_{it} + u_{it}$$

where the dependent variable indicates Official Development Aid as a percentage of GNI, the independent variables for human freedom are either included by categories or an index with a value of one being the freest country in the ranking. The latter was compiled by using indicators in line with the Universal Declaration of Human Rights in order to assess the level of political rights and civil liberties. The second specification assigns each country to a bracket of human freedom. While "free" and "partially free" are included in the specification, "not free" is the base category. Moreover, controls for economic well-being and rents on natural resources are added.

All variables have also been carefully selected in order to meet the outlined economic theory. Concerning the dependent variable, the ratio of ODA over GNI accounts for the amount of aid relative to the size of the country and its income. The control variables are also founded in theory: I employ these variables in the model to avoid a violation of the Zero Conditional Mean assumption which is present if some variables that affect freedom levels as well as ODA/GNI are only captured by the error term. Life expectancy controls for the level of healthcare in the country and the years of schooling act as a proxy for the strength of the education system, which both may support the level of freedom and are at the same time likely to be correlated to the level of aid. Additionally, the rent on natural resources, as a proxy for the potential of economic exploitability, may also heavily affect the level of freedom in a given country.

Ex ante the level of human freedom is expected to be positively correlated to ODA as a share of GNI. Two decades ago Alesina and Dollar (2000) claimed this relationship to be positive as donor countries value freedom in recipient countries.

IV. Description of Data

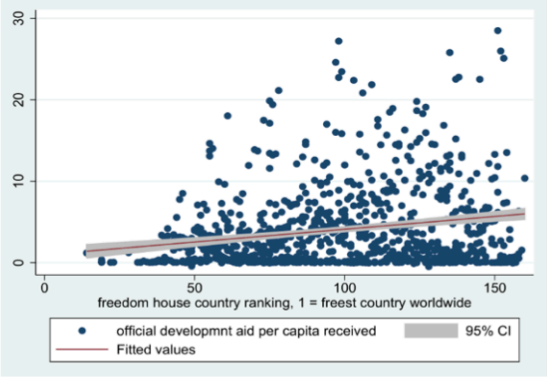
The dataset was compiled using the World Bank's database for ODA (2019a) and rent on natural resources (2019b), the Freedom House database for data on freedom levels (Freedom House, 2019), the UN Population Division (2019) for life expectancy, the UN Development Program's database (2019) for data on expected years of schooling and the Issue Correlates of War Project's database (2018) for data on colonies.

The sample of 144 low-income and middle-income countries was chosen between the years of 2007 and 2017 as the structure of the aid framework governed by the OECD changed before and after this time. As visible in the figure for the number of observations (Table 1), there are some missing variables for the dependent and some of the independent variables. Thus, a small number of entries for specific years and countries had to be excluded from the dataset when running regressions, resulting in an unbalanced dataset. However, this does not pose a big problem as missing values are unlikely correlated to ODA/GNI levels.

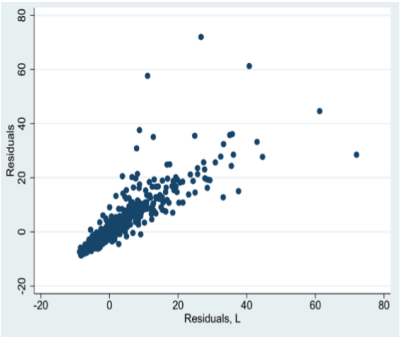
The summary statistics of the numerical variables (Table 1) also give a first insight to the dataset. One may observe that ODA/GNI is fairly scattered with a standard deviation of 9.577, a negative minimum bound of -0.483 and a maximum of 89.04. The negative value can be explained by the fact that ODA/GNI is negative when a country pays back more loans than it is receiving in a specific year. Similarly, the minimum of the rent of natural resources of zero is explained by the fact that not every country in the dataset has a sector for natural resources. Moreover, a simple scatterplot and fitted values indicate a slight positive relationship between the freedom ranking of a country and the level of aid received (Graph 1).

VARIABLES	N	mean	sd	min	max
oda	1.233	6,286	9,577	-0.483	89.04
lfexpec	1.233	64.36	16.21	0	80.14
yrs_schlng	1.233	11.89	2,962	0	17.40
frhs_hmnfreedm	1.233	71.04	51.24	0	160
natres_rent	1.233	9,092	11.63	0	60.40

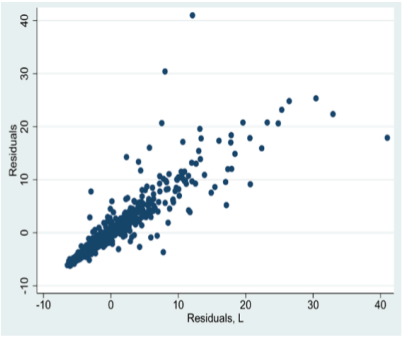
Table 1: Descriptive Statistics Numerical Variables



Graph 1: correlation Freedom Index and ODA as % of GNI



Graph 2: Residuals and lagged Residuals, Freedom Bracket Specification



Graph 3: Residuals and lagged Residuals, Freedom Index Specification

V. Tests and Transformations

In order to find the preferred specification, multiple tests were conducted to combat sources of statistical errors in both models – the index as well as the brackets. Such tests are key as the research question can hardly be answered using experimental or quasi experimental evidence at national level and thus time series data is the best alternative. Testing of the research question started with a pooled OLS. As heteroscedasticity was found in this model using the Breusch-Pagan test, robust standard errors were used. The Ramsey RESET test was used to test for a misspecification but also omitted variable bias. As the H_0 of no omitted variables was rejected, a Fixed Effect model was set up controlling for time-invariant omitted factors. Autocorrelation was investigated graphically by plotting the error term against the lagged error term. Graphs 2 and 3 (specification using brackets and index data respectively) clearly show a positive correlation of the error terms. Thus, as outlined by Musau et al. (2015), the feasible GLS estimation for a fixed effect model ought to be used to control for this aspect.

VI. Results

The results from the two different models do not only give a valuable insight into ODA donor behaviour individually but the comparison of the two makes the argument concerning the level of freedom more convincing. The model using a freedom ranking proves the expected positive relationship between freedom levels and ODA/GNI as change in the freedom index is highly significant. More precisely, the coefficient indicates a decrease of ODA/GNI of 0.0288 when moving one rank down the index towards a relatively less free state (ceteris paribus). The model utilizing freedom brackets instead of a relative ranking offers a more dynamic view, although most of the results are statistically insignificant. The overall observation that can be made of the results is in line with the testing conducted by Collier and Dollar (2002), which found a positive relationship between more democratic policies and aid levels.

Due to the scope of this paper, only the coefficients of the model using the freedom index (Table 4) will be investigated more closely. This model reinforces the investigation of the OECD (2017) that lower income countries receive a disproportionate amount of ODA. The differ-

ence from a lower income country to a middle-income country makes a stark difference of around 4% more ODA relative to GNI (ceteris paribus). This may be explained by a focus of donor countries on those in most need but also because the GNI growth over time reduces the figure for ODA/GNI. Still, there is a rather small difference between lower and upper middle-income countries. The negative and highly significant coefficients for life expectancy and years of schooling further support the idea that donor countries direct their aid towards regions with the greatest need.

The coefficient for rent on natural resources is more ambiguous with different (but also rather insignificant) results across the two models. More research would have to be conducted to make a clear judgement on this effect. However, it might also just not be taken into account at all when donor countries decide upon their aid flows. With the FE model, the effect of former colonies receiving disproportionate aid could not be observed. As pooled OLS models suffer from autocorrelation, cross sectional models for each year (see appendix, Table A1) were used to infer more about the impact of colonial history. These simple models do not indicate an overall focus of aid on former colonies, as all coefficients are insignificant.

Table 3: Results Freedom Brackets

VARIABLES	(1) ODA/GNI	(2) ODA/GNI	(3) ODA/GNI	(4) ODA/GNI	(5) ODA/GNI
Partly Free	-0.276	0.517	0.679**	0.676**	-0.528
	(0.421)	(0.328)	(0.307)	(0.308)	(0.521)
Free	1.177**	0.687**	0.801**	0.804**	0.992*
	(0.593)	(0.328)	(0.341)	(0.342)	(0.528)
LMI	-4.367***		0.227	0.212	-4.645***
	(0.605)		(0.450)	(0.464)	(0.576)
UMI	-6.322***		1.569***	1.581***	-6.854***
	(0.600)		(0.588)	(0.581)	(0.693)
Life	-0.269***			0.0356	-0.0817*
Expectancy	(0.0489)			(0.174)	(0.0424)
Years of	-0.345***		-0.437	-0.438	-0.307**
Schooling	(0.133)		(0.419)	(0.420)	(0.132)
Rents Nat.	-0.0325		-0.0695	-0.0697	-0.0355*
Resources	(0.0246)		(0.0445)	(0.0444)	(0.0195)
Colony	-4.222***				
France	(0.686)				
Colony	-4.190***				
GB	(0.718)				
Colony but	-5.287***				
Not FRA/GB	(0.772)				
Constant	32.55***	6.265***	11.55**	9.235	18.68***
	(3.213)	(0.354)	(4.768)	(11.99)	(2.520)
Estimation Method	OLS	FE	FE	FE	FGLS FE
Observations	1,174	1,174	1,174	1,174	1,174
R-squared	0.289	0.053	0.066	0.066	
Number of Countries		136	136	136	136

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4: Results Freedom Index

VARIABLES	(1) ODA/GNI	(2) ODA/GNI	(3) ODA/GNI	(4) ODA/GNI	(5) ODA/GNI
Freedom Index	-0.0230***	0.00366	0.00379	0.00402	-0.0288***
	(0.00482)	(0.0115)	(0.0116)	(0.0113)	(0.00514)
LMI	-4.035***		0.384	0.389	-4.286***
	(0.380)		(0.361)	(0.362)	(0.385)
UMI	-4.374***		1.194**	1.214***	-4.609***
	(0.426)		(0.459)	(0.460)	(0.475)
Life	-0.305***		-0.0520	-0.0537	-0.212***
Expectancy	(0.0409)		(0.163)	(0.162)	(0.0281)
Years of	-0.304***			-0.150	-0.325***
Schooling	(0.0891)			(0.321)	(0.100)
Rents Nat.	0.0201			0.0237	0.0273*
Resources	(0.0230)			(0.0379)	(0.0150)
Colony	-1.614***				
France	(0.577)				
Colony	-2.575***				
GB	(0.650)				
Colony	-2.041***				
Not GB/FRA	(0.657)				
Constant	33.36***	4.724***	7.717	9.227	27.24***
	(2.806)	(1.127)	(11.00)	(11.41)	(1.875)
Estimation Method	OLS	FE	FE	FE	FGLS FE
Observations	912	912	912	912	912
R-squared	0.456	0.051	0.058	0.060	
Number of Countries		113	113	113	113

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

VII. Conclusion

This paper set out to explore the effect of the level of freedom in an ODA recipient country on donor behaviour. It did so by using a Feasible GLS estimation for panel data over a span of nine years and across 144 countries. The empirical results suggest that donor countries indeed reward freedom to some degree. More aid is given to countries which are relatively freer: ODA/GNI increases by 0.0288 when a country rises one rank in the Freedom House index (when controlling for humanitarian and economic circumstances and keeping all else constant). When inspecting freedom brackets rather than a relative ranking, there are indicators for a nonlinear relationship. In other words, there might be a certain region of personal freedom in which donor countries may be more willing to supply aid. However, even though these aggregate figures indicate that there is evidence for on overall rewards of human freedom, it does not rule out occasional strategic aid giving by some countries. Hence, beside this overall impression of ODA behaviour, country specific studies are a necessary complement to form an exhaustive picture. The other coefficients were also in line with prior literature and general intuition. Due to the used statistical approach, the effect of being a former colony could not be sufficiently tested to refute Alesina and Dollar's (2000) claims but cross-sectional models do not show significant indicators of colonial linkages. These insightful results from this unique dataset may be a good start for further research into more specific events such as political crises or the importance of former donation behaviour through lagged variables. Overall, especially due to the advanced model and the large dataset, the stated results are a strong indicator that donor countries may in fact be rewarding progressive legislation in recipient countries through their ODA decisions.

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IX. Appendix

Table A1: Yearly Cross-Sectional Model

	(1)	(2)	(3)	(4)	(5)	(6)
	2012	2013	2014	2015	2016	2017
VARIABLES	ODA as % of GNI					
frhs_hmnfree	-0.0231*	-0.00735	-0.00852	-0.0308*	-0.0129	-0.0214**
	(0.0134)	(0.0134)	(0.0102)	(0.0157)	(0.0127)	(0.00920)
lmi	-2.850***	-3.321***	-2.841***	-3.176***	-3.357***	-3.579***
	(0.962)	(0.946)	(0.976)	(1.045)	(1.081)	(0.995)
umi	-2.752***	-3.235***	-2.620**	-2.588**	-2.231*	-2.941***
	(0.976)	(0.981)	(1.022)	(1.091)	(1.144)	(1.062)
lfexpec	-0.294**	-0.301***	-0.343**	-0.271**	-0.333**	-0.269**
	(0.113)	(0.110)	(0.150)	(0.127)	(0.158)	(0.113)
yrs_schlng	-0.456*	-0.268	-0.338*	-0.651***	-0.447	-0.421*
	(0.241)	(0.213)	(0.198)	(0.247)	(0.284)	(0.232)
natres_rent	-0.0426*	-0.0732***	-0.0497	0.112	0.162*	0.0761
	(0.0224)	(0.0211)	(0.0426)	(0.125)	(0.0895)	(0.0631)
col_fra	-0.439	-0.939	-0.527	-1.704	-2.243	-0.820
	(1.391)	(1.272)	(1.405)	(1.816)	(1.686)	(1.213)
col_gb	-1.409	-1.923	-2.843	-2.236	-2.052	-1.168
	(1.864)	(1.839)	(1.885)	(1.770)	(2.151)	(1.935)
col_notgbfra	-1.383	-1.349	-2.524	-2.919	-3.002	-1.898
	(1.628)	(1.564)	(1.668)	(1.797)	(2.000)	(1.325)
Constant	34.00***	31.39***	34.74***	34.74***	35.09***	31.51***
	(6.713)	(6.201)	(9.939)	(9.194)	(9.712)	(7.657)
Observations	104	104	108	110	110	113
R-squared	0.487	0.508	0.433	0.445	0.489	0.479

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1