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Development Aid and Regulatory Policies in Recipient-Countries: Is there a Specific Effect of Aid for Trade?

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Abstract

This article explores the effect of the cumulated development aid, including the cumulated amounts of each of its two components, namely Aid for Trade (AfT) and NonAfT (i.e., development aid flows not dedicated to the trade sector) on regulatory policies in recipient-countries. The analysis is performed on an unbalanced panel of 129 countries over the period 2002-2016. Results suggest that for Least developed countries (LDCs), only the cumulated NonAfT flows influences positively regulatory policies, while for NonLDCs (other countries than LDCs), it is rather the cumulated amounts of NonAfT flows that exert a positive effect on regulatory policies.

This article represents the personal opinions of individual staff members and is not meant to represent the position or opinions of the WTO or its Members, nor the official position of any staff members. The author sincerely thanks the two anonymous reviewers for their very helpful comments that have helped improve the quality of the paper. Any errors or omissions are the fault of the author.
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1. Introduction

There is a huge literature on the effectiveness of development aid (the so-called official development assistance - ODA-). As part of this literature, studies (e.g., Askarov and Doucouliagos, 2015; Bräutigam, 2000; Busse and Gröning, 2009; Collier and Dollar, 2004; Freytag and Heckleman, 2012; Jones and Tarp, 2016; Knack, 2001; 2004; Remmer, 2004; Svenson, 2000) that have looked at the effect of ODA on institutional and governance quality have reached mixed conclusions. For example, Knack (2001) and Freytag and Heckleman (2012) have argued for a positive effect of development aid on the quality of institutions: development aid could contribute to financing improvements of institutions as well as facilitating the acceptation of implementation of reforms by the elites. Development aid could also influence institutions quality through its effect on income and education. Askarov and Doucouliagos (2015) have provided evidence that aid flows promote democratization, including through their positive effect on constraints on the executive as well as political participation. Some other studies have, however, reported a negative effect of development aid on the institutional and governance quality. For example, Bräutigam (2000) has noted that development aid influences negatively institutions by stimulating rent-seeking and creating moral hazard problem. Svensson (2000) has reported that aid flows facilitate corruption, including in ethnically heterogenous countries. Along the same lines, Collier and Dollar (2004) and Remmer (2004) have argued that aid could negatively influence institutional quality by reducing domestic pressures for accountability. Similarly, Busse and Gröning (2009) have obtained evidence that aid flows exert a negative effect on governance. Jones and Tarp (2016) have nuanced many of these findings by demonstrating empirically that data does not support the view that aid consistently exerts a negative effect on political institutions.

In spite of the growing interest of researchers and scholars in the assessment of the effect of development aid on institutional and governance quality, we are not aware of any study that has investigated the effect of development aid, including both Aid for Trade (AfT) flows and NonAfT flows (other development aid flows than AfT) on regulatory policies. AfT flows represent an important component of total ODA flows (see Figure 1 discussed below), and issues related to AfT have gained momentum since the launch - by the Members of the World Trade Organization (WTO) - of the AfT Initiative at the Hong Kong Ministerial Conference of the WTO in 2005. This Initiative aims to help developing countries, in particular Least

developed countries[1] (LDCs), to enhance the supply-side capacity and trade-related infrastructure that they need to assist them to implement and benefit from WTO Agreements and more broadly to expand their trade (see WTO Secretariat document WT/MIN(05)/DEC).

The purpose of the current study is to investigate the relationship between development aid flows (total ODA flows), including its two components (namely AfT flows and NonAfT[2] flows) and regulatory policies in recipient-countries. In so doing, the study primarily explores the extent to which cumulated amounts of development aid (from the first year of data availability up to a given year) affect regulatory policies in recipient-countries. We believe that while policymakers in both recipient-countries and donor-countries might be interested in the contemporaneous effect of development aid flows on regulatory policies, the effect of the cumulated development aid amounts might be much more relevant to them, given that the contemporaneous effect of development aid on regulatory policies may vary from year to year, and could be positive, negative or statistically nil, as shown by the brief literature review provided above on the effect of development aid on institutional quality. Therefore, the present analysis focuses primarily on the effect of cumulated amounts of development aid (and its two components) on regulatory policies, although it also briefly presents some estimations' outcomes on the effect of development aid flows on regulatory policies.

The empirical analysis has been conducted using an unbalanced panel dataset of 129 recipient-countries over the annual period 2002-2016. Results show that NonAfT flows appear to positively affect regulatory policies in LDCs while AfT flows promote regulatory policies in NonLDCs (i.e., other countries than LDCs in the full sample).

In the rest of the paper, Section 2 presents a theoretical discussion on how development aid, through its two components highlighted above could affect regulatory policies. Section 3 lays down the model specification that helps address the issue at hand, and briefly discusses the econometric methodology. Section 4 interprets empirical results, and Section 5 concludes.

2. Theoretical discussion on the effect of development aid on regulatory policies

[1] This group of countries has been designed by the United Nations and constitutes (according to the United Nations) the poorest and most vulnerable countries in the world to external economic shocks and environmental shocks. For further information on this group of countries, see online at: http://unohrlls.org/about-ldcs/

[2] NonAfT refers to the component of total ODA that is allocated to other sectors than the trade sector in recipient-countries.

As noted above, the analysis considers two main components of total ODA flows, namely AfT flows and NonAfT flows, given that regulatory policies target the private sector and is likely directly linked with AfT flows. Thus, the effect of total ODA on regulatory policies would depend on the effect of each of these two components on regulatory policies in recipient-countries, with the expectation that AfT flows exert a direct effect on regulatory policies, while NonAfT flows would indirectly influence regulatory policies.

We postulate that NonAfT flows could affect regulatory policies through the channels concerning the effect of development aid on institutional quality, highlighted in section 1. These channels could include the financing of institutional improvements and the facilitation of the acceptation of reforms implementation by the elites; the positive effect on education; the positive effect on democratization, including through the constraints on the executive as well as the political participation; or a negative effect on institutional quality. For example, by helping to implement reforms in other sectors than the trade sector, NonAfT flows could exert positive spillovers on the trade sector reform, including through the adoption of good quality of regulatory policies so as to improve the business environment for trading firms. The same reasoning could apply to the effect of NonAfT flows on the institutional quality through the constraints on the executive and political participation. Similarly, if NonAfT flows, notably the part allocated to the education sector generate higher educational outcomes in recipient-countries (e.g., Birchler and Michaelowa, 2016; Dreher et al. 2008), they could incentivize policymakers to improve the business environment - including by implementing good regulatory policies - in favour of trading firms that wish to use the educated workforce for enhancing their competitiveness in the international markets. At the same time, NonAfT flows might also result in lower institutional quality and induce the adoption of inappropriate regulatory policies. Against this background, it is difficult to anticipate the direction in which NonAfT flows could affect regulatory policies. Therefore, the contemporaneous effect of NonAfT flows on regulatory policies is a priori unknow, and we could not anticipate the direction in which the cumulated amounts of NonAfT flows would affect regulatory policies in recipient-countries.

The effect of AfT flows on regulatory policies quality in recipient-countries is straightforward and could take place through trade performance and foreign direct investment (FDI) flows in recipient-countries. AfT contributes to promoting export performance in recipient-countries (Calì and te Velde, 2011; Vijil and Wagner, 2012; Bearce et al., 2013; Hühne et al., 2014; Martínez-Zarzoso et al., 2017; Gnangnon, 2019; see a literature review in

OECD-WTO, 2017), including through its positive effect on economic infrastructure (via trade costs reduction), on strengthening productive capacity, and on helping policymakers in recipient-countries devise appropriate trade policies that both align with their country's commitments at the WTO and their export development strategy. As a result, when they enjoy higher AfT flows, policymakers in recipient-countries could be motivated to set up good regulatory policies quality with a view to developing a business environment conducive to higher export performance. Likewise, AfT helps promote trade policy liberalization (see Gnangnon, 2018) as well as FDI inflows (e.g., Ly-My and Lee, 2019). This could also motivate policymakers in recipient-countries to devise regulatory policies that promote international trade and FDI inflows. Against this backdrop, we postulate the hypothesis that AfT flows would exert a positive effect on regulatory policies quality in recipient-countries. Consequently, we could expect a positive effect of the cumulated amounts of AfT on regulatory policies.

3. Model specification

To explore empirically the effect of development aid flows on regulatory policies, we draw on many insights from previous studies (highlighted above) concerning the effect of development aid on institutional and governance quality, and postulate the model (1):

$$REGQUAL_{it} = \beta_0 + \beta_1 \text{Log(CUMAID)}_{it} + \beta_2 \text{TP}_{it-1} + \beta_3 \text{Log(GDPC)}_{it-1} + \beta_4 Log(POP)_{it} + \beta_5 \text{Log(FDI)}_{it-1} + \beta_6 \text{POLSTAB}_{it} + \gamma_t + \mu_i + \varepsilon_{it} \quad (1)$$

where *i* represents the country's index (129 recipient-countries of which 42 LDCs); *t* denotes the time-period (data spans over 2002-2016). The coefficients of variables β_0 to β_6 are to be estimated. μ_i are countries' unobservable time-invariant characteristics, γ_t represents global shocks that could affect together all countries' regulatory policies, and ε_{it} is an error-term. The description and source of variables used in the analysis are provided in Appendix 1. The standard descriptive statistics on the variables are provided in Appendix 2, and the lists of countries contained in the entire sample and in the sub-sample of LDCs are reported in Appendix 3. The variables "CUMAID" (or as we will see later the aid variables), "GDPC", and "POP" have been transformed using natural logarithm, given their high skewness. Similarly, the variable "FDI" contains both negative and positive values, and also exhibits a high

skewness. It has therefore been transformed using the method proposed by Yeyati et al. (2007) (see Appendix 1 for further details on the transformation approach).

The variable "REGQUAL" is the indicator of regulatory policies. The variable "CUMAID" is the variable of interest and stands for the cumulated amounts of development aid. It could be the cumulated amounts of total ODA (denoted "CUMODA"), the cumulated amounts of AfT flows (denoted "CUMAfT") and the cumulated amounts of NonAfT flows (denoted "CUMNONAfT"). The cumulated aid variables have been computing by drawing from Wang and Xu (2018) and Gnangnon (2019).

Concerning the expected effect of control variables, we argue that a rise in the economic development level (captured through the variable "GDPC") would be positively associated with the implementation of regulatory policies, because such a rise reflects countries' greater capacity to implement appropriate regulatory policies for trade promotion. From an empirical perspective, Chong and Zanforlin (2000) and Alonso and Garcimartín (2013) have reported a positive effect of the development level on the institutional quality. On another note, we also expect that greater trade policy liberalization (higher values of the variable "TP") would provide incentives to governments to implement appropriate regulatory policies that would facilitate the development of international trade. A positive effect of trade liberalization on institutional quality has been reported by Bhattacharyya (2012) and Alonso and Garcimartín (2013). Incidentally, we expect political stability to be positively associated with the implementation of regulatory policies in favour of trade development. As for the effect of FDI inflows on regulatory policies, we postulate that it could take place through, *inter alia*, greater trade performance. In fact, as FDI inflows could be associated with better trade performance (e.g., Aizenman and Noy, 2006; Metulini et al., 2017; Park and Park, 2015), policymakers in host-countries that receive high amounts of FDI inflows might be willing to improve the business environment so as to enhance the positive trade impact of these FDI inflows. Finally, concerning the population size ("POP"), which represents the country's size, Busse and Gröning (2009) have argued that larger countries could improve governance thanks to their important financial mass, while in the meantime, the information asymmetry problems and higher transaction costs that they face may limit the possibilities for improving governance.

Note that the use of the one-year lag for some variables in model (1) aims to mitigate the endogeneity concern (in particular the reverse causality) related to these variables. The latter include trade policy, real per capita income, and FDI inflows. Concerning the trade policy variable, the reverse causality arises from the fact that while trade policy liberalization could

be expected to influence regulatory policies, countries that have a certain level of regulatory policies and that wish to spur export performance might be willing to further promote trade policy liberalization. Similarly, one could postulate that while the development level proxied by the real per capita income could affect regulatory policies, it is still possible that countries with better regulatory policies enjoy a better trade performance and better integrate into the international trade market. In turn, this could affect the level of per capita income. Finally, the explanation of the feedback effect from regulatory policies to FDI inflows resides on the fact that institutional quality, and in particular regulatory policies influence FDI inflows to a given country. For example, Demir and Hu (2016) have shown, *inter alia*, that institutional differences create entry barriers for foreign investors in North-South and South-North directions. Farok et al. (2019) have reported that countries with stronger contract enforcement and more efficient international trade regulations attract more FDI inflows. We are well aware that the use of the one-year lag of some variables does not fully eliminate the endogeneity concern, but as these variables are control variables in the model specification, we believe that their one-year lag helps limit the endogeneity bias.

We provide in Figure 1 the evolution of total ODA flows as well as the share (%) of AfT in total ODA for both the sub-samples LDCs and NonLDCs. We additionally provide a first insight into the statistical relationship between development aid flows and regulatory policies by displaying in Figures 2 to 5 the correlation patterns (in the form of scatter plot) between total ODA flows (and its components) and regulatory policies. We observe from Figure 1 that while total ODA flows have fluctuated over time in both LDCs and NonLDCs, countries in these two sub-samples particularly experienced a surge of ODA flows in 2006. In addition, over the entire period, the total ODA flows that have accrued to LDCs are, on average, higher than those obtained by NonLDCs. On the other hand, the share of AfT in total ODA has been on rise for both LDCs and NonLDCs. However, from 2013 to 2016, this share has been higher for NonLDCs than for LDCs, thereby indicating that NonLDCs have received higher AfT flows (as a share of total ODA) compared to LDCs over this sub-period. Figure 2 shows for the full sample that while total ODA flows seem to be negatively correlated with regulatory policies, the correlation pattern between the cumulated amounts of total ODA and regulatory policies is only loosely negative. Both AfT flows and their cumulated amounts are positively correlated with regulatory policies, while NonAfT flows and their cumulated values show a negative correlation with regulatory policies. Graphs in Figure 3 indicate for LDCs that the three types of development aid variables, and their cumulated amounts are positively correlated with

regulatory policies. Figure 4 shows for NonLDCs that the correlation patterns between total ODA, their cumulated amounts and regulatory policies are negative, while for AfT flows (and their cumulated amounts), the correlation appears to be loosely positive. For NonAfT flows and their cumulated amounts, the correlation patterns are negative.

In terms of estimation strategy, we estimate model (1) (or its different variants, including with different variables "CUMAID") using the two-way fixed effects estimator, i.e., with both time-invariant countries' fixed effects and year dummies. The standard errors have been clustered at the country level.

Note that to provide a first view on the relationship between development aid variables and regulatory policies, we first estimate model (1) where the variable "CUMAID" has been replaced with each of the development aid variables, namely total ODA, AfT and NonAfT flows. We have also estimated specifications of model (1) with lags[3] of the AfT variable, notably the one-year lag and two-year lag of AfT. This is because the literature on AfT effectiveness has retained that AfT flows could affect recipient-countries' export performance with a time lag of 2 years, although there is no consensus on the optimal time lag to be used. For the sake of consistency, we have also estimated specifications of model (1) that contain total ODA and NonAfT variables by using the one-year and two-year lags of each of these variables. The use of lags of development aid variables helps to mitigate the endogeneity problem, that is, the bi-directional causality between development aid variables and regulatory policies. In fact, while development aid is expected to affect regulatory policies, it is also possible that donors would be willing to supply higher amounts of ODA, notably AfT to recipient-countries that experience low quality of regulatory policies so as to incentivize them to improve the business environment for the private sector. Donors may also opt for supplying higher development aid, including AfT flows to further encourage recipient-countries that endeavour to improve their regulatory policies. At the same time, it is unlikely that the variables capturing the cumulated amounts of development aid would be endogenous, that is, it is unlikely that these variables would suffer from the reverse causality problem. This is because while we expect the cumulated amounts of development aid to influence regulatory policies, it is unlikely that the regulatory policies implemented in year t would, in turn, influence the cumulated amounts of development aid from 2002 up to the year t.

[3] The rationale for considering lags of the AfT variable rests on the fact that according to the literature, there could be some time lags (for example, one year or two years) for AfT interventions (for example AfT for building economic infrastructure) to influence recipient-countries' export performance (e.g., Calì and TeVelde, 2011; Bearce et al., 2013).

Overall, Table 1 presents for the full sample, the estimations' results of specifications of model (1) where the variable "CUMAID" has been replaced with development aid variables (both contemporaneous and lagged aid variables with one year and two years). Table 2 presents the estimations' outcomes of different variants of model (1) where the variable "CUMAID" has been replaced respectively by "CUMODA", "CUMAfT", and "CUMNONAfT" over the full sample, as well as the sub-samples LDCs and NonLDCs.

4. Interpretation of empirical results

Results in column [1] of Table 1 suggest that the contemporaneous total ODA does not significantly affect regulatory policies at the conventional levels. In columns [2] to [3] of Table 1, we note that the one-year and the two-year lags of total ODA flows influence positively and significantly regulatory policies only at the 10% level, and exhibit almost the same magnitude of the impacts. Columns [4] to [6] of Table 1 contain results where the contemporaneous total ODA and its two lags have been replaced with its two components (and respectively their one-year and two-year lags). Specially, results in column [3] indicate that the contemporaneous AfT flows influence positively and significantly (at the 1% level) regulatory policies, while NonAfT flows do not affect significantly regulatory policies at the conventional levels. The same findings are obtained in column [5] of Table 1 concerning the effect of the one-year lag of AfT flows and NonAfT flows, although the magnitude of the effect of the one-year lag of AfT flows on regulatory policies is slightly lower than the effect of the contemporaneous AfT flows on regulatory policies. In column [6], we obtain that the two-year lag of AfT flows exerts yet a positive effect on regulatory policies, but this effect is statistically significant only at the 10% level. At the same time, the two-year lag of NonAfT flows is positively and significantly (at the 1% level) associated with regulatory policies.

With regard to control variables, we that across all columns, trade policy liberalization is not statistically associated with regulatory policies, possibly because its effect translates through the aid variables. For the other control variables, we obtain that at the 1% level, regulatory policies are positively and significantly driven by higher real per capita income, lower population size, higher FDI inflows, and greater political stability.

Turning now to the estimates displayed in Table 2, we obtain across the first three columns that, at the 5% level, the cumulated amounts of total ODA contribute to improving regulatory policies in the full sample as well as in LDCs. However, for NonLDCs, the coefficient of the related variable is statistically significant only at the 10% level. In terms of

the magnitude of the impact for the full sample, a 100 per cent increase in the cumulated total ODA amounts induces a 0.14-point increase in the index of regulatory policies. For LDCs, a 100 per cent increase in the cumulated total ODA amounts induces a 0.27-point increase in the index of regulatory policies. Results in columns [4] to [6] suggest that at the 5% level, the cumulated values of AfT flows affect positively and significantly regulatory policies in the full sample as well as in NonLDCs. In particular, for LDCs, the effect is not statistically significant at the 5% level, but rather at the 10% level. We find that a 100 per cent increase in the cumulated amounts of AfT is associated with a rise by 0.072-point and 0.077-point in the indicator of regulatory policies, respectively for the full sample and NonLDCs. Finally, at the 5% level, cumulated NonAfT flows exert a positive effect on regulatory policies only in LDCs, as for the full sample and NonLDCs, the coefficient of the variable "Log(CUMNonAfT)" is not statistically significant at the 5% level. Specifically, a 100 per cent increase in the cumulated amounts of NonAfT generates a rise in the indicator of regulatory policies by 0.25-point in LDCs. It is important to note that the magnitude of these different effects of the cumulated amounts of development aid on regulatory policies might be viewed as small. Nevertheless, the analysis has the advantage of highlighting the important role of the cumulated development aid on regulatory policies, the latter being key for trade and investment promotion, notably in developing countries. Results concerning control variables in Table 2 are broadly consistent with those in Table 1.

5. Conclusion

This article contributes to the literature on the determinants of institutional quality by primarily examining the effect of the cumulated amounts of development aid, including total ODA flows and its two components, namely AfT flows and NonAfT flows on regulatory policies that are expected to promote countries' participation in international trade. The analysis has been performed on a sample of 129 countries - of which 42 LDCs - over the period 2002-2016. The findings suggest that over the full sample, the cumulated amounts of total development aid exert a positive effect on regulatory policies, but this effect seems to take place primarily in LDCs. With regard to the components of total ODA, the cumulated AfT flows appear to influence positively and significantly regulatory policies in NonLDCs, whereas for LDCs, it is rather the cumulated NonAfT flows that positively affect regulatory policies.

The findings of this analysis, therefore, suggest that while for NonLDCs, AfT flows matters much more than NonAfT flows for the promotion of good regulatory policies, in LDCs,

it is rather NonAfT flows that positively (although indirectly) influence regulatory policies. As far as LDCs are concerned, the finding may suggest that governments in these countries have not been able to fully take advantage of AfT flows to promote regulatory policies or that the AfT amounts to LDCs have not been sufficiently high to be conducive to the adoption of good regulatory policies in these countries.

One policy implication of this study might be the need for scaling-up development aid flows, particularly AfT flows in favour of developing countries, notably the LDCs among them (that are the most in need of these capital flows) so as to help them better integrate into the global trading system, including through the adoption of good regulatory policies.

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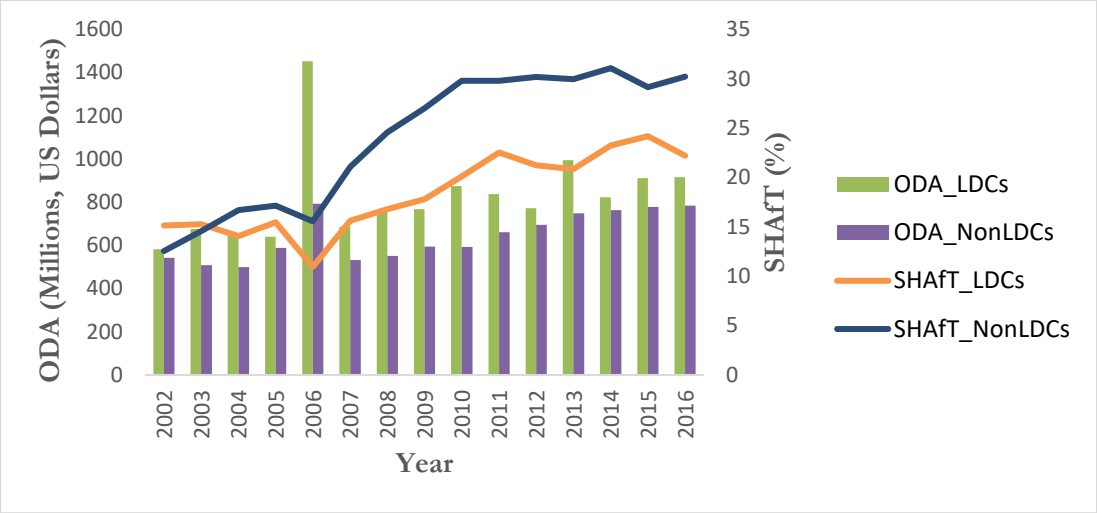
Figures

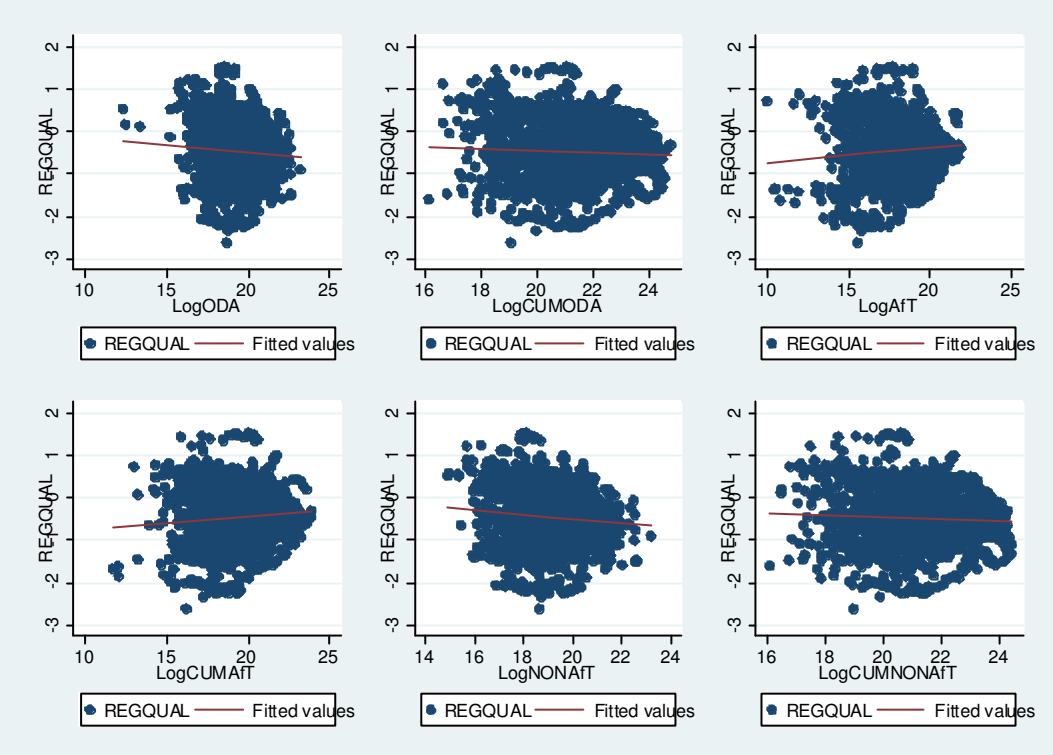
Figure 1: Developments of total ODA and the share of AfT flows in total ODA over time



Source: Author

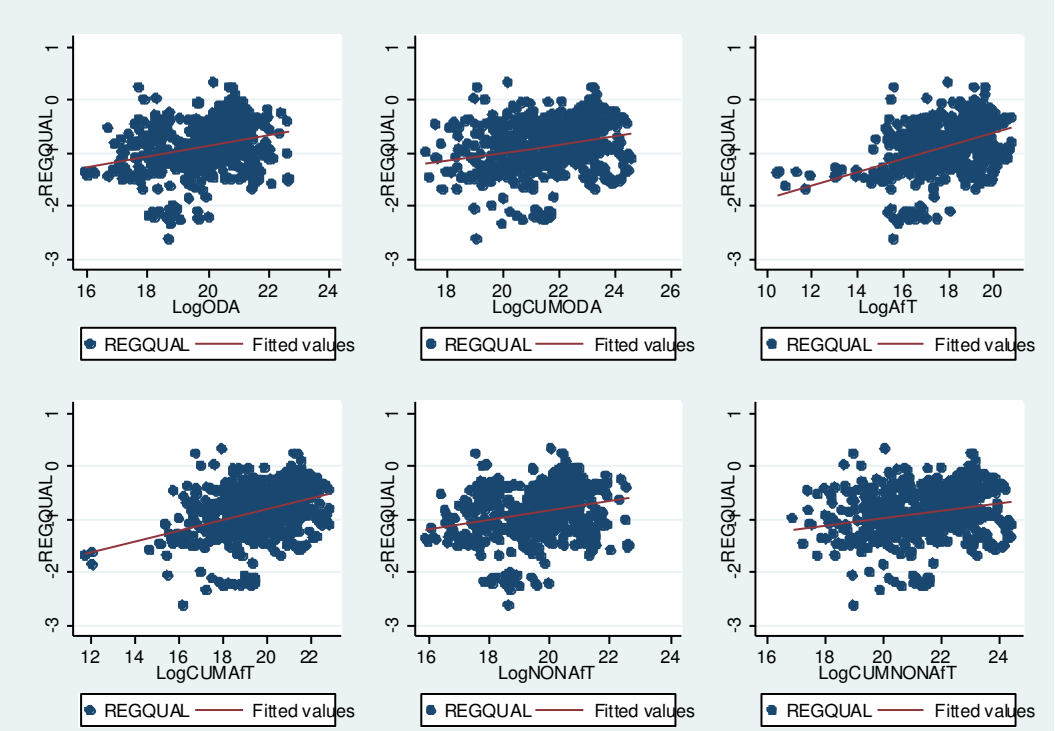
Note: The variable "SHAfT" represents the share (%) of AfT flows in total ODA flows (both AfT flows and total ODA flows are expressed in in constant prices 2016, US Dollar).

Figure 2: Scatter plot between development aid variables and regulatory policies_Over the full sample



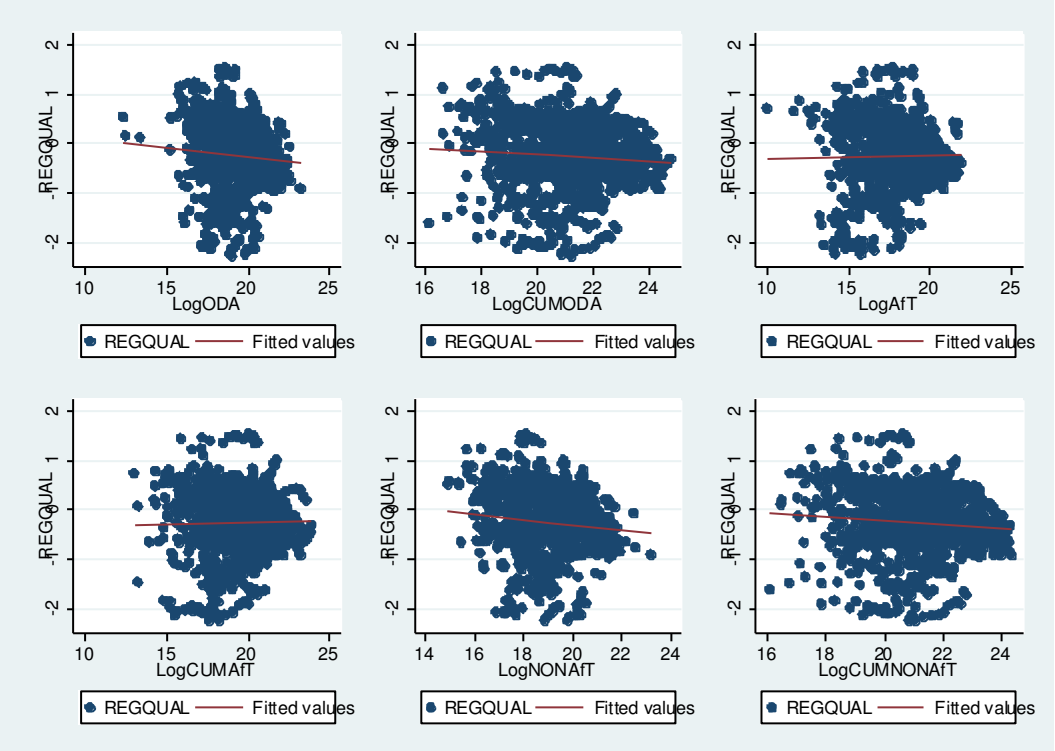
Source: Author

Figure 3: Scatter plot between development aid variables and regulatory policies_Over LDCs



Source: Author

Figure 4: Scatter plot between development aid variables and regulatory policies_Over NonLDCs



Source: Author

Tables and Appendices

Table 1: Impact of development aid on regulatory quality policies
Estimator: Two-way Fixed Effects

Variables	REGQUAL	REGQUAL	REGQUAL	REGQUAL	REGQUAL	REGQUAL
	(1)	(2)	(3)	(4)	(5)	(6)
Log(ODA)	0.0221					
	(0.0189)					
$Log(ODA)_{t-1}$		0.0350*				
		(0.0186)				
$Log(ODA)_{t-2}$			0.0346*			
			(0.0182)			
Log(AfT)				0.0393***		
				(0.0146)		
Log(NonAfT)				0.0117		
				(0.0192)		
$Log(AfT)_{t-1}$					0.0287**	
					(0.0125)	
$Log(NonAfT)_{t-1}$					0.0284	
					(0.0197)	
$Log(AfT)_{t-2}$						0.0206*
						(0.0118)
$Log(NonAfT)_{t-2}$						0.0399**
						(0.0194)
TP_{t-1}	0.000746	0.000735	0.00149	0.000629	0.000609	0.00123
	(0.000957)	(0.000946)	(0.00113)	(0.000912)	(0.000996)	(0.00107)
$Log(GDPC)_{t-1}$	0.410***	0.416***	0.425***	0.413***	0.423***	0.427***
	(0.107)	(0.105)	(0.117)	(0.103)	(0.103)	(0.116)
Log(POP)	-0.532**	-0.523**	-0.464*	-0.589**	-0.566**	-0.521**
	(0.258)	(0.257)	(0.244)	(0.265)	(0.272)	(0.258)
$Log(FDI)_{t-1}$	0.0292***	0.0291***	0.0247**	0.0289***	0.0279***	0.0259**
	(0.0108)	(0.0106)	(0.0101)	(0.0105)	(0.0104)	(0.0101)
POLSTAB	0.113***	0.113***	0.117***	0.101***	0.109***	0.109***
	(0.0315)	(0.0314)	(0.0332)	(0.0293)	(0.0314)	(0.0318)
Constant	4.067	3.701	2.715	4.386	3.839	3.078
	(3.916)	(3.844)	(3.694)	(3.977)	(4.037)	(3.856)
Observations - Countries	1,596 - 129	1,602 - 129	1,503 - 129	1,575 - 129	1,573 - 129	1,473 - 129
R-squared	0.951	0.951	0.956	0.951	0.951	0.955

*Note: *p-value<0.1; **p-value<0.05; ***p-value<0.01. Robust standard errors are in parenthesis. Year dummies and countries' fixed effects have been included in the regressions.*

Table 2: Cumulative impact of development aid on regulatory quality policies
Estimator: Two-way Fixed Effects

	***Dependent variable*: REGQUAL**								
	Full Sample	**LDCs**	**NonLDCs**	**Full Sample**	**LDCs**	**NonLDCs**	**Full Sample**	**LDCs**	**NonLDCs**
Variables	REGQUAL	REGQUAL	REGQUAL	REGQUAL	REGQUAL	REGQUAL	REGQUAL	REGQUAL	REGQUAL
	(1)	(2)	(3)	(4)	(5)	(6)	(5)	(8)	(9)
Log(CUMODA)	0.140**	0.269**	0.121*						
	(0.0695)	(0.116)	(0.0717)						
Log(CUMAfT)				0.0718**	0.174*	0.0773**			
				(0.0354)	(0.0942)	(0.0371)			
Log(CUMNonAfT)							0.113*	0.252**	0.0825
							(0.0676)	(0.114)	(0.0710)
TP_{t-1}	0.000531	0.00118	0.000509	-3.29e-05	0.000756	-0.000300	0.000787	0.00122	0.000772
	(0.000964)	(0.00122)	(0.00115)	(0.000919)	(0.00125)	(0.00103)	(0.00102)	(0.00122)	(0.00127)
$Log(GDPC)_{t-1}$	0.424***	0.513***	0.373***	0.384***	0.530***	0.311**	0.381***	0.513***	0.311**
	(0.101)	(0.146)	(0.126)	(0.107)	(0.150)	(0.128)	(0.103)	(0.148)	(0.129)
Log(POP)	-0.537**	0.0243	-0.951**	-0.520*	-0.207	-1.015**	-0.606**	0.0116	-0.994**
	(0.263)	(0.470)	(0.363)	(0.282)	(0.521)	(0.387)	(0.273)	(0.466)	(0.388)
$Log(FDI)_{t-1}$	0.0281***	0.0209	0.0357***	0.0257**	0.0153	0.0317**	0.0282**	0.0222	0.0353**
	(0.0105)	(0.0156)	(0.0132)	(0.0109)	(0.0166)	(0.0131)	(0.0109)	(0.0156)	(0.0141)
POLSTAB	0.120***	0.0567	0.163***	0.108***	0.0447	0.151***	0.113***	0.0565	0.151***
	(0.0341)	(0.0400)	(0.0414)	(0.0316)	(0.0444)	(0.0377)	(0.0321)	(0.0402)	(0.0386)
Constant	1.337	-11.04	8.623*	3.084	-5.430	10.98**	3.632	-10.46	10.54*
	(4.111)	(9.759)	(5.139)	(4.301)	(10.11)	(5.490)	(3.981)	(9.696)	(5.330)
Observations - Countries	1,596 - 129	506 - 43	1090 - 86	1518 - 123	492 - 42	1026 - 81	1545 - 124	506 - 43	1039 - 81
R-squared	0.952	0.898	0.956	0.949	0.896	0.954	0.950	0.897	0.954

*Note: *p-value<0.1; **p-value<0.05; ***p-value<0.01. Robust standard errors are in parenthesis. Year dummies and countries' fixed effects have been included in the regressions.*

Appendix 1: Definition and Source of variables

Variables	Definition	Sources
REGQUAL	This is the indicator of regulatory quality policies. It reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. A rise in the values of this indicator reflects better regulatory quality policies.	World Bank Governance Indicators developed by Kaufmann, Kraay and Mastruzzi (2010) and recently updated.
ODA	This is the real gross disbursements of total Official Development Aid (ODA) (expressed in constant prices 2016, US Dollar).	Author's calculation based on data extracted from the database on development statistics of the OECD (Organization for Economic Cooperation and Development).
AfT	This is the real gross disbursements of total Aid for Trade (expressed in constant prices 2016, US Dollar).	Author's calculation based on data extracted from the database of the OECD/DAC-CRS (Organization for Economic Cooperation and Development/Donor Assistance Committee)-Credit Reporting System (CRS). Aid for Trade data cover the following three main categories (the CRS Codes are in brackets): Aid for Trade for Economic Infrastructure, which includes: transport and storage (210), communications (220), and energy generation and supply (230); Aid for Trade for Building Productive Capacity, which includes banking and financial services (240), business and other services (250), agriculture (311), forestry (312), fishing (313), industry (321), mineral resources and mining (322), and tourism (332); and Aid for Trade policy and regulations, which includes trade policy and regulation and trade-related adjustment (331).

NonAfT	This is the measure of the development aid allocated to other sectors in the economy than the trade sector. It has been computed as the difference between the gross disbursements of total ODA and the gross disbursements of total Aid for Trade (both being expressed in constant prices 2016, US Dollar).	Author's calculation based on data extracting from the OECD/DAC-CRS database.
CUMODA, CUMAfT and CUMNONAfT	The variable "CUMODA" stands for the cumulated amounts of total ODA (expressed in constant prices 2016, US Dollar) over time (i.e., from 2002, which is the initial year of the period under analysis up to a given year t). "CUMAfT" represents the cumulated values of total AfT (expressed in constant prices 2016, US Dollar) over time (i.e., from 2002, which is the initial year of the period under analysis up to a given year t). "CUMNONAfT" represents the cumulated amounts of total NonAfT (expressed in constant prices 2016, US Dollar) over time (i.e., from 2002, which is the initial year of the period under analysis up to a given year t).	Author's calculation based on data described above.
TP	This is the domestic trade policy, measured by the "freedom to trade internationally" index. The latter is a major component of the Economic Freedom Index. It is a composite measure of the absence of tariff and nontariff barriers that affect imports and exports of goods and services. Higher values of "TP" reflect lower trade barriers, that is, greater trade liberalisation. Lower values of "TP" indicate rising trade restrictive measures.	Heritage Foundation (see Miller et al., 2019)
GDPC	GDP per capita (constant 2010 US$)	World Development Indicators (WDI)
POP	Total Population	WDI
FDI	This variable represents a transformation of the variable capturing the Foreign Direct Investment inflows, in percentage of Gross Domestic Product using the following formula (see Yeyati et al. 2007): FDI $= sign(FDIGDP) * \log(1 + \lvert FDIGDP \rvert)$ (2), where $\lvert FDIGDP \rvert$ refers to the absolute value of the FDI-to-GDP ratio.	Data on FDI inflows -to-GDP ratio is extracted from the database of the United Nations Conferences on Trade and Development (UNCTAD), 2018
POLSTAB	This is the indicator of Political Stability and Absence of Violence/Terrorism. It measures the perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. A rise in the values of this indicator reflects greater political stability and absence of violence/terrorism.	World Bank Governance Indicators developed by Kaufmann et al. (2010) and recently updated.

Appendix 2: Standard Descriptive statistics on the variables used in the analysis

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
REGQUAL	1932	-0.441	0.673	-2.626	1.539
ODA	1892	7.02e+08	9.67e+08	230000	1.20e+10
CUMODA	1892	5.32e+09	7.81e+09	9700000	5.89e+10
AfT	1858	1.67e+08	3.09e+08	21965	3.24e+09
CUMAfT	1805	1.09e+09	2.14e+09	123002	2.42e+10
NonAfT	1858	5.46e+08	7.81e+08	2961332	1.19e+10
CUMNONAfT	1835	4.40e+09	6.18e+09	9700000	3.97e+10
TP	1775	68.469	12.015	0.000	90.000
GDPC	1928	4222.485	4441.994	193.867	22436.210
POP	1930	4.24e+07	1.60e+08	69824	1.38e+09
FDI	1923	4.879	6.385	-37.414	85.963
POLSTAB	1929	-0.369	0.849	-2.810	1.423

Appendix 3: List of countries of the full sample

Full Sample		
Albania	Gambia***	Oman
Algeria	Georgia	Pakistan
Angola***	Ghana	Panama
Argentina	Guatemala	Papua New Guinea
Armenia	Guinea***	Paraguay
Azerbaijan	Guinea-Bissau***	Peru
Bahrain	Guyana	Philippines
Bangladesh***	Haiti***	Rwanda***
Barbados	Honduras	Samoa
Belarus	India	Sao Tome and Principe***
Belize	Indonesia	Saudi Arabia
Benin***	Iran, Islamic Rep.	Senegal***
Bhutan***	Jamaica	Serbia
Bolivia	Jordan	Seychelles
Bosnia and Herzegovina	Kazakhstan	Sierra Leone***
Botswana	Kenya	Solomon Islands***
Brazil	Kiribati***	South Africa
Burkina Faso***	Kyrgyz Republic	Sri Lanka
Burundi***	Lao PDR***	St. Lucia
Cabo Verde	Lebanon	St. Vincent and the Grenadines
Cambodia***	Lesotho***	Sudan***
Cameroon	Liberia***	Suriname
Central African Republic***	Libya	Swaziland
Chad***	Macedonia, FYR	Tajikistan
Chile	Madagascar***	Tanzania***
China	Malawi***	Thailand
Colombia	Malaysia	Timor-Leste***
Comoros***	Maldives	Togo***
Congo, Dem. Rep***	Mali***	Tonga
Congo, Rep.	Mauritania***	Trinidad and Tobago
Costa Rica	Mauritius	Tunisia
Cote d'Ivoire	Mexico	Turkey
Croatia	Moldova	Turkmenistan
Dominica	Mongolia	Uganda***
Dominican Republic	Montenegro	Ukraine
Ecuador	Morocco	Uruguay
Egypt, Arab Rep.	Mozambique***	Uzbekistan

El Salvador	Myanmar***	Vanuatu***
Equatorial Guinea***	Namibia	Venezuela, RB
Eritrea***	Nepal***	Vietnam
Ethiopia***	Nicaragua	Yemen, Rep***
Fiji	Niger***	Zambia
Gabon	Nigeria	Zimbabwe

*Note: The symbol "***" denotes the Least developed countries (LDCs).*