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Thierry Kangoye

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# Essays on the institutional impacts of aid in recipient countries

Thèse Nouveau Régime

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*L'Université d'Auvergne n'entend donner aucune approbation ni improbation aux opinions émises dans la thèse. Ces opinions doivent être considérées comme propres à l'auteur.*



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# Table of contents

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Contents	7
List of Tables	11
List of Figures	13
Remerciements	15
INTRODUCTION	17
1 Aid For Institutions Or Institutions For Aid? Where Does The Literature Stand?	25
2 Does Foreign Aid Promote Democracy? Aid, Democracy And Trade Instability	63
3 Does Aid Unpredictability Weaken Governance? New Evidence From Developing Countries	101
4 Aid, History and Democratic accountability	149
CONCLUSION	199
Bibliography	205



---

# Contents

---

<b>Contents</b>	<b>7</b>
<b>List of Tables</b>	<b>11</b>
<b>List of Figures</b>	<b>13</b>
<b>Remerciements</b>	<b>15</b>
<b>INTRODUCTION</b>	<b>17</b>
<b>1 Aid For Institutions Or Institutions For Aid? Where Does The Literature Stand?</b>	<b>25</b>
1.1 Introduction . . . . .	26
1.2 Can aid support policy reforms? . . . . .	28
1.3 How can aid effectively promote quality institutions? . . . . .	30
1.3.1 Conditionality-based arguments . . . . .	30
1.3.2 Aid directly targeted on the improvement on institutions . . . . .	31
1.3.3 Aid dampens external shocks: do institutions benefit? . . . . .	32
1.4 Theories about how aid may weaken institutions . . . . .	33
1.4.1 A disincentive effect on institutional reforms . . . . .	34
1.4.2 Aid and government accountability . . . . .	35
1.4.3 Moral hazard problems: the Samaritan's dilemma . . . . .	37
1.4.4 Aid and rent-seeking behaviors in recipient countries . . . . .	38
1.5 Discussion . . . . .	39
1.5.1 The diversity of the institutions under consideration . . . . .	39
1.5.2 Concerns about the robustness of the empirical findings . . . . .	40



1.6	A meta study of the Aid-Institutions literature . . . . .	45
1.6.1	Brief overview on Meta-Regression Analysis (MRA) . . . . .	45
1.6.2	Criticisms about the effectiveness of MRA . . . . .	46
1.6.3	Some general basic facts . . . . .	48
1.6.4	The meta-data . . . . .	49
1.6.5	Model and results . . . . .	53
1.7	Conclusion . . . . .	56
Appendix A	References of the studies used in the Meta-Analysis . . . . .	57
Appendix B	Some general features of the AIL . . . . .	58
Appendix C	Descriptive statistics on institutional quality indexes . . . . .	60
<b>2</b>	<b>Does Foreign Aid Promote Democracy? Aid, Democracy And Trade In-</b>	
	<b>stability</b>	<b>63</b>
2.1	Introduction . . . . .	64
2.2	The determinants of democracy . . . . .	66
2.2.1	Non-economic determinants of democracy . . . . .	66
2.2.2	Economic performance and democracy . . . . .	68
2.2.3	Instability of economic performance and democracy: causation and reverse causation . . . . .	71
2.3	Does foreign aid promote democracy? . . . . .	74
2.3.1	Aid and democracy . . . . .	74
2.3.2	Aid and growth: the stabilizing nature of aid . . . . .	76
2.4	Empirical evidence . . . . .	78
2.4.1	The data . . . . .	78
2.4.2	The measure of term-of-trade instability . . . . .	79
2.4.3	Some stylized facts . . . . .	80
2.4.4	Identification of causal effects . . . . .	81
2.5	Concluding remarks and policy implications . . . . .	90
Appendix A	The Freedom House and Polity IV indicators of democracy . . . . .	92
A.1	The Freedom House democracy index . . . . .	92
A.2	The Polity IV democracy index . . . . .	92
Appendix B	Data description and sources . . . . .	94
Appendix C	Base sample countries . . . . .	95
Appendix D	Descriptive statistics . . . . .	96
Appendix E	Additional findings . . . . .	98
<b>3</b>	<b>Does Aid Unpredictability Weaken Governance? New Evidence From De-</b>	
	<b>veloping Countries</b>	<b>101</b>
3.1	Introduction . . . . .	102
3.2	Aid dependency and corruption in the literature . . . . .	105
3.3	Aid flow uncertainty and rent extraction . . . . .	110
3.4	Empirical evidence . . . . .	113
3.4.1	Data and base specification . . . . .	113

3.4.2	Aid dependency and corruption: revisitating the causal effect . . . . .	116
3.4.3	Aid unpredictability and corruption . . . . .	122
3.5	Concluding remarks and policy implications . . . . .	137
Appendix A	Data definition and sources . . . . .	139
Appendix B	The sample countries . . . . .	141
Appendix C	Additional results . . . . .	142
<b>4</b>	<b>Aid, History and Democratic accountability</b>	<b>149</b>
4.1	Introduction . . . . .	150
4.2	How institutions are transplanted from one place to another . . . . .	154
4.2.1	The influence of history . . . . .	154
4.2.2	External assistance . . . . .	155
4.3	Do institutional transplants work? . . . . .	156
4.3.1	Are institutional models transferable? . . . . .	157
4.3.2	Are institutional transplants suitable? . . . . .	158
4.4	Implications for the aid-institutions literature (AIL) . . . . .	161
4.5	Kenya and Botswana: two illustrative cases . . . . .	164
4.5.1	Kenya . . . . .	164
4.5.2	Botswana . . . . .	168
4.5.3	Implications for the institutional impacts of aid . . . . .	172
4.6	Empirical evidence . . . . .	174
4.6.1	The data . . . . .	174
4.6.2	State illegitimacy as a proxy for historical institutional disconnection: discussion and computation details . . . . .	176
4.6.3	Some stylized facts . . . . .	180
4.6.4	Model and identification strategy . . . . .	183
4.6.5	Findings and discussion . . . . .	184
4.7	Concluding remarks and policy implications . . . . .	187
Appendix A	Data definition and sources . . . . .	190
Appendix B	The sample countries . . . . .	192
<b>CONCLUSION</b>		<b>199</b>
<b>Bibliography</b>		<b>205</b>



---

# List of Tables

---

1.1	Meta data decriptive statistics . . . . .	51
1.2	Meta-probit regression analysis (best-set specifications). Dependent variable is binary variable indicating if a significant negative estimated coefficient of aid is reported . . . . .	55
2.1	The impact of aid and terms-of-trade instability on democracy (Panel IV regressions, 1980-2003, 12-years periods). . . . .	88
2.2	Aid and democracy (Panel IV regressions, 1980-2003, 12-years periods). . .	89
2.3	Descriptive statistics . . . . .	96
2.4	Pairwise correlation matrix . . . . .	97
2.5	Democracy, term-of-trade and income instability (Panel IV regressions, 1980-2003, 12-years periods) . . . . .	98
2.6	Robustness checks (Panel IV regressions, 1980-2003) . . . . .	99
3.1	Descriptive statistics (1984-2004) . . . . .	116
3.2	Aid dependency and corruption (OLS and IV cross-section regressions, 1984-2004). . . . .	122
3.3	Aid unpredictability and corruption (Panel IV regressions, 4-year periods averages, 1984-2004) . . . . .	128
3.4	Aid unpredictability and corruption (panel IV regressions, instrumenting for unpredictability. Data are averaged over two ten-years periods (1984-1994 and 1995-2004)) . . . . .	132
3.5	Aid unpredictability and corruption: the importance of the initial institutions (panel IV regressions, instrumenting for unpredictability. Data are averaged over two ten-years periods (1984-1994 and 1995-2004)) . . . . .	134
3.6	Aid unpredictability and corruption (Cross-section IV regressions, 1984-2004)	142

3.7	Aid unpredictability and corruption ((Panel IV regressions, by aid types (2SLS). 4-year periods averages 1984-2004)) . . . . .	143
3.8	Aid uncertainty and corruption: robustness checks (aid types). (Panel IV regressions, 4-year periods averages, 1984-2004). . . . .	144
4.1	Constructing the State illegitimacy dummy . . . . .	179
4.2	Impact of aid dependency on state illegitimacy (Probit, cross-section, 1984-2003). . . . .	180
4.3	Selected institutional and economic performance indicators compared among legitimate and illegitimate states in the sample countries . . . . .	182
4.4	State illegitimacy, aid and democratic accountability (Cross-section, 1984-2003). . . . .	187
4.5	Descriptive statistics (selected variables) (1984-2003) . . . . .	193
4.6	Pairwise correlation matrix . . . . .	194
4.7	First-stage regressions (refer to table 4.4) . . . . .	195
4.8	Robustness checks (IV cross-section, 1983-2004). . . . .	196
4.9	Impact of democratic accountability of State illegitimacy (IV probit cross-section, 1984-2003). . . . .	197

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## List of Figures

---

1.1	Heterogeneity in the nature of the reported effect of aid in the AIL (all institutional indexes) (Chart A) and AIL papers issuing over 2000-2011 (Chart B) . . . . .	49
1.2	Heterogeneity in the nature of the reported effect of aid in the AIL (governance quality indexes) (Chart A) and Heterogeneity in the nature of the reported effect of aid in the AIL (economic institutions indexes) (Chart B) . . . . .	58
1.3	Heterogeneity in the nature of the reported effect of aid in the AIL (democracy indexes) (Chart A) and AIL governance papers issuing over 2000-2011 (Chart B) . . . . .	58
1.4	AIL economic institutions papers issuing over 2000-2011 (Chart A) and AIL democracy papers issuing over 2000-2011 (Chart B) . . . . .	59
2.1	From aid to democracy: interrelationships with other economic variables . .	78
2.2	Quality of democracy (Polity2 combined score of democracy and autocracy) by deciles of TOT instability . . . . .	81
2.3	Evolution of the regression coefficient of the TOT instability variable according to the countries' levels of aid dependency (Aid per capita). x-axis: aid per capita (2004 USD). y-axis: estimated coefficient of the impact of TOT instability on democracy (table 2.1 settings) . . . . .	90
3.1	Aid and donor countries' public finances (outstanding debt –GDP ratio–). .	119
3.2	Aid and donor countries' public finances (conventional deficit –GDP ratio–). .	119
3.3	Aid and cultural proximity with donor countries (common official language). .	120
3.4	Net ODA errors forecasts for high aid-dependent countries . . . . .	125
3.5	ODA(%GDP) forecasts errors (whole sample countries) . . . . .	145

4.1	The colonial experience in Kenya: institutional transplants and institutional change . . . . .	167
4.2	The colonial experience in Botswana: institutional transplants and institutional change . . . . .	171
4.3	Evolution of aid flows and democracy scores in Kenya (1963-2009) . . . . .	173
4.4	Evolution of aid flows and democracy scores in Botswana (1966-2009) . . . . .	174

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# INTRODUCTION

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Differences in institutional quality appear to explain divergent patterns of economic development across countries, as evidenced by a huge literature. The issue has indeed received considerable attention from economists and social scientists. Institutions, which can be understood as the "rules" that govern the actions of individuals (North, 1990), have proved to be an important determinant of growth performances and development outcomes. More generally, a rich body of research has shown that **institutions have a decisive role in economic growth and development** (Rodrik, Subramanian, and Trebbi, 2004; Easterly and Levine, 2003; Acemoglu, Johnson, and Robinson, 2001, 2004; Knack and Keefer, 1995; North, 1990). Under the impetus of the growing consensus that sound institutions are vital for development and poverty reduction, institutional issues have been strongly prioritized in the development agenda and have been replaced at the center of development strategies.

In the same way, **macroeconomic instability has come to be a relevant issue for**

**developing countries**, as it has been threatenning their short and long-term economic performances. A large body of empirical research has indeed investigated the adverse impacts of macro instability (high inflation, exchange rate volatility, fiscal instability, trade volatility, etc.) on a wide range of economic variables, providing evidence that macroeconomic stability is crucial for high and sustainable growth rates, and has to be taken into account in poverty reduction plans (Ames, Brown, Devarajan, and Izquierdo, 2001). Macroeconomic instability has also proved to strongly influence private investment and productivity (Ramey and Ramey, 1995; Easterly and Kraay, 1999).

While the issue has not been the subject of an extensive investigation and discussion, **there may be some reasons to expect some adverse effects of macroeconomic volatility on institutional development**. Most of the researches has focused on the reverse issue, *i.e.* the role of institutions in securing macroeconomic stability (Rodrik, 1997; Acemoglu, Johnson, Robinson, and Thaicharoen, 2003; Satyanath and Subramanian, 2004; Yang, 2008). Notwithstanding, the literature provides some theoretical arguments about how instability can be detrimental for institutional building. According to Huber, Rueschemeyer, and Stephens (1993), high exposure to fluctuations in world markets and economic instability can penalize the stabilization and legitimation of regimes. Negative macroeconomic shocks could also bring pressure on governments to reduce democracy and checks and balances (Djankov, Montalvo, and Reynal-Querol, 2008).

Importantly in the recent years, some influential papers revisitated **aid's potential as an insurance mechanism against macroeconomic instability**. According to Guillaumont and Chauvet (2001); Chauvet and Guillaumont (2004, 2009), aid does stabilize recipient countries that are experiencing volatile terms of trade, external shocks or natural disasters. They explained that in cases shocks occur, aid smoothes public expenditures and limit the

risk of fiscal deficits. Collier and Dehn (2001) confirm this finding by offering evidence that increasing aid cushions countries against negative export price shocks. Collier and Goderis (2009) have also shown that the level of aid lowers the negative effects of commodity export price shocks on growth because aid finances precautionary expenditures, which reduce vulnerability to shocks.

The debates have also moved beyond this insurance role of aid by suggesting that **it can play a role in terms of institutional building**. Many aid donors indeed include the promotion of institutions (fight against corruption, promotion of democratic governance, etc.) as a key component of their assistance programs. A huge and mixed literature has dedicated itself to the study of the impacts of aid on institutions in recipient countries. Notwithstanding, while some researches pointed out that aid offers opportunities to support institutional building through several channels (modernization of societies through literacy and increased income, support of institutional reforms through conditionalities, softening of governments' financial constraints, etc.) (Goldsmith, 2001; McNab and Everhart, 2002a; Al-Momani, 2003; Tavares, 2003; Kalyvitis and Vlachaki, 2005; FMI, 2005; Dalgaard and Olsson, 2008), others have strongly challenged this view, suggesting that aid can create disincentives for institutional reforms, weaker accountability of governments, increased rent-seeking behaviors, and increased moral hazard problems between donors and aid recipients (Hoffman, 2003; Svensson, 2000; Knack, 2001; Alesina and Weder, 2002; Brautigam and Knack, 2004; Djankov, Montalvo, and Reynal-Querol, 2008; FMI, 2005). Nevertheless, this discussion of the impacts of aid on the quality of institutions has to be linked in a broader sense to the larger literature about the determinants of institutions including history in particular. An exciting emerging literature led by the seminal works of La Porta, Lopez-De-Silanes, Shleifer, and Vishny (1997, 1998), Engerman and Sokoloff (2002, 1994) and Acemoglu, Johnson, and Robinson (2001, 2002), has indeed emphasized the importance of historical events in shaping

current institutions, this indubitably having implications for aid effectiveness debates.

**This thesis addresses the aforementioned issues by examining the following questions: what are the impacts of macroeconomic instabilities on institutions and what role does aid play in this framework? The thesis further investigates the role of history in explaining these impacts.** The first chapter provides a **comprehensive survey of this body of research** and first sheds light on the controversy on the effects of aid on institutional quality by analyzing the various arguments explaining them. Second, after having analyzed this heterogeneity by discussing the diversity of institutions, the quality of the institutional indexes, the heterogeneity in the identification strategies, the chapter attempts to identify a publication bias in the literature using a meta-regression analysis with a sample of 26 relevant articles investigating the aid-institutions relationship. It comes out from the analysis that the heterogeneity in the empirical approaches (identification strategies, choice of institutional indexes, etc.) and some publications bias seem to be the source of this heterogeneity.

The **second chapter investigates the impact of trade instability on institutions and the role that aid can play in this context.** We proxy trade instability by term-of-trade instability and institutional quality by an index of democracy. The question addressed is as followed: can aid help promote democracy through mitigating the adverse effects of macroeconomic instability on growth? The rationale of this argument is based on three results in the literature: *(i)* due to their dependence the export sectors and to their low importance in global markets, poor countries' growth performances are affected by external instability (particularly terms of exchange instability) and are made more unstable (Easterly and Kraay, 2000); *(ii)* the sustainability of economic performance has proved to be a determinant of the establishment of democratic systems, making steady growth a determinant

of democracy; *(iii)* aid may have a protective role for growth against the effects of negative external shocks in vulnerable countries (Collier and Dehn, 2001; Guillaumont and Chauvet, 2001; Chauvet and Guillaumont, 2004, 2009; Collier and Goderis, 2009). Hence, we deduce that if aid reduces growth volatility *ceteris paribus*, it can indirectly help improve the quality of democracy. Several arguments justify the choice of democracy as a "flagship" institution. Rodrik (1997, 2000) explain that democracy, which can be considered a "meta-institution", helps build better institutions, helps societies select the best economic institutions, and in this way can make growth more predictable and more equitable; the concentration of political power in the hands of a small group of actors can indeed lead to an inefficient choice of economic institutions (Acemoglu and Robinson, 2008; Acemoglu, 2008). Democracy would also promote good governance, which in turn, facilitates growth and reduce inequalities. Democracy can also have a direct effect on poverty reduction by allowing all social classes to participate to decisions processes, empowering their influence on policy decisions that might be favorable to them. The message of this chapter is that aid, by cushioning the adverse effects of macroeconomic instability, can be effective in terms of enhancing the quality of institutions.

In the same vein than the second chapter which investigated the impact of macroinstability on institutions and the subsequent role of aid, the **third chapter** is interested in the instability of aid. The recent evolution of aid flows has indeed shown that they have not particularly been stable and predictable. The average volatility of aid as a percentage of GDP over the period 1975-2003 was approximately 40 times greater than that of income in recipient countries, and would also have been a multiple of that of domestic budgetary revenue (Bulir and Hamann, 2008). More importantly, aid did not perform well in terms of predictability. According to Bulir and Hamann (2001), the gap between aid commitments and

disbursements would exceed 40%, indicating a high degree of unpredictability, which would also be more severe in low-income countries. The instability and unpredictability of aid, would hinder the improvement of the quality of institutions in the long term, and could even have a perverse effect on them by increasing the elites' rent-seeking behaviors. **This chapter switches from an economic policy approach towards a political economy approach and addresses the question of whether unpredictable aid flows can create or aggravate corruption among the elites, and thereby weaken the institutions.** The natural intuition is that if one assumes that those elites are corrupt and smooth their rent capture through time, uncertain aid flows may lead to an acceleration of the capture in the periods where aid is available. Aid, just as the revenues extracted from natural resources, has rent characteristics and would create rent-seeking (Svensson, 2000). The findings from the empirical analysis make evidence that higher aid unpredictability is associated with more rent-seeking and corruption. More importantly, the empirical analysis shed light on the importance of the pre-existing institutional conditions since the impact of aid unpredictability proves to be more severe in the countries having weaker checks and balances on the executive.

The **fourth and final chapter investigates the extent to which those pre-existing institutional conditions matters for explaining the impacts of aid on institutions,** by introducing the role of history and more particularly the role of institutional transplants which occurred through colonial experiences. The chapter puts an emphasis on the hypothesis that the extent to which colonial institutions clashed with pre-existing indigenous ones considerably explains the state of post-colonial institutions in developing countries, which persisted (partly due to aid) and determined the current institutions. It then explores the hypothesis that these lasting effects of institutional transplants failures account for some of the adverse effects of aid on recipient countries' institutions. Some studies have indeed explained the limits of institutional transplants between countries (Mukand and Ro-

drik, 2002; Pistor, 2002; North, 1994), pointing out the costs in terms of the institutional outcomes related to the failure of these transfers. On the basis of the assumption that the structural disconnect between the indigenous norms and the modern transplanted practices and institutions created a crisis of legitimacy of State institutions, we proxy the unsuccessfulness of institutional transplants by the State political nonlegitimacy, and the quality of institutions by an index of democratic accountability. The chapter provides an empirical evaluation with cross-countries regressions on a sample of 68 developing countries over 1984-2003, which provide supportive results to the hypothesis that the institutional crisis caused by the unreceptive transplants largely accounts for aid's impacts on the quality of institutions. It also offers evidence that aid has a strong impact in terms of feeding state illegitimacy. The intuition of the empirical analysis is given by two countries cases, Kenya and Botswana showing the lasting impacts of the successfulness or the unsuccessfulness of the institutional transplants in the colonial period.





# Chapter 1

---

## **AID FOR INSTITUTIONS OR INSTITUTIONS FOR AID? WHERE DOES THE LITERATURE STAND?**

---

## 1.1 Introduction

More than five decades of foreign development assistance to developing countries have fed debate in the international community about the quality and quantity of foreign aid. A look at the past and current evolution of official development assistance reveals that total aid to developing countries has been on an upward trend since the end of the 1990s. According to the Organisation for Economic Co-operation and Development (OECD), total net official development assistance (ODA) from the OECD's Development Assistance Committee (DAC) donors rose by 6.8% in real terms (debt relief excluded) from 2008 to 2009. Bilateral aid also rose by 8.5% in real terms (debt relief and humanitarian aid excluded), 20.6% being new lending. In 2009, net bilateral ODA to sub-Saharan Africa rose by 5.1% from 2008. Backed by the new commitments of the international community of donors to increase the amount of aid delivered in order to reach the Millennium Development Goals, ODA to developing countries was expected to reach US\$130 billion in 2010, up from US\$80 billion in 2004, an increase of more than 60%<sup>1</sup> Statistics indicate that most countries maintained their commitments for 2010, even though some reduced or postponed the pledges made for 2010.

Nonetheless, these increases have raised some concerns about the capacities of recipient countries to manage the funds efficiently and ensure their effectiveness. Those concerns are related to what is called the "absorptive capacity" approach of development financing<sup>2</sup> The main limits of absorptive capacity have been identified as related to factors such as disbursement and other short-term bottlenecks, loss of competitiveness, macroeconomic volatility, and institutional weakening (Guillaumont and Guillaumont-Jeanneney, 2010).

A wealth of empirical as well as theoretical papers have shifted the debate about aid effectiveness from the institutional conditions required to ensure aid effectiveness, to the potential direct effects that aid itself could have on the quality of institutions in the recipient coun-

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<sup>1</sup>These commitments were made at the Gleneagles G8 and Millennium +5 summits in 2005

<sup>2</sup>The opposite of what is called the "big push" approach, prescribing massive transfers of aid and broad reforms in order to get poor countries out of the poverty trap in which they are stuck.

tries. Do institutions serve as aid effectiveness success factors or should aid be directed to the improvement of institutions? This question, which is of core interest in this chapter, is illustrative of the problems; indeed if one chooses to make institutions a conditionality factor, what about those countries in need of assistance which have poor institutions? How can we overcome that problem, since inefficient institutions may simply be the result of poor development performances? On the other hand, if we make aid a tool for institution-building in addition to its role of bringing growth, how can we insure its effectiveness, since any major interest is no longer granted to institutions as an underlying factor of success? According to the findings of the literature, aid has proved to have an ambiguous effect on institutions, some papers agreeing that aid can be beneficial to institution-building, others drawing the opposite conclusion. So far, more than 30 empirical papers have investigated the issue, trying to identify a direct, indirect or conditional effect of aid on the quality of institutions in recipient countries.

This chapter reviews the literature on the effects of aid on the quality of institutions of recipient countries, and raises the issue of the surrounding controversy. The chapter is focused on how authors arrive at such inconsistent arguments, and how they can be reconciled. Indeed, although it should be noted that the emerging trend is that aid has adverse effects on institutions, several studies concur that aid can be useful in helping to build institutions or at the worst have neutral direct effects on them. The issue is important insofar as the contrasting findings have led to similarly heterogeneous policy recommendations. The first part of this chapter highlights the controversy about the effects of aid on institutions by presenting the results of analysis and the theoretical arguments. The second part is devoted to an analysis of these heterogeneous results, paying particular attention to the conceptual and methodological approaches that have been used. This analysis is then deepened through a meta-study of the findings from the empirical literature, with the aim of identifying a publication bias. The remainder of the chapter is organized as follows: sections 1.2, 1.3 and 1.4 review the liter-

ature by highlighting the opposing theoretical arguments respectively explaining the positive and negative impact of aid on institutions. Section 1.5 discusses the factors underpinning the heterogeneity in the empirical results. Section 1.6 deepens this analysis with a meta-study of 449 estimates collected from 26 articles of the effect of aid on institutions. Section 1.7 concludes.

## 1.2 Can aid support policy reforms?

The link between aid and economic policy reforms is important insofar as it introduces the broader question concerning the effect of aid on the quality of institutions in recipient countries. The quality of economic policies and the quality of institutions considered in the broad sense are closely linked. Johnson and Subramanian (2005) have indeed stressed that good policies and good governance go hand in hand with good political and economic institutions. While institutions are improving under the impetus of reforms, they are in turn important in guaranteeing the quality of economic policies. Since the mid-1980s, several studies have investigated the effects that aid could have on policy reforms, drawing controversial conclusions. Chauvet and Guillaumont (2004) provide a comprehensive review of that literature, highlighting the arguments and findings. A look at that literature reveals that the studies can be classified in three categories: those that are based upon a cross-sectional econometric analysis of the effect of aid on policy reforms, those based upon a statistical analysis and those based upon country case studies. Indeed, although the statistical analysis and cross-country econometric studies (Burnside and Dollar, 1997; Alesina and Dollar, 2002; Mosley, 1987) evidence no effect of aid on reforms (or at best a weak effect), studies based upon a more rigorous econometric analysis (Chauvet and Guillaumont, 2004) conclude that aid has a positive effect on political reforms. As regards analysis based upon case studies (Devarajan, Dollar, and Holmgren, 2001; Berg, Guillaumont, and Amprou, 2001), they suggest

### 1.1.2 Can aid support policy reforms?

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that the effect of aid on reforms depends on the local ownership of policies and the sequence of use of the aid instruments (financial transfers, conditionality, technical assistance), and reach different conclusions for different countries. Thus, unlike the work of Burnside and Dollar (1997) and Alesina and Dollar (2002), who performed a static evaluation of the effect of aid on economic policies which does not allow them to identify effect, Chauvet and Guillaumont (2004) take advantage of the dynamic aspect of the relationship to conclude the contrary. The basic argument is that the improving effect of aid on economic policy change is as strong as the initial quality is low. The case studies presented by Devarajan, Dollar, and Holmgren (2001) draw different conclusions about the countries surveyed, conveying a message of a different style from that of empirical analysis. The rationale of this work is that the effect of aid on reforms depends on the type of aid used at the various stages of the reform process, and local ownership of these reforms. Thus, in the early phase of reforms aid should essentially consist in transferring only ideas to initiate effective reforms and then be strengthened with more financial assistance as the policies improve. In the final phase, donors can then release the majority of financial assistance, the reforms being undertaken in a sustainable manner. The work of Devarajan, Dollar, and Holmgren (2001) explained that aid can generate adequate reforms in countries like Ghana, Uganda and Ethiopia, and that except for Ethiopia and Cote d'Ivoire aid has had adverse effects on economic policy. For the case of Cote d'Ivoire in particular, Berg, Guillaumont, and Amprou (2001) emphasize that the economic reforms initiated by aid in the 1990s have been successful.

## 1.3 How can aid effectively promote quality institutions?

### 1.3.1 Conditionality-based arguments

Discussion has focused on the determinants of aid effectiveness, which are assumed to justify its geographical distribution. Several arguments defending the conditional effectiveness of aid have been provided, including emphasis on the quality of economic policies (Burnside and Dollar, 2000), periods of post-conflict (Collier and Hoeffler, 2000), internal and external shocks affecting countries (Guillaumont and Chauvet, 2001; Chauvet and Guillaumont, 2004). Just as some studies have been able to adduce evidence of the macroeconomic effectiveness of aid, others have demonstrated that aid can enhance institutional quality. Some studies may indeed be specifically identified as having succeeded in highlighting a positive impact of aid on democratic change (Dunning, 2004; Goldsmith, 2001; Al-Momani, 2003; Kalyvitis and Vlachaki, 2005), and the quality of government (Tavares, 2003). The arguments they use explain that the strengthening of governance, rule of law, high levels of income and education are channels through which aid can have a positive effect on democracy (Kalyvitis and Vlachaki, 2005) (Kalyvitis Vlachaki, 2005). If indeed education and income levels directly strengthen democracy (Barro, 1996; Almond and Powell, 1965), aid has a positive and indirect effect on it. The core argument explaining the benefits of aid in terms of institutional development, however, is the one based upon conditionalities. Conditionalities are indeed perceived as an effective instrument to stimulate change in democratic institutions. The argument that aid can be an instrument to strengthen institutions explains that policy and institutional reforms are assumed to accompany the disbursement of aid funds (before or after the delivery). Hence, if conditionalities are fully effective and enforced, an improvement in institutional quality can be expected, thanks to less discretion and greater transparency in

### 1.1.3 How can aid effectively promote quality institutions?

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the use of aid funds allocated. In line with this argument, Tavares (2003) finds that aid reduces corruption in recipient countries.

### 1.3.2 Aid directly targeted on the improvement on institutions

Beyond its indirect impact on institutions, aid can also directly target the improvement of institutions. Many donors provide specific funds to support democratic institutions. OECD's Government and Civil Society Aid (GSCA), which is directly focused on strengthening democracy in recipient countries, is an example. This aid encompasses a wide range of democracy-related targets and peace-building activities. Some sub-components explicitly target legal and judicial development, the strengthening of civil society, post-conflict peace-building, elections, free flow of information, human rights, demobilization, economic and development policy/planning, public sector financial management, and government administration.

Many studies have investigated the effectiveness of democratic aid and in the main, have evidenced a positive effect on democratic institutions. The works of Kalyvitis and Vlachaki (2005, 2008) and Menendez (2008) found a positive effect of democratic aid on future democratic transitions, thereby giving credit to the argument supporting democratic aid effectiveness. Democracy assistance may foster democracy by channeling support for elections, strengthening legislatures and judiciaries by creating checks and balances on the executive and other bodies, and by strengthening civil society organizations, which in turn promotes democratic participation (Menendez, 2008). Among the other interesting findings of this study are that overall aid appears not to have an effect on democracy, whereas an enhancing effect of aid on democracy emerges when the authors consider the type of aid which is specifically targeted on the improvement of democracy. These findings shed light on the importance of the type of aid considered in the AIL, and especially on the fact that all types of aid do not have a priori the same effects on institutions.

Aid, regardless of its form, may also be intended, through technical assistance targeted on



### 1.1.3 How can aid effectively promote quality institutions?

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the support of electoral processes, to strengthen the local capacities supporting legislative and judicial rules such as control over executive power and strengthening the power of civil society (Knack, 2004). Technical assistance for countries having difficulties in complying with the requirements of donors (mainly by transforming their managerial rules in order to support a positive institutional change) can be quoted as an example. Johnson and Subramanian (2005), however, raise some concerns about the effectiveness of such an aid, since institutional change remains largely a local matter. This last point is discussed in more detail in the final chapter of the thesis.

### 1.3.3 Aid dampens external shocks: do institutions benefit?

Aid can be effective in enhancing institutional development because its countercyclical nature absorbs external shocks considered to be detrimental to institutions. Indeed, if aid helps protect institutions from the potentially adverse effects of external shocks, it can be perceived as indirectly reinforcing institutions by preventing them from being weakened by these shocks. Aid effectiveness in vulnerable countries (in terms of economic growth) has been defended from the standpoint that countercyclical aid protects economic performance from macroeconomic shocks (Guillaumont and Chauvet, 2001; Chauvet and Guillaumont, 2004). Although the literature on the effect of shocks on institutions is so far sparse, one can argue on the basis of the assumption explaining that the shocks affecting economic performance also negatively affect the performance of institutions, that countercyclical aid favors institutional development. Chong and Calderon (2000) showed that sustained economic growth helps to establish quality institutions. Therefore, if countercyclical aid helps to preserve growth sustainability, it can potentially support the establishment and strengthening of institutions. Therefore, if (in the extreme case) aid cannot directly improve the quality of institutions, it can at least preserve them from undermining shocks.

Summing up, supportive arguments emerge from analysis of the impact of aid on institutional quality. Aid can support the improvement of institutions. Many other studies, however, reject these arguments by demonstrating that aid also undermines institutions. The following sections summarize the evidence explaining the negative impact of aid on institutional quality, and shed more light on the controversial nature of the debate on the effects of aid on the quality of institutions.

## 1.4 Theories about how aid may weaken institutions

Little evidence to date suggests that aid has no effect on institutions in recipient countries. Moreover, many studies have provided evidence rebutting the charge that aid has adverse effects on institutions. Several studies have shown that revenues from the exploitation of natural resources could hamper growth mainly by weakening institutions (Sala-i Martin and Subramanian, 2003). This phenomenon, which is better known as the "curse of natural resources" partly relies on the arguments explaining that these additional and unexpected resources provide disincentives for governments to undertake institutional reforms, and are a source of rent-seeking behaviors. Some studies have concluded that foreign aid may also represent a resource curse. Foreign aid transfers have been considered as windfalls in several other studies, and thus as a source of rent-seeking. Djankov, Montalvo, and Reynal-Querol (2008) interestingly point out that aid and natural resources share a common feature inasmuch as they can both be captured by rent-seeking leaders. Acemoglu, Johnson, and Robinson (2004) also stress that aid and resource rents share the general character of "windfall gains" that disrupt political and economic incentives although some important differences can be noted between them. Dalgaard and Olsson (2006) also explain that aid transfers and natural resources both have the character of windfalls since poor countries can benefit from them without much effort and both have the ability to generate rent-seeking. We strive in the fol-

lowing sections to shed light on the arguments that aid can be detrimental to the institutions by weakening the incentives to undertake institutional reforms, by weakening government accountability, and by favoring rent-seeking behaviors and moral hazard problems.

#### 1.4.1 A disincentive effect on institutional reforms

The literature suggesting a negative effect of aid on institutions provides arguments to explain that aid can stimulate a disincentive to improve institutions. The first argument is in line with the work of Franco-Rodriguez, Morrissey, and McGillivray (1998), which provides evidence that aid alleviates fiscal pressure. This argument explains that since aid softens governments' hard budget constraints, it leads indirectly to lower fiscal pressure, making taxation institutions less effective. The relationship between aid and economic institutions<sup>3</sup> is thus more apparent when taking an interest in the reform of the economic environment and the collection of public revenue. Knack (2001) explains that aid discourages governments from adopting adequate policies and institutional reforms through the following mechanism: in the absence of aid, the government, in order to increase its revenues, is encouraged to establish favorable conditions for the creation of new enterprises (strengthening of property rights, strengthening of the judicial system, etc.) and thus extend its tax base. In the presence of aid, however, since more resources are available, the need to tax becomes relatively smaller, with less need to insure a favorable investment climate through good institutions, which also become less necessary.

Another argument defending the effect of aid on institutions operating through the disincentive of the holders of political power to improve them, is based upon the rent-seeking behaviors that would be provoked by aid (see the following sections). Aid monopolized by elites gives them the financial and political incentives to maintain an opposition to insti-

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<sup>3</sup>Broad economic institutions are a set of laws, rules, and other practices that govern property rights for a broad cross-section of society (Johnson and Subramanian, 2005).

#### 1.1.4 Theories about how aid may weaken institutions

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tutional change. North (1990) and Acemoglu and Robinson (2006) provide an explanation for the persistence of inefficient institutions, stressing that the institutions which persist are those that "favor" the incumbents holders of the political power. It is therefore possible to understand how aid weakens the quality of institutions by helping to maintain these persistent and weak institutions.

A last argument is based upon countries' dependence on aid. Brautigam and Knack (2004) investigated the institutional impact of aid from that angle, explaining that hard budget constraints must be accompanied by rules and laws allowing governments to reduce public deficits and determining the ability to transfer them to future budget exercises. Aid, by helping to relax these constraints, causes a relaxation in incentives to improve these rules. The leaders are then under less pressure to undertake reforms to improve the institutional system supporting taxation.

#### 1.4.2 Aid and government accountability

Government accountability is about the obligations of a government to insure good-quality institutions in return for taxation resources obtained from citizens. The rationale of the arguments explaining the impacts of aid on institutions related on this accountability is based upon the relationship at the equilibrium between the supply of tax revenues and the demand for quality institutions by taxpayers. The expectation is that as long as citizens remain subject to taxes, they are entitled to claim back the effective use of these funds, which are guaranteed by quality institutions. The interesting point to consider here is that aid potentially breaks this equilibrium since it provides the government with funds from outside the country, the consequence being that governments become less accountable to citizens as regards institutional strengthening. Therefore, taxes stemming from citizens are no longer accompanied by the same demand for quality institutions, insofar as the state's financing demand is reduced by the greater availability of external resources (aid). Brautigam and Knack

#### 1.1.4 Theories about how aid may weaken institutions

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(2004) took a look at the issue from the perspective of aid dependence and explained that receiving aid funds in the framework of a program or in the framework of a crisis, is different from receiving such funds on a continual basis and making them a major source of public revenue. Political disempowerment would then be maintained by this dependence. They explain that the way of supplying aid funds diverts government accountability from citizens to donors, since the government collects its resources less from the taxpayer than from donors. A restructuring of government accountability towards donors occurs since the demand for quality institutions that goes with the supply of domestic financing is reduced (Brautigam, 2000). This restructuring of accountability, which is reinforced by conditionalities, becomes a problem in terms of institution-building once these conditionalities have proved to be ineffective (Brautigam and Knack, 2004; Djankov, Montalvo, and Reynal-Querol, 2008; Lane and Tornell, 1999; Moss, Pettersson, and Van De Walle, 2006). In the equilibrium relationship between the three agents, *i.e.* the government, taxpayers and aid donors, there should be on the one hand, quality policies and institutions that go back with tax revenue, and the other hand quality policies and institutions in exchange for aid (backed by conditionalities). Once aid alleviates fiscal pressure and conditionalities are not met, the obligation for governments to insure the quality of institutions and policies is no longer in force.

Elsewhere, as explained by Knack (2004), weak government accountability may also take place between two successive governments. These governments are linked because the succeeding government has to handle the consequences of its predecessor's actions. Knack (2004) explains that since aid eases budget constraints, it weakens the incentives to improve the rules and laws limiting public deficits, and determine the possibility of transferring them to future budget exercises.

### 1.4.3 Moral hazard problems: the Samaritan's dilemma

The Samaritan's dilemma (Buchanan, 1975) illustrates a situation of non-reciprocal altruism between an agent (the Samaritan) who helps another (the beneficiary). This paradigm explains that the beneficiary may be persuaded to exploit the altruism of the Samaritan to extract a rent. The latter knows that the recipient has information that he is an altruist and that he can take advantage of that without cost but because of his altruism he can remain motivated to provide assistance.

In the case of aid, the Samaritan's dilemma is enacted by donors and recipients. The starting-point for the analysis is that if aid does not reward progress towards better governance and improved quality of bureaucracy, there is a natural incentive for local elites not to devote efforts to insure quality policies and good representation of the state but, above all, to take advantage of this situation where aid delivery is not strongly influenced by bad policies and institutions in the recipient countries. Zanger (2001) has analyzed this question and concluded that between 1980 and 1995 European aid did not notably consider countries' performances in terms of good governance. The findings of this study have indeed demonstrated that other economic and strategic considerations were at stake in terms of donors' aid policies. Svensson (2000) also highlighted in his analysis that in the period between 1980 and 1994 donors did not systematically discriminate against countries regarding their level of corruption, and evidenced that the least corrupt countries do not receive more aid. Similarly, Alesina and Weder (2002) found that the most corrupt governments do not receive less aid. Therefore, if recipient governments are convinced that aid policies do not really reward good institutional performances (by analyzing the trend of aid commitments and disbursements), or do not punish bad policies by an effective reduction of aid, they will naturally have an incentive to pursue behaviors undermining the quality of governance.

#### 1.4.4 Aid and rent-seeking behaviors in recipient countries

The concept of rent is specifically introduced by Anderson (1987) to designate resources or incomes that are "external" to the economy or "outside the society" and that are paid to governments. Several studies have been interested in analyzing land rent and oil rents. Other studies have introduced the concept of aid rent, mainly because it is generated outside the economy and is exposed to predation from governments (owing to the lack of transparency in its management). Such external resources to the economy are monopolized by the elites holding political power at the expense of financing development goals. If aid can be considered as a rent which governments can access, it can promote actions undertaken to ward off competing groups from political participation, creating political and institutional inertia.

The individuals or groups of individuals who benefit from aid rent do indeed have an interest in preventing any change (which would not favor them), essentially by undermining the democratic rules. Based upon recent works providing a thorough analysis of the relationship between an exploitation of a rent and institutional change, rent capture and weak institutions can be seen as auto-reinforcing in the extent that the institutions supporting (or favoring) the rent capture modify the behaviors of rent-seekers who, in return, will attempt to maintain them. The incumbent holding the political power are encouraged to bend the rules so as to maintain the institutions, allowing them to benefit from the financial resources from aid while preserving their power. Elsewhere, such incentives would also be encouraged by what may be termed the "failures of donors" illustrated by the ineffectiveness of conditionalities (Svensson, 2001; Allegret and Dulbecco, 2004); Goldsmith (2001) explained that donors' awareness of the failures of aid conditionalities do not affect the geographical allocation of aid, since they must keep delivering aid to justify the budget shares allocated to finance development.

The term "curse of aid" discussed above is also inspired by findings which show that aid appears to affect democratic rules more severely than would natural resources (Djankov, Montalvo, and Reynal-Querol, 2008). Evidence is clear that the average ratio (from 1960

to 1999) of ODA to GDP was consistently about 1.9%, so a recipient country would have seen its democracy score evolve from its initial average level to zero; whereas the revenues generated from natural resources (GDP ratio) needs to reach 12.2% to produce the same deleterious effects on democratic performance. Rent-seeking behaviors are also often associated with political corruption and particularly with the waste of aid funds (especially through the financing of unproductive activities). Since good governance rules consist in implementing good policies, insuring good management capacities of resources and the existence of democratic control over executive power, then it is understandable how these rent-seeking behaviors affect the effectiveness of these rules through unproductive expenditures.

Summing up, the question about the net effect of foreign aid on the performance of institutions faces a lack of consensus, highlighted by the great heterogeneity in studies' empirical results. On the one hand, some studies have succeeded in evidencing that aid is beneficial to the enhancement of the quality of institutions mainly through conditionalities, the improvement of education, and the direct targeting of aid on the strengthening of institutions. On the other hand, other studies provide opposing arguments and empirical findings explaining that aid leads to the disempowerment of political leaders, creating problems of moral hazard and causing behaviors hindering institutional quality. Given this diversity of evidence in such an important question, one may wonder about the factors explaining this heterogeneity in the findings. The next sections are devoted to this analysis.

## 1.5 Discussion

### 1.5.1 The diversity of the institutions under consideration

In the framework of the AIL analysis, it is important to note the diversity of the forms and functions of institutions since this can explain the heterogeneous findings about the rela-



tionship between aid and institutional quality. The variety of institutions on which studies focus on may explain why they did not succeed in reaching a unanimous conclusion about the effect of aid on institutional quality. They have indeed considered diverse institutional variables describing democracy (Goldsmith, 2001; Hoffman, 2003; Al-Momani, 2003; Knack, 2004; Kalyvitis and Vlachaki, 2005; Djankov, Montalvo, and Reynal-Querol, 2008), governance and corruption (FMI, 2005; Brautigam and Knack, 2004; Knack, 2001; McNab and Everhart, 2002a; Svensson, 2000; Alesina and Weder, 2002; Tavares, 2003), and economic freedom (Goldsmith, 2001; FMI, 2005; Coviello and Islam, 2006). This assumption is relevant, as studies have shown that in a system of institutions, there is a hierarchy, and that some rules can perform well whereas others do not work or simply do not exist. The case of China, where good property protection and weak democratic rules coexist, is illustrative. Moreover, one can see in the developing countries that good performance of economic institutions and good performance of political institutions do not always go hand in hand. Therefore, the idea that foreign aid can strengthen some institutions while weakening others at the same time is relevant and explains that the effect on the quality of institutions might be different depending on the type of institution considered.

## 1.5.2 Concerns about the robustness of the empirical findings

### 1.5.2.1 Data quality issues

The argument we posit in this section is that the disparity of empirical studies' findings on the effects of aid on the quality of institutions may also reflect some structural differences between the different databases on aid and institutions that have been used. The work of Al-Momani (2003), who tests the effect of foreign aid on the level of democracy in recipient countries, supports this point. Using institutional quality indexes from Polity III, Freedom House and Vanhanen, he found empirical evidence of the effect of aid on democracy only

with Freedom House's democracy scores. These results suggest that institutional indexes may proxy differently institutional quality, and thus be the cause of differences in empirical findings. This point suggest a comparison between the most commonly used institutional indicators in the literature by analyzing their degree of linear correlation. We focus the analysis on governance and corruption indexes from the International Country Risk Guide (ICRG), the World Bank (Kaufmann, Kraay, and Mastruzzi, 2006) and Transparency International. For the democracy indicators, the Polity IV index and that of Freedom House are analyzed. Graphical analysis (not shown) shows that the relations between the relevant indicators appear to be linear, and therefore the simple linear correlation coefficients presented in Table 1 may be considered valid and interpretable. A quick analysis of descriptive statistics in Appendix 4 shows that the Polity IV indices of civil liberties have high standard deviations; this high variability can probably be attributed to the scores of -66, -77 and -88 assigned to specific years, revolutions, coups, etc. The corresponding index of democracy, which is also standardized, presents less variability. It emerges in Table 1 that the indices of corruption from Kaufmann, Kraay, and Mastruzzi (2006) and those from Transparency International, the rule of law indices of ICRG and Kaufmann, Kraay, and Mastruzzi (2006), and democracy indices from Freedom House and Polity IV are significantly correlated. As regards the Vanhanen democracy index, it has a marked degree of correlation with the Polity IV and Freedom House indicators. On the other hand, for the Polity IV and Freedom House civil liberties indices, the correlation coefficient is about 12.7%, indicating a weak (even significant) correlation.

In sum, with the exception of these last two indicators, one can see high and somewhat varied degrees of correlation; that does not however confirm the doubts of a discrepancy between the indexes, although it is difficult to know precisely how low correlations may be the cause of differences in empirical results. Methodological problems in the construction of variables can also be a source of low quality in empirical results. It should be noted that

institutional variables are often measured with substantial errors (because the measurement of the quality of institutions is often subjective), leading to biased results when added to an inadequate identification strategy. Moreover, a closer look at official development assistance data raises some concerns. It should be noted that agencies often tend to include flows that are not really development-oriented (or at least not in the long term in some cases) in the calculation of the assistance intended to promote development. For instance, if one considers the sub-components of aid such as food aid, emergency aid, technical cooperation, the administrative costs of bilateral aid programs and debt relief, certain observations are pertinent. As noted by Sundberg and Gelb (2006), food aid and emergency relief funds are not really intended to support development, since they have short-term goals. The biggest share of technical cooperation is intended to pay salaries to foreign technical experts (so this share should not really be considered as direct financing for development). Debt relief cannot be directly considered as additional external funding in terms of debt cancellation which is no more ongoing. All these findings suggest that the inclusion of development assistance in the empirical literature fails to assess aid at its true level (though one should remain aware of the difficulties inherent in the calculation), raising questions about the consequences of such accounts on the quality of the empirical results.

### 1.5.2.2 The empirical strategies in the AIL: correlations or causations?

Beyond the diversity of theoretical arguments explaining whether or not aid strengthens the quality of institutions, the heterogeneity in the econometric findings feeds debate around the issue. It therefore seems important to take a critical look at the quality of empirical strategies, since they largely determine these results. Simultaneous causalities between economic variables are a source of endogeneity in empirical identification strategies. Several arguments can be found in the literature to support the notion of double causality between aid and institutional quality. Thus, if one accepts the assumption that aid affects institu-

tions (positively or negatively) , one must also take into account the reverse relationship: the quality of institutions may also be a determinant of aid inflows. Indeed, on the one hand, in countries with bad institutions, aid can flow precisely because donors directly target the improvement of institutions. On the other hand, poor institutions can be correlated with aid flows, not because aid weakens them, but rather because weak institutions attract aid because they are correlated with other variables (low level of development, low socio-economic indicators, etc.) whose improvement is targeted by donors (Alesina and Weder, 2002). A parallel can be made with the low levels of development of recipient countries, towards which aid inflows are important, precisely because poverty alleviation and development are the main economic objectives of donors, and not because aid is not effective. Explaining the reverse causation, Alesina and Weder (2002) suggested that the more corrupt governments have also become more "skilful" in attracting more aid by generating more moral hazards over donors' conditionalities. Correct handling of endogeneity issues (partly arising from the reverse causation between aid and institutional quality) when the impact of aid on institutions is being investigated is therefore essential. Several identification strategies have been developed in the literature to address these problems, and have essentially relied on the use of instrumental variables, without giving robust results from a study to another. These results have shown positive results of aid on democracy (Goldsmith, 2001; Al-Momani, 2003) corruption (McNab and Everhart, 2002a; Tavares, 2003), the quality of governance (FMI, 2005) on economic freedom (Goldsmith, 2001) and negative results for democracy (Djankov, Montalvo, and Reynal-Querol, 2008), the quality of governance, corruption (Svensson, 2000; Alesina and Weder, 2002; Knack, 2001; Brautigam and Knack, 2004), and economic freedom (FMI, 2005). Other empirical studies have failed to identify a significant effect of aid on the same set of institutions (Hoffman, 2003; Knack, 2004; McNab and Everhart, 2002a; Coviello and Islam, 2006). Using largely instrumental variables representing donors' interests (initial population, regional dummies) and the needs of recipient countries (initial income, infant

mortality, etc.), these studies made the assumption that aid is influenced by both criteria. Although it seems feasible that these instrumental variables comply with instrumental variable requirements, that is to say, a strong correlation with aid, it is less certain that they do not determine (even in the long term) institutional quality. Poor economic performance is in fact often cited as a determinant of the quality of institutions<sup>4</sup>. The rationale behind the choice of such instruments is much less convincing, on top of the fact that the supportive results of tests of instrument validity cannot be considered as theoretical arguments. Other studies have used multiple-set strategies to deal with dual causality. The empirical approach of Alesina and Weder (2002), which aimed at identifying the effect of aid on corruption, was based upon a progressive approach insuring that the causality running from corruption to aid flows is irrelevant. They found that except for the United States and Scandinavian countries, the level of corruption does not affect aid inflows. Indeed, if one assumes that foreign aid has an effect (positive or negative) on the level of corruption, and if there is evidence that less corrupt governments do not receive more aid than those which are the most corrupt, then the causality running from corruption to aid is inoperative. Moreover, the authors explain that, since it is difficult to identify the effect showing that the most corrupt governments would be the most skilful in attracting more aid, it is easier to defend the argument that more aid leads to more corruption and more "predatory" leaders. The major criticism of this study, however, is the lack of explicit causality tests, that leaves some doubt about the real direction of the operative causality between the two phenomena. In addition, the inclusion of US and Scandinavian countries in the estimates may be a source of bias in the results, given that double causality has been confirmed for these countries.

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<sup>4</sup>Chong and Calderon (2000) have strongly evidenced a double causality between institutional quality and economic performance.

## 1.6 A meta study of the Aid-Institutions literature

### 1.6.1 Brief overview on Meta-Regression Analysis (MRA)

Meta-regression analysis in economics was first introduced by the work of Stanley and Jarrell (1989) in the *Journal of Economic Survey*. Since then, a plenty of papers using this empirical literature survey tool have been issued, covering different topics. Some of the well-known ones have applied meta-analysis to survey the literature on the effect of democracy on growth (Doucouliagos and Ulubasoglu, 2008b), the effect of common currencies on international trade (Rose and Stanley, 2005), the effects of economic freedom on economic growth (Doucouliagos, 2005) and more interestingly the aid effectiveness literature (Doucouliagos and Paldam, 2010, 2009). Using a set of statistical techniques, meta-analysis is intended to provides a summary of empirical studies and especially to identify and explain the between-study differences in the research findings (Doucouliagos and Ulubasoglu, 2008a).

To perform meta-analysis, one needs first to identify primary studies investigating exactly the same question on a given topic and then to encode information from them. The setting up of the database of studies can be made following three alternatives: either to include as many as possible studies that are publicly available on the topic (published or unpublished papers); or to make a random selection of the available studies (while making sure that the selection process is truly random); or to include studies from a given year (while ensuring that a sufficient number of studies are available) (Doucouliagos and Ulubasoglu, 2008a).

Since several estimates are usually performed within a given study, the meta-regression analysis may include either all estimates sets (this being the most helpful alternative to identify the source of heterogeneity in the results), or include only the author's preferred set of estimates, or include the average of the different estimates for each study, as suggested by Doucouliagos and Ulubasoglu (2006).

Practically, meta-regression analysis is intended to investigate in what extent the variables

coded from an empirical study (author's details such as affiliation or ideology, regression details such as the number of observations used in the estimation process, the type of estimator used, the control variables, binary variables indicating if the estimate relates to a sub-sample of countries, if the paper is published in a refereed journal, etc.) explain variations in a standardized effect (*i.e.* the effect of democracy on growth), which can be an elasticity, a t-statistic or a partial correlation coefficient<sup>5</sup>. The measure of the effect is standardized using the following formula:

$$\gamma = \sum [N_i \gamma_i] / \sum N_i \tag{1.1}$$

where  $\gamma$  is the standardized effect of the  $i^{th}$  paper and  $N$  the associated weight (sample size, estimate's standard error, number of citations received, the journal's impact factor, etc) (Doucouliagos and Ulubasoglu, 2006). Alternatively, the dependent variable can be a binary variable taking the value 1 if a study reports a positive (or negative) significant effect and 0 otherwise. We follow this alternative since the variables and indexes used to proxy the quality of institutions are not homogeneous across studies (corruption indexes, democracy indexes, economic freedom indexes, etc.). We make use of a binary dependant variable indicating if a study reported a significant negative coefficient of aid (1) or not (0).

### 1.6.2 Criticisms about the effectiveness of MRA

While MRA has gained some popularity as an assessment tool of literature in the recent years, some concerns have been raised by some recent studies, casting doubts about it's ability to efficiently identify publication bias. MRA indeed faces important econometric, statistical and data encoding challenges that are worth noting. Mekasha and Tarp (2011) provide a

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<sup>5</sup>the use of regression coefficients being not appropriated

### 1.1.6 A meta study of the Aid-Institutions literature

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sound discussion of these issues and highlight a couple of points as hindering factors of MRA effectiveness. The first concern is about the MRA's ability to pool together and standardize the findings of heterogeneous groups of studies, which rely on very different methodologies. Elsewhere, as noted by Mekasha and Tarp (2011), MRA is subject to subjectivity in the identification and the selection of the studies to be included in the analysis, which can potentially lead to some selection bias. As noted by them, there is indeed no standard guidance about which moderator variable has to be taken into account or not. They also discuss the MRA core standard assumption of the existence of an homogeneous effect across the studies, leading MRA authors to use fixed effects estimations and then to end up with different results and conclusions as compared with what they would have got with random effects estimations. This assumption is very debatable insofar as different factors across the studies matter for the estimate of the impact of interest. Another point casting some doubts on the effectiveness of MRA is about the non-consideration of the non-linearities (especially the presence of interactive terms in regression models) in the estimated impact of interest, leading most of standard MRA analysis to mismeasure the true partial estimate. Another major concern raised by Mekasha and Tarp (2011) is the lack of accuracy and consistency in the MRA data encoding, which can make the number of observations used in the MRA vary from a meta-analysis to another, and lead to discrepant findings. The authors also raise the issue regarding the weighting method used in the MRA which is very debatable. They demonstrate that using sample size as a weight to calculate the average impact of interest (*e.g.* the impact of aid on growth) is not the most accurate method since other data characteristics importantly matter in influencing the standard errors of the estimated impact. Summing up, MRA is far from being blameless regarding the points raised above and MRA authors might be very careful when formulating policy implications from their findings.



### 1.6.3 Some general basic facts

We are interested in this chapter in doing a meta-regression analysis of the direct impact of aid on the quality of institutions in recipient countries. This project is particular regarding a couple of points; first to the best of our knowledge, no meta-analysis has been done in this field. Second, since a wide range of institutional indexes proxying the quality of different types of institutions has been used in the literature, we have considered as "institutions", all the variables related to democracy, regime change, governance, corruption, bureaucratic quality, rule of law, economic freedom, risk of expropriation, etc. This allowed us to reach the critical minimal number of studies to be included in a meta-analysis (15).

We were able to collect a set of 26 published and unpublished papers<sup>6</sup> investigating empirically the impact of aid on institutional quality indexes (corruption, governance, democracy, regime change, economic freedom, etc). That makes up a total sample of 449 estimates. Two studies in the AIL explored a conditional effect of aid on institutions (Wright, 2009; Dutta and Leeson, 2008) and three studies investigated the impact of different types of aid on institutions, including all them together in the regression (Bermeo, 2010; Finkel, Perez-Linan, and Seligson, 2007; Nielsen and Nielson, 2008). We decide not to include those papers in the analysis, since they do not provide an estimate of the direct effect of overall aid.

A first look at the AIL empirical literature investigating a direct impact of aid on institutions confirms the heterogeneity in the findings (Figure 1.1), even though the majority of studies has evidenced a negative effect. Indeed, out of the 37 main estimates (from the 26 selected studies), 14 concluded to a direct negative effect of aid, 9 concluded to the opposite effect, while 9 studies found that the effect of aid on institutions is neutral. A break down of this evidence by type of institutions (see appendix B) reveals a more mitigated picture; governance related papers tend to evidence a negative effect of aid while democracy related papers tend to identify a positive effect of aid.

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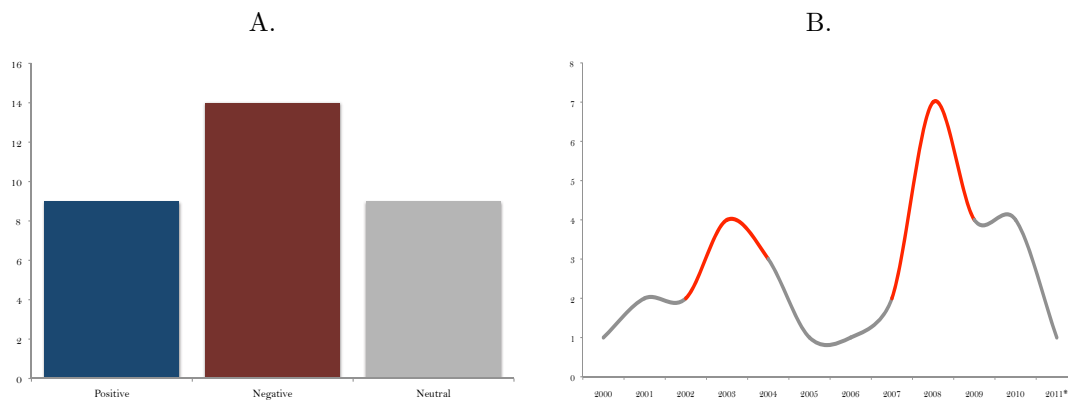
<sup>6</sup>The References of the studies used in the meta-analysis are presented in appendix A

### 1.1.6 A meta study of the Aid-Institutions literature

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Elsewhere when analyzing the time trend of the AIL papers issuing (Figure 1.1) it comes out that the years 2003 and 2008 are peaks. Figures 1.3 and 1.4 show that the 2003 peak is due to the governance papers issuing while the 2008 peak is associated to a democracy papers peak. These facts illustrate a renewed interest for aid's institutional impact regarding democracy and governance.

**Figure 1.1: Heterogeneity in the nature of the reported effect of aid in the AIL (all institutional indexes) (Chart A) and AIL papers issuing over 2000-2011 (Chart B)**



*Source: Author*

### 1.6.4 The meta-data

Empirical analysis usually report several sets of estimation results, on top of considering all sets of estimates, we also focus on "best-set" ones, as suggested by Doucouliagos and Ulubasoglu (2006). Since it not always easy to identify which estimate is the author's preferred set of results, we considered as "best-set", all the estimates that deal at best with all the potential econometric problems (endogeneity, functional forms, control for fixed effects, etc.). Table 1.6.4, which presents some descriptive statistics of the variables coded for the purpose of the meta-study, indicate that considering only the "best-set" estimates shrink the number

### 1.1.6 A meta study of the Aid-Institutions literature

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of observations from 449 to 190.

*Academia* and *ThinkTank* are included to explore the effect of author's affiliation on the reported results. We also include *Reproduce* to investigate whether the fact that author attempt to replicate results from prior researches in the literature is relevant. In order to explore the effect of the measure of institutional quality (related in this case to different types of institutions), we include *DemocIndex*, *DemocCateg*, *DemoChange*, *Goverance*, *Corrup*, *RuleLaw*, *BurQual*, *Ecofree*. It would have been more appropriate to perform a meta-analysis for each category of institutions to ensure consistency in the measure of institutions. However we have been limited by the number of publicly available study<sup>7</sup>. We also tested if the measure of aid dependance affect the nature of the reported impact of aid on institutions, by introducing *AidGdp*, *AidGnp*, *AidGni*, *AidPercap*, which respectively measure: aid as percentage of the Gross Domestic Product, aid as percentage of the Gross National Product, the Gross National Income, and aid per capita. Nine other variables are included to capture the impact of data and identification strategies differences: the number of observations (*Obs*), the number of degrees of freedom (*DegFreedom*), the number of time periods (*TimePeriod*), the panel structure of the data (*Panel*), the consideration of outliers (*Outlier*), the control for regional fixed effects (*Region*), the control for the initial level of institutional quality (*InitialInstit*). Three variables are included in order to capture the effect of the estimation techniques on the reported results: the consideration of the potential endogeneity of aid (*Endo*), the use of Ordinary Least Squares and Fixed effects estimators (*Ols* and *FixedEffects*). We also control for the number of years (*NbYears*) of data from each study.

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<sup>7</sup>For the years to come, meta-regression analysis in this field will certainly be more accurate and more rigorous as the number of papers will increase

Table 1.1: Meta data decriptive statistics

Variable	Definition	Best-Set			All-Set		
		Mean	St. Dev.	Obs.	Mean	St. Dev.	Obs.
<i>Panel A: authors and paper details</i>							
Academia	BD if author is from academia	0.79	0.41	190	0.82	0.38	449
ThinkTank	BD if author is affiliated with a think tank or an independent research center	0.23	0.42	190	0.43	0.5	449
Reproduce	BD if estimate is an attempt to replicate results	0.38	0.49	190	0.31	0.46	449
<i>Panel B: measures of institutions</i>							
DemocIndex	BD if study uses a synthetic index/score of democracy as a measure of institutional quality	0.04	0.19	190	0.03	0.16	449
DemocCateg	BD if study uses a categorical description of democracy (including dummy variables) as a measure of institutional quality	0.16	0.37	190	0.33	0.47	449
DemoChange	BD if study uses the change of a synthetic index of democracy over a period as a measure of institutional quality	0.19	0.4	190	0.14	0.35	449
Goverance	BD if study uses an index of governance as a measure of institutional quality	0.17	0.38	190	0.13	0.34	449
Corrup	BD if study uses an index of corruption as a measure of institutional quality	0.05	0.22	190	0.07	0.26	449
RuleLaw	BD if study uses an index of rule of law as a measure of institutional quality	0.01	0.10	190	0.004	0.07	449
BurQual	BD if study uses an index of bureaucratic quality as a measure of institutional quality	0.01	0.10	190	0.006	0.08	449
Ecofree	BD if study uses an index of economic freedom as a measure of institutional quality	0.12	0.33	190	0.07	0.26	449

Table 1.1 (cont.)

Variable	Definition	Best-Set			All-Set		
		Mean	St. Dev.	Obs.	Mean	St. Dev.	Obs.
<b>Panel C: measures of aid</b>							
AidGdp	BD if paper uses aid/GDP ratio as a measure of aid dependence	0.29	0.45	190	0.48	0.50	449
AidPercap	BD if paper uses aid par capita as a measure of aid dependence	0.17	0.38	190	0.10	0.30	449
AidGnp	BD if paper uses aid/gnp ratio as a measure of aid dependence	0.11	0.31	190	0.10	0.30	449
AidGni	BD if paper uses aid/gni ratio as a measure of aid dependence	0.27	0.45	190	0.14	0.35	449
<b>Panel D: nature of aid's impact</b>							
Positive	BD if regression result reports a statistically significant positive coefficient of aid	0.32	0.47	190	0.41	0.49	449
Negative	BD if regression result reports a statistically significant negative coefficient of aid	0.42	0.50	190	0.37	0.48	449
<b>Panel E: statistical information and paper's identification strategy</b>							
Obs	Number of observations	207.85	327.42	187	212.49	302.38	434
DegFreedom	degrees of freedom	199.37	326.78	187	204.93	301.69	436
NbYears	Number of years covered in the analysis	18.84	8.41	189	23.79	10.48	448
TimePeriod	Number of time periods	4.55	6.94	187	4.80	6.141	446
Panel	BD for use of panel data	0.43	0.50	190	0.54	0.50	449
Outlier	BD if outliers were removed from the sample	0.07	0.26	190	0.08	0.27	449
Endo	BD if the aid was treated as an endogenous variable	0.66	0.48	190	0.44	0.50	449
Ols	BD for use of OLS	0.27	0.45	190	0.27	0.44	449
FixedEffects	BD if fixed effects estimator used	0.05	0.21	190	0.02	0.15	449
Region	BD if paper controlled for regional effects/dummies	0.22	0.41	190	0.39	0.49	449
InitialInstit	BD if study controlled for initial level of institutional quality	0.64	0.48	190	0.46	0.50	449

### 1.6.5 Model and results

We estimate the following probit meta-regression model:

$$negative = \alpha + \left\{ \begin{array}{l} \beta (\text{authors and paper details}) \\ \gamma (\text{measures of aid}) \\ \delta (\text{regression statistics}) \\ \zeta (\text{measures of institutions}) \end{array} \right\} + \mu \quad (1.2)$$

The dependent variable (*negative*) is a binary variable taking the value of 1 if the study reports a statistically significant negative aid-institutions coefficient and otherwise 0. The regression coefficients  $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\zeta$  respectively quantify the impact of authors details, the measures of aid, the statistical features of the regressions and the measures of institutions differences on reported study effect nature.

Columns 1 to 4 of Table 1.2 reports the probit Meta-Regression Analysis results for equation 1, using alternative specifications. Results in columns 1 and 2 are based upon the best-set specifications of studies, while columns 3 and 4 are based upon all specifications. We can only interpret the sign and significance of the estimates summarized in Table 1.2 since they are not marginal impacts.

Studies by authors from think tanks are more likely to report a negative effect of aid on institutions for best-set specifications, while the same result comes out for studies by authors for academia only for best-set specifications (columns 1 and 2). Except for column 1, the coefficients of *Reproduce*, which are not significant, show that prior findings replication does not influence the reported results in the AIL. *NbYears* is positive and statistically significant in all the specifications in Table 1.2; the more years are covered by a study, the more likely is a negative and statistically significant aid effect on institutions. *Endogeneity* and *Ols* are also important in determining a negative aid-institutions result. Interestingly, controlling for

### 1.1.6 A meta study of the Aid-Institutions literature

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the initial level of institutional quality increase the likelihood to report a negative effect of aid on institutions. *TimePeriod* has a strong negative effect on the probability of reporting negative effect of aid.

The measure of institutional quality has ambiguous effects on the nature of reported aid's impact. Indeed, while the use of democracy categorial indexes and changes in the indexes increase the probability not to report a negative impact of aid, the use of a synthetic index of democracy, a synthetic index of governance and corruption increase the likelihood to report a negative and significant effect of aid on the quality of institutions. The probit meta-regression analysis for the best-set and all set thus confirms that the way institutional quality is measured plays an important role in determining the nature of aid's impact.

Notwithstanding, some caveats apply to the results, due to the limited number of empirical papers; this meta-analysis is an introductory one in the AIL and more studies (allowing more homogeneity in institutional variables) are needed for more thorough analysis.

### 1.1.6 A meta study of the Aid-Institutions literature

Table 1.2: Meta-probit regression analysis (best-set specifications). Dependent variable is binary variable indicating if a significant negative estimated coefficient of aid is reported

Controls <sup>a</sup>	<i>Best-set</i>		<i>All-set</i>	
	(1)	(2)	(3)	(4)
<b><i>Panel A: authors and paper details</i></b>				
Academia	6.09 <sup>(a)</sup> (1.69)	10.91 <sup>(a)</sup> (4.45)	-0.64 <sup>(c)</sup> (0.39)	-0.78 <sup>(c)</sup> (0.46)
ThinkTank	5.07 <sup>(a)</sup> (1.41)	14.39 <sup>(a)</sup> (5.95)	1.36 <sup>(a)</sup> (0.62)	1.95 <sup>(a)</sup> (0.47)
Reproduce	-1.15 <sup>(a)</sup> (0.51)	0.37(0.75)	0.04(0.23)	0.52(0.33)
<b><i>Panel B: measures of aid</i></b>				
AidGdp	-2.72 <sup>(a)</sup> (0.79)	-1.08(1.53)	-0.48(0.36)	0.21(0.43)
AidPercap	-8.23 <sup>(a)</sup> (1.90)	-17.86 <sup>(a)</sup> (5.95)	-1.38 <sup>(a)</sup> (0.59)	-0.93(0.61)
AidGnp	0.02(0.55)	1.11 <sup>(c)</sup> (0.61)	0.37(0.33)	0.31(0.37)
AidGni	-7.68 <sup>(a)</sup> (1.65)	-15.31 <sup>(a)</sup> (4.51)	-0.58(0.38)	-0.13(0.47)
<b><i>Panel C: statistical information and paper's identification strategy</i></b>				
Obs	-0.11(0.09)	-0.02(0.15)	-0.03(0.03)	-0.01(0.03)
DegFreedom	0.12(0.09)	0.06(0.15)	0.03(0.03)	0.01(0.03)
NbYears	0.18 <sup>(a)</sup> (0.05)	0.24 <sup>(a)</sup> (0.06)	0.10 <sup>(a)</sup> (0.02)	0.10 <sup>(a)</sup> (0.02)
TimePeriod	-0.51 <sup>(a)</sup> (0.10)	-1.15 <sup>(a)</sup> (0.48)	-0.14 <sup>(a)</sup> (0.05)	-0.04(0.04)
Panel	-4.08 <sup>(a)</sup> (1.65)	-12.44 <sup>(a)</sup> (5.20)	1.86 <sup>(a)</sup> (0.72)	1.36 <sup>(b)</sup> (0.69)
Outlier	-0.65(0.60)	-1.16 <sup>(c)</sup> (0.71)	0.22(0.32)	0.22(0.34)
Endo	2.16 <sup>(c)</sup> (1.28)	3.55(2.39)	1.19 <sup>(a)</sup> (0.40)	1.07 <sup>(a)</sup> (0.38)
Ols	2.41 <sup>(c)</sup> (1.27)	7.28 <sup>(a)</sup> (2.92)	0.78 <sup>(c)</sup> (0.46)	0.87 <sup>(b)</sup> (0.44)
FixedEffects			1.91(1.76)	-0.35(1.43)
Region	-2.22(1.49)	-1.21(0.88)	-2.62 <sup>(a)</sup> (0.63)	-1.58 <sup>(a)</sup> (0.62)
InitialInstit	10.84 <sup>(a)</sup> (2.18)	21.81 <sup>(a)</sup> (7.70)	3.06 <sup>(a)</sup> (0.76)	3.06 <sup>(a)</sup> (0.55)
Const.	-14.09 <sup>(a)</sup> (3.25)	-29.02 <sup>(a)</sup> (10.84)	-4.61 <sup>(a)</sup> (1.02)	-5.41 <sup>(a)</sup> (0.87)
<b><i>Panel D: measures of institutions</i></b>				
DemocIndex		4.04 <sup>(c)</sup> (2.29)		0.53(1.05)
DemocCateg		4.36(3.35)		-1.50 <sup>(a)</sup> (0.60)
DemoChange		-6.17 <sup>(a)</sup> (2.69)		-1.19 <sup>(a)</sup> (0.39)
Goverance		1.02(0.65)		1.08 <sup>(a)</sup> (0.36)
Corrup		1.09 <sup>(c)</sup> (0.65)		0.44(0.55)
RuleLaw		0.73(0.71)		0.67(0.64)
BurQual		0.73(0.71)		0.87(0.54)
Ecofree		3.22 <sup>(a)</sup> (0.74)		0.41(0.44)
Number of obs	176	176	432	432
Pseudo R2	0.68	0.76	0.57	0.62
Log pseudolikelihood	-36.61	-27.12	-117.81	-105.82

<sup>a</sup> Notes: (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. Heteroskedasticity robust standard errors in parentheses.



## 1.7 Conclusion

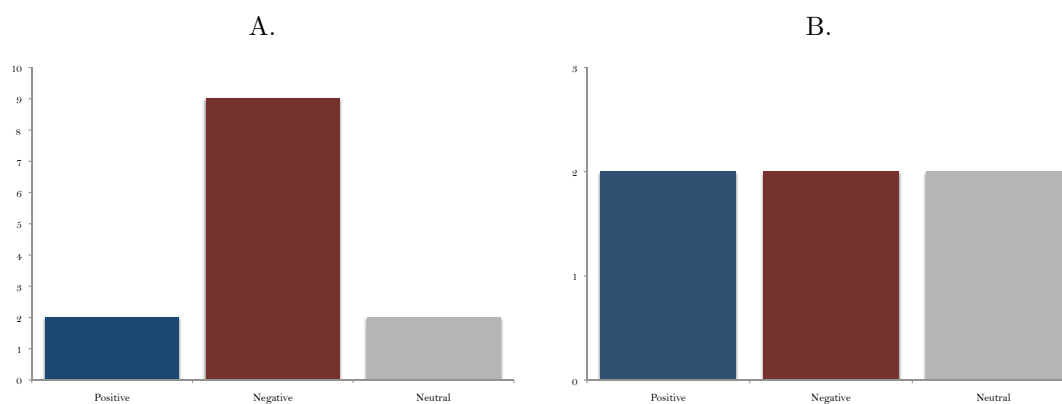
The aim of the chapter was to analyze controversies in the Aid-Institutions Literature (AIL) regarding the impact of aid on the quality of institutions, and highlight the explanatory factors. No consensus comes out from that Literature. Many studies were indeed interested in the topic, presenting arguments and contradictory empirical results, which explain that aid can support the improvement of the quality of institutions, as well as weaken it. In a first part of the chapter, we started the analysis with the studies explaining that aid help improve the institutions through positive effects on education, income level, effective conditionalities, through the dampening effect on external shocks, or by being directly targeted institutional improvement. In a second part, we shed light on the opposite theoretical arguments supporting that aid has adverse effects on the quality of institutions. These arguments uphold that aid weakens incentives to reform institutions, government accountability and give rise to rent-seeking behaviors, all of that yielding to inefficient institutions. Such an heterogeneity in the findings and the theoretical arguments raises questionings about the explanatory factors. The chapter suggested that the institutionnal theoretical frameworks, data quality issues, and especially the quality of empirical strategies feed the controversy by supporting conflicting results. A meta-study of the Aid-Institutions Literature provide supportive results to those points. Finally, this chapter stresses the importance of the aid-institutions debate, in view of the ongoing initiatives that ask for a substantial increase in aid volumes and the raise of the concerns regarding the impact on institutions. Indeed, by understanding how aid can be a source of positive institutional change, it will be easier to make it a factor directly supporting their improvement.

## Appendix A References of the studies used in the Meta-Analysis

1. Csordas and Ludwig (2011)	14. Coviello and Islam (2006)
2. Heckelman (2010)	15. Brautigam and Knack (2004)
3. Kalyvitis and Vlachaki (2010)	16. Knack and Rahman (2004)
4. Wright (2010)	17. Knack (2004)
5. Bermeo (2009)	18. Abdiweli and Isse (2003)
6. Busse and Gröning (2009)	19. Al-Momani (2003)
7. Heckelman and Knack (2009)	20. Hoffman (2003)
8. Djankov, Montalvo, and Reynal-Querol (2008)	21. Tavares (2003)
9. Heckelman and Knack (2008)	22. Alesina and Weder (2002)
10. Ishiyama, Sanders, and Breuning (2008)	23. McNab and Everhart (2002a)
11. Menendez (2008)	24. Goldsmith (2001)
12. Kalyvitis and Vlachaki (2008)	25. Knack (2001)
13. Bowman and Chand (2007)	26. Svensson (2000)

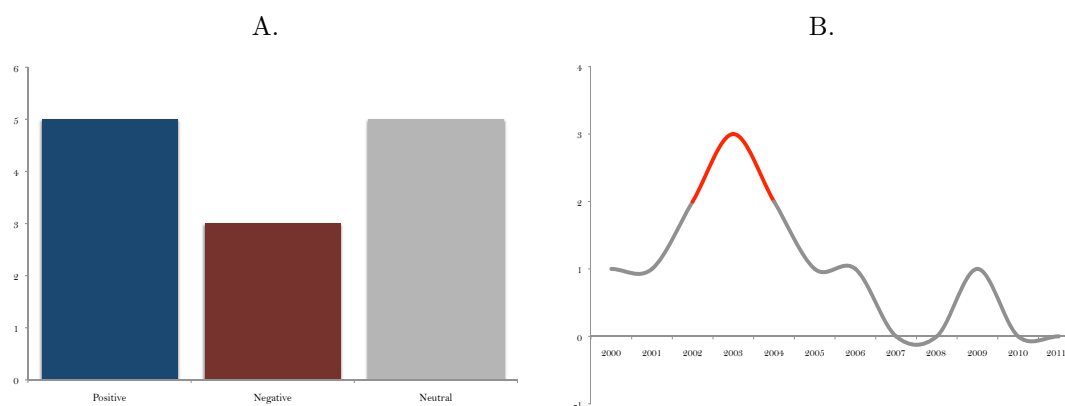
## Appendix B Some general features of the AIL

Figure 1.2: Heterogeneity in the nature of the reported effect of aid in the AIL (governance quality indexes) (Chart A) and Heterogeneity in the nature of the reported effect of aid in the AIL (economic institutions indexes) (Chart B)



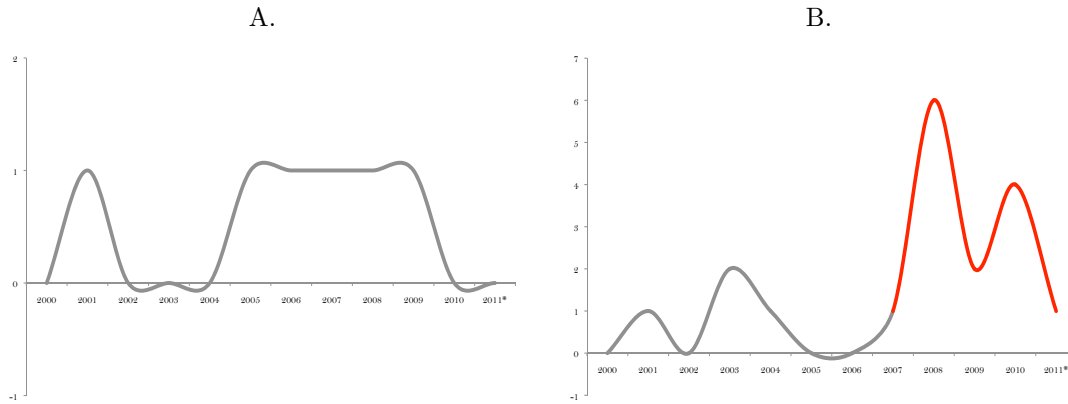
*Source: Author*

Figure 1.3: Heterogeneity in the nature of the reported effect of aid in the AIL (democracy indexes) (Chart A) and AIL governance papers issuing over 2000-2011 (Chart B)



*Source: Author*

Figure 1.4: AIL economic institutions papers issuing over 2000-2011 (Chart A) and AIL democracy papers issuing over 2000-2011 (Chart B)



Source: Author

## Appendix C Descriptive statistics on institutional quality indexes

Tableau 1: Pairwise correlations for selected institutional quality indexes

	Corruption (TI)	Corruption (KKM)	Rule of law (ICRG)	Rule of law (KKM)	Democracy (Vanhanen)	Democracy (Freedom House)	Democracy (Polity IV)	Civil liberties (Polity IV-parreg)	Civil liberties (Freedom House)
Corruption (TI)	1.00 (2500)	0.97 <sup>(b)</sup> (698)	-	-	-	-	-	-	-
Corruption (KKM)	0.97 <sup>(b)</sup> (698)	1.00 (2500)	-	-	-	-	-	-	-
Rule of law (ICRG)	-	-	1.00 (2500)	0.74 <sup>(b)</sup> (868)	-	-	-	-	-
Rule of law (KKM)	-	-	0.74 <sup>(b)</sup> (868)	1.00 (2500)	-	-	-	-	-
Democracy (Vanhanen)	-	-	-	-	1.00 (8094)	0.74 (3567)	0.69 (7367)	-	-
Democracy (Freedom House)	-	-	-	-	0.74 <sup>(b)</sup> (3567)	1.00 (2500)	0.88 <sup>(b)</sup> (2485)	-	-
Democracy (Polity IV)	-	-	-	-	0.69 <sup>(b)</sup> (7367)	0.88 <sup>(b)</sup> (2485)	1.00 2500	-	-
Civil liberties	-	-	-	-	-	-	-	1.00 (2500)	0.13 <sup>(b)</sup> (2500)
Civil liberties (Freedom House)	-	-	-	-	-	-	-	0.13 <sup>(b)</sup> (2500)	1.00 (2500)

Notes : -TI, KKM, ICRG respectively refer to indexes from Transparency International (TI), Kaufman, Kraay and Mastruzzi, 2005 (KKM), and the International Country Risk Guide (ICRG).

- Number of observations under brackets

- (b) denotes a significance level of 5%

- The data used to compute the coefficients have been averaged over five years periods

## 1.C Descriptive statistics on institutional quality indexes

Tableau 2: Descriptive statistics for the selected institutional quality indexes

Indice <sup>a</sup>	Obs.	Moy.	Ecart-type	Min.	Max.
Corruption/TI	698	3.77	1.82	1.43	9.52
Corruption/KKM	868	-0.22	0.84	-1.62	2.44
Rule of law/ICRG	868	3.54	1.26	0.96	6
Rule of law/KKM	868	-0.22	0.88	-2.08	2.17
Democracy/Vanhanen	8094	12.51	11.88	0.01	53.81
Democracy/Freedom House	2500	-4.63	1.73	-7	-1
Democracy/Polity IV	2485	-1.17	6.80	-10	10
Civil Liberties_1/Polity IV( <i>parreg</i> )	2500	-1.38	15.58	-88	5
Civil Liberties_2/Polity IV( <i>parcomp</i> )	2500	-2.34	15.43	-88	5
Civil Liberties/Freedom House	2500	-4.63	1.61	-7	-1

<sup>a</sup> • The Corruption Perceptions Index (CPI) ranks countries according to the perception of corruption in the public sector. The index ranges from 0 (extreme level of corruption) to 10 (no corruption).

• The Kaufmann, Kraay et Mastruzzi (2006)'s index of corruption similarly proxies corruption, and ranges from -2.5 (weak corruption) to +2.5 (strong corruption).

• The ICRG's law and order index is computed from two separate sub-components comprising zero to three points. The Law sub-component is an assessment of the strength and impartiality of the legal system, while the Order sub-component is an assessment of popular observance of the law. The index ranges from 0 (worse situation) to 6 (best situation).

• The Kaufmann, Kraay et Mastruzzi (2006)'s rule of law index measures the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence. It ranges from -2.5 (weak respect of the rule of law) to +2.5 (strong respect of the rule of law).

• The Vanhanen index of democratization assesses political competition and participation and positively ranges from 0 to 100%.

• The Freedom House index of democracy assesses civil liberties and political rights and negatively ranges from 1 (full democracy) to 7 (total absence of democracy).

• The revised polity IV index of democracy is a combined score of democracy and autocracy, and ranges from -10 (full autocracy) to +10 (full democracy).

• The first polity IV index of civil liberties (*parreg*) assesses the regulation of the political participation, *i.e.* the extent to which there are binding rules on when, whether, and how political preferences are expressed. The index ranges as follows: 1 (unregulated), 2 (multiple identity), 3 (sectarian), 4 (restricted), 5 (regulated). The second polity IV index of civil liberties (*parcomp*) assesses the competitiveness of participation, *i.e.* the extent to which alternative preferences for policy and leadership can be pursued in the political arena. The index ranges as follows: 1 (repressed), 2 (suppressed), 3 (factional), 4 (transitional), 5 (competitive).

• The Freedom House index of civil liberties ranges from 1 (most free) to 7 (least free).



# Chapter 2

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## **DOES FOREIGN AID PROMOTE DEMOCRACY?**

### **AID, DEMOCRACY AND TRADE INSTABILITY**

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- Kangoye, Thierry (2011). Does Foreign Aid Promote Democracy? Aid, Democracy and Instability From Trade. UNU WIDER Working Paper



## 2.1 Introduction

The positive role of institutions on development has been widely assessed and confirmed; institutions cause fundamentally economic growth and development (Rodrik, Subramanian, and Trebbi, 2004; North, 1990; Hall and Jones, 1999; Acemoglu, Johnson, and Robinson, 2001). The obvious next question for some scholars has naturally been to know how countries acquire good institutions. Rodrik (2000) explained that countries face two strategies to optimize their institutions: copying well-functioning institutions from advanced countries (with a risk of failure, since the effectiveness of institutions is highly specific to local conditions), or taking advantage of local knowledge and engage in an experimentation process of institutional designs.

However, from another policy point of view, one can propose another formulation of strategies: still following Rodrik (2000), a first strategy could suggest that countries invest directly their resources in institutional improvement (through experimentation or copying from abroad) [which can be costly for their current economic performance], while a second strategy could suggest that instead of focusing directly on institutions, countries give preference to an indirect way of institutional building. They can do so by investing their resources on some determining factors of the emergence of good institutions, such as economic performance.

As we will discuss in the next section, growth stability matters for institutional building and external assistance can be given a role, that is the purpose of this research. As a matter of fact, recent studies on aid effectiveness have highlighted macroeconomic instability as a factor of aid effectiveness. Guillaumont and Chauvet (2001); Chauvet and Guillaumont (2004, 2009); Collier and Dehn (2001); Collier and Goderis (2009) have shown that aid, by protecting growth against the negative effects of shocks, is more effective in vulnerable countries. The core assumption of this chapter is based upon these findings and can be formulated as follows: if one accepts that a stable growth is good for institutional building and that aid

can make growth more stable by protecting it against shocks, a positive effect of aid on institutions in countries exposed to these shocks can therefore be expected. The question this research answers is important since reducing the adverse effects of macroeconomic instability has become a great challenge for developing countries.

We focus in this chapter on democracy, as measured by synthetic indexes. As a matter of fact, democracy is considered as a "meta-institution" which helps to build better institutions, help societies to select good economic institutions from the available menu of them, and deliver higher-quality growth (more stable, better redistributed, more predictable) (Rodrik, 1997, 2000). Democracy has also gained importance with the worldwide diffusion of its ideology, which has induced a great deal of pressure for the underdeveloped world to adopt democratic forms of governments. We also focus in this chapter on terms-of-trade instability as a source of instability, since most of developing countries rely on the export sector of primary products and are dependent of world markets, making them particularly sensitive to terms-of-trade fluctuations. Moreover, the exogenous character of terms-of-trade fluctuations we can assume with the data we use<sup>1</sup> provides some technical benefits in the econometric estimations.

We empirically test successfully that terms-of-trade instability is a source of income instability, which have negative effects on democracy, and that aid has a positive effect on the quality of democracy conditional on this instability. We explain that this is probably due to the "growth-stabilizing" effect of aid shown in previous studies. We use panel data from 71 developing and emerging countries<sup>2</sup> over the period 1980-2003 (pooled in two twelve-years periods) and find evidence that aid mitigates the adverse effects of term-of-trade instability on democracy. The effect of aid on institutions conditional on instability is assessed through an interactive variable equal to the product of aid and terms-of-trade instability. We also use instrumental variables to isolate the exogeneous variation in aid flows.

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<sup>1</sup>We discuss this argument in section 5.3

<sup>2</sup>See the complete list in appendix C

Our results add to the existing literature in the extent that to our knowledge, this chapter is the first to explicitly test empirically this effect. The remainder of the chapter proceeds as follows: in section 2.2 we review the determinants of democracy and the relationships between the instability of economic performance and democracy. In section 2.3 we focus on the relationships between aid and democracy and on how aid may have a positive impact on democracy conditional on terms-of-trade instability. Section 2.4 provides the empirical evaluation of the theoretical arguments, and section 2.5 concludes.

## 2.2 The determinants of democracy

### 2.2.1 Non-economic determinants of democracy

Theoretical and empirical models in the literature have identified and discussed a number of non-economic determinants of democracy, the most pointed up being colonial heritage, cultural factors (religious affiliation), and social fractionalization.

#### 2.2.1.1 Colonial heritage

Depending on what countries inherited from their previous rulers (e.g. regarding political freedom), colonial heritage could be a determinant of democracy. British colonial heritage is the most cited colonial heritage variable in the literature on the determinants of democracy and is quite widely evidenced as good for democracy (Weiner, 1987; Lipset, 1996; Mainwaring and Shugart, 1997). According to these authors, British colonists handed down traditions of law (lowering the control of local landed elites over the colonial state), parliamentarism, and civil-service professionalism that left their former colonies in a better position to sustain open rule than the former colonies of other European powers. Lipset, Seong, and Torres (1993) also argue that British rule provided a crucial learning experience for subsequent democracy. Przeworski, Alvarez, Cheibub, and Limongi (2000) support this view by arguing

that transitions to democracy are more likely in former British colonies, where citizens had historical positive experience with democratic practice.

However, the empirical evidence of that arguments is not clear. When testing the effect of colonial history on democracy, La Porta, Lopez-De-Silanes, Shleifer, and Vishny (1999) find a positive relationship between British colonial heritage and democracy, while Barro (1999) only succeed in identifying an indirect effect through economic development factors (standard and living and education). Barro (1996) argues that the former possessions of Britain and Spain are substantially more democratic than are those of France, Portugal, or other countries. However, he concludes that the breakdown among different colonizers is irrelevant and colonial history is insignificant for democracy when measures of the standard of living (such as schooling and infant mortality) are held constant.

### 2.2.1.2 Ethnic diversity

Much academic writings on the determinants of democracy assume or aver that social heterogeneity lowers democracy's prospects. A number of eminent political scientists have seen diverse societies as disadvantaged when it comes to democratization (Lijphart, 1977; Dahl, 1971; Rabushka and Shepsle, 1972; Welsh, 1993). According to them, ethnic differences divide society and make compromise and consensus difficult. Heterogeneity also potentially undermine open politics by increasing the risk of intercommunal violence. When political parties and other organizations are formed more readily around ethnic than other identities, political entrepreneurs have an incentive to play on such divisions and to neglect efforts to mobilize citizens around civil rights and class concerns (Horowitz, 1985). Fish and Brooks (2004) also explains that more ethnically diverse countries are less likely to sustain democracy because ethnic diversity, by contributing to inequality can reduce democratic tendency. The 2001 Freedom House survey provided support these points by showing that democracy has been significantly more successful in monoethnic societies than in ethnically divided and

multiethnic societies (Karatnycky, 2002). Barro (1999) in his empirical investigation of the determinants of democracy also highlighted that the population degree of heterogeneity with respect to ethnicity, language and culture also matter for democracy, the common idea being that more heterogeneous societies are less able to sustain democracy.

### 2.2.1.3 Religious affiliation

Religious affiliation has also been stressed as an important determinant of democracy (Lipset, 1994; Boone, 1996), even though the theories about the relationships between religion and political structure are not very well developed. Some authors have pointed out the deficit of democracy in the Muslim world and have then negatively associated affiliation to Muslim religion to democratic performance (Karatnycky, 2002; Goodwin, 1995; Mayer, 1998; Fish, 2002) According to their analysis, the fusion of temporal and spiritual authority in Islamic thought, the subordination of women, and a culture of intolerance predispose Muslim societies to authoritarianism.

From an empirical point of view, Barro (1999) from a set of over 100 countries from 1960 to 1995, provides statistical evidence that Protestant countries are nearly always highly democratic, whereas Muslim countries are usually not democratic. However, his empirical analysis also shows that the effects of religion on democracy are likely to work through the channels of economic development variables such as the gap between male and female education and the indicators of the standard of living.

## 2.2.2 Economic performance and democracy

In what extent democracy leads to development economic outcomes such as economic growth<sup>3</sup> and high level of income? This question has been the subject of much interest in the field of

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<sup>3</sup>For a complete survey of economic theories on the link between democracy and growth, see Przeworski and Limongi (1993) and Przeworski, Alvarez, Cheilub, and Limongi (2000).

political economy. Competing theoretical and empirical studies have yielded few robust conclusions supporting each of the following possibilities: "democracy facilitate development", "democracy hinders development", and "there is no independent relationship between democracy and development outcomes". Using indices of democracy (political openness, political regimes, civil liberties), a huge empirical literature has examined the question by looking at the causal effects of democracy on economic growth, and has reached inconclusive findings. Helliwell (1994) finds that while democracy (measured by index of political rights and civil liberties) affects positively education and investment, it has a negative and insignificant impact on growth once these factors are controlled for, concluding that democracy has no significant effect on economic growth. Barro (1996) highlights a non-linear relationship between democracy and growth. His results explain that at low levels of democracy, growth increases with democracy and at higher levels of democracy, growth decreases with democracy. The work of Monali (1997) finds a positive association between the degree of non-elite participation in politics and economic growth. Tavares and Wacziarg (2001) finds that the positive effect of democracy on growth works through the channels of education, reduced inequality, and lower government consumption. Rodrik (1997) investigates the effect of democracy (as measured by indexes of civil liberties and political rights) on economic performance and show that as compared with autocracies, democracies yield higher and more predictable growth rates. Tavares and Wacziarg (2001) provide empirical evidence that after taking into account the positive and negative indirect effects of democracy on growth (negative effect through the physical capital accumulation and the government consumption and positive effect through the accumulation of human capital and the lowering of income inequality), the overall effect of democracy on economic growth is moderately negative. Barro (1999) explains that the net effect of democracy on growth is uncertain. While an expansion of political freedom provides a check on governmental power and thereby limit the potential of public officials to amass personal wealth and to carry out unpopular policies, this may also encourages rich-to-poor

redistributions of income and thus enhance the power of interest groups. Using a measure of democracy based upon the number of years that a country can be regarded as a democracy, De Haan and Siermann (1996) conclude that there is no robust relationship between democracy and economic growth. Recently, Persson and Tabellini (2006) supported that the relationship between democracy and economic growth depends on the details of democratic regimes such as electoral rules, forms of government, stability and persistence of democratic institutions. Summing up, what comes out from the number of studies that have investigated the causal relationships from democracy to economic development and growth is that there is no robust findings.

However, interestingly, beside and inside the huge analytical literature about the beneficial effects of democracy on economic performance and development, Number of studies have also interestingly adressed the other-way linkage between democracy and development economic outcomes that is the effect of income on democracy.

The modernization theory articulated by Lipset (1959) claims that countries should become more democratic as they become richer. This seminal work of Lipset (1959) discusses a broad category of economic development as determinant of democracy, including indices of wealth (per capita income), of urbanization and of industrialization. The key element of this hypothesis is that richer countries are more willing to promote democratic values and receptivity to democratic political tolerance norms.

A great deal of studies have follow up this theory insofar as they recognize that the level of income is an important background condition for democracy (Lipset, 1960; Dahl, 1971; Bollen, 1979; Lipset, 1994) although the exact form of the relationship is still a matter of debate. However this theory has received mixed empirical support. While Barro (1999) and Helliwell (1994) finds that improvements in the standard of living (or income level) favour democracy (as measured by a subjective indicator of electoral rights, political rights and civil liberties), Acemoglu, Johnson, Robinson, and Yared (2005) highlight with postwar data, that when the

factors that simultaneously affect income and democracy are controlled for the strong cross-country correlation between democracy and a high level of income does no longer result in a causal effect on income on democracy.

Recent studies of democratization do however point out that other factors can play a causal role in the emergence of democracy. Sachs and Warner (2001) and Ross (2001) highlight natural resource endowments of countries as a strong determinant, arguing that greater reliance on mineral exports leads to concentrated power and then reduces the probability that dictatorships will become democratic. The work of Lipset (1959) predicts that a better educated population favours democracy and democratic practices because education provides individuals with a higher value of staying politically involved. While a number of empirical studies provide support to this view (Barro (1999); Przeworski, Alvarez, Cheibub, and Limongi (2000); Glaeser, La Porta, de Silanes Florencio, and Shleifer (2004)), Acemoglu, Johnson, Robinson, and Yared (2005) find that when considering country *within* variation, there is no evidence that countries that increase their education are more likely to become democratic.

### 2.2.3 Instability of economic performance and democracy: causation and reverse causation

Few academic works deal explicitly with issues about causal relationships between macroeconomic instability (or its determining factors) and the quality of institutions. One aim of this chapter is to explain how macroeconomic instability (more precisely terms-of-trade instability) can affect the quality of democracy. However, the well-known papers in the literature about macroeconomic instability and institutions have been interested in the reverse causation, that is the institutional causes of instability. Rodrik (1997) has explained that countries with weak institutions of conflicts management and in which latent social conflicts exist are more likely to experience severe external shocks. The core idea of his argumentation



is that shocks (more precisely negative terms-of-trade shocks), by reducing wealths to be redistributed, weaken growth stability because of redistribution conflicts when there are no rules to manage them. So, by concluding from this idea, good institutions of conflicts management (democratic institutions, rule of law, good social insurance system, etc.) can mitigate the impacts of shocks on growth. Acemoglu, Johnson, Robinson, and Thaicharoen (2003) have also explained that macroeconomic volatility are deeply determined by weak institutions rather than distortionary macroeconomic policies. Countries characterized by weak institutions are more likely to experience macroeconomic instability because of weak constraints on the executive (that favor bad resources redistribution and distortionary policies), lack of entrepreneurs confidence (which causes investment instability), and weak security of contracts. Democratic institutions have also proved to have direct effects on macroeconomic stability, making that countries leaded by democratic regimes experience greater macroeconomic stability than non-democratic countries (Rodrik, 1997; Weede, 1996; Almeida and Ferreira, 2002; Quinn and Woolley, 2001; Mobarak, 2005). Satyanath and Subramanian (2004) evidenced that democratic political institutions have a strong and statistically significant causal impact on macroeconomic stability. Yang (2008) has also examined the causal relationship between democracy and growth volatility, and has shown that democratic institutions lower the volatility of real GDP per capita growth in ethnically divided countries.

However, the idea that institutions can be affected by instability also has important policy implications and is relevant for our research. We are interested in this chapter in knowing how terms-of-trade instability can affect the quality of democracy. Our main theoretical reasoning is that terms-of-trade instability affect negatively democracy by generating income instability (Easterly and Kraay, 2000) and in turn, by lowering growth (Mobarak, 2005), which has been proved to be unfavourable to democratic processes. Academic works interested in the economic determinants of democracy have highlighted the level of development as one of the main determinants (Lipset, 1959; Helliwell, 1994). Nonetheless, while most

of them has established a positive effect of the level of growth on democracy, very few of them have discussed the quality of growth, and more specifically its stability (although the both can be closely related). We support the view that terms-of-trade instability causes (*ceteris paribus*) growth instability which in turn, weakens democracy. As a matter of fact, growth instability can have an effect on the quality of democracy through (income) growth volatility in various ways. The first argument is that macroeconomic volatility is costly for growth and development, which are important determinants of democracy. Indeed, development which is favourable to the emergence of good political institutions, requires sustained increases in income. The influential work of Ramey and Ramey (1995)<sup>4</sup> using a sample 92 countries has shown that countries with higher volatility have lower growth rates. However and more interestingly, Mendoza (1997) shown that volatility associated with terms-of-trade fluctuations could lead to slower growth (depending of the degree of risk aversion). Since we know that democratic institutions are evolving slowly and that their establishment and their reinforcement require financial resources (resources for organizing democratic elections, resources to give means to civil society to be effective, resources for the establishment of an efficient parliament or an independent judicial court, etc.) to be taken from growth, income volatility which lower growth appears as a penalizing factor of democracy.

Instability from trade (proxied in this research by terms-of-trade instability) *per se* can also be harmful for democracy. High trade dependency (which increases countries exposure to external shocks) have been found to be unfavorable for the installation and consolidation of democratic regimes. As a matter of fact, terms-of-trade instability which can be seen as one of the symptoms of economic dependence and weak diversification, is a source of high exposure to fluctuations in world markets and economic instability, which penalize the stabilization and legitimation of regimes (Huber, Rueschemeyer, and Stephens, 1993). About this point, Djankov, Montalvo, and Reynal-Querol (2008) have explained that negative shocks

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<sup>4</sup>followed by many other studies

bring pressure on governments to reduce democracy and checks and balances.

Income volatility (arising from terms-of-trade instability) can also have a negative effect on democratic institutions by generating uncertainty and risks on resources to be redistributed in an economy. On the one hand income instability can create some uncertainty in the politico-economic environment which can in turn have a direct negative effect on the democratic process by changing the way of assuming power. On the other hand, this uncertainty can give some incitement to elites in power to exclude other competing political groups in order to maximize in the present, rent capture. So, elites can engage in rent-seeking activities in "good times" (when income is high<sup>5</sup>) if their objective is to smooth their private consumption across time. As a consequence, this can result in a weak political competition and a therefore in a weak quality of democracy.

## 2.3 Does foreign aid promote democracy?

### 2.3.1 Aid and democracy

Several papers have examined the potential direct impact of aid on institutional development and have found different results about the nature of this impact, making them very debated.

Many of them have focused on legal institutions (rule of law, corruption, bureaucracy, contracts, property rights), others on economic and political institutions, and have found that aid can have negative as well as positive effects on these institutions (see Alesina and Weder (2002); Knack (2001); Brautigam and Knack (2004); Knack and Rahman (2004); Svensson (2000); Goldsmith (2001); McNab and Everhart (2002b); Tavares (2003); Hoffman (2003); FMI (2005); Coviello and Islam (2006)).

Regarding the specific effect of aid on democracy, the empirical findings in the literature seem

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<sup>5</sup>Since instability can be viewed as an alternation of positive and/or negative shocks

### 2.2.3 Does foreign aid promote democracy?

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to be less debated. The general view of the relationship between foreign aid and democracy is that one of aid's purposes is to promote democracy in the developing world. Excepted the work of Djankov, Montalvo, and Reynal-Querol (2008) which finds that aid have a negative effect on democracy, most of empirical papers conclude either to positive effects or simply to no effects. Djankov, Montalvo, and Reynal-Querol (2008) explain their findings by the fact that foreign aid could lead politicians in power to engage in rent-seeking activities in order to appropriate aid resources and to exclude other groups from the political process. This damage political institutions because they become in this way less representative and less democratic.

The democracy-building efforts of aid donors potentially contribute to improve democratization by improving the learning of electoral processes (through technical assistance and conditionalities), and by improving human resources quality and income level (Knack, 2004). This point is confirmed by Kalyvitis and Vlachaki (2005) who find strong evidence that political aid<sup>6</sup> (electoral and technical assistance) directed to democratization predict positively democratic transitions in recipient countries, when aggregate aid flows does not.

While most of empirical studies on aid and democratization have concluded to the point that aid has no effect on democracy (Hoffman, 2003; Knack, 2004; Kalyvitis and Vlachaki, 2005), some of them have found that aid could lead to better civil liberties, political competition and participation. Goldsmith (2001) supports this point by explaining that foreign aid, by improving health and literacy, make people more informed and aware of public politics, which improve the quality of democracy. Dunning (2004) demonstrates that foreign aid has a (small) positive effect on democracy in the post Cold War period.

Summing up, the main empirical studies about the direct effect of aid on democratic institutions conclude that aid has no effect on them, or at most has a positive effect on democracy. But what impacts of aid on institutions would be expected in some exogenous circumstances?

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<sup>6</sup>The data they used is Government and Civil society Aid, provided by OECD

### 2.3.2 Aid and growth: the stabilizing nature of aid

The aid effectiveness literature focusing on macroeconomic instability and economic vulnerability of recipient countries provide us with the general intuition of this research. If one accepts the point that aid has proved to be more effective in vulnerable countries by protecting growth against external shocks (more precisely by making it more stable), so aid could therefore have an indirect (positive) effect on institutions in these countries through this channel, since institutional development requires some stability in the economic environment<sup>7</sup>.

Guillaumont and Chauvet (2001); Chauvet and Guillaumont (2004, 2009) have shown that negative terms-of-trade shocks have adverse effects on growth and that aid is more effective in vulnerable countries by making growth more stable in the medium term. Chauvet and Guillaumont (2009) have discussed the stabilizing nature of aid regarding exports and more interestingly for this research, regarding growth volatility. They have explained that more than aid cyclical (pro or counter), it's the relative trend level of aid and its relative volatility compared to the flow of the interest (exports, national revenues, etc.), that contribute to explain its dampening character. Pointing out aid volatility as a factor of income volatility, their findings have concluded that the level of aid tends to dampen it. Guillaumont and Chauvet (2001); Chauvet and Guillaumont (2004, 2009) have explained that in cases shocks occur, aid smoothes public expenditures and limit the risk of fiscal deficits. In recipient countries, national income and fiscal revenues are indeed more likely to be influenced by aid disbursements. The indicator of vulnerability they have used allow them to conclude that the level of aid is likely to cushion the negative effects of external shocks on economic growth<sup>8</sup>.

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<sup>7</sup>Figure 1 illustrates the quite complex relationships to be taken into account when studying this effect

<sup>8</sup>in Guillaumont and Chauvet (2001), the indicator of vulnerability takes into account the size of population, the instability of exports agricultural production, while in Chauvet and Guillaumont (2004), it only takes into account exports instability and the negative trend of terms-of-trade. Since (exogenous) terms-of-trade instability is also a source of vulnerability (which causes a risk on growth), the growth-stabilization effect of aid can also be valid for this type of instability.

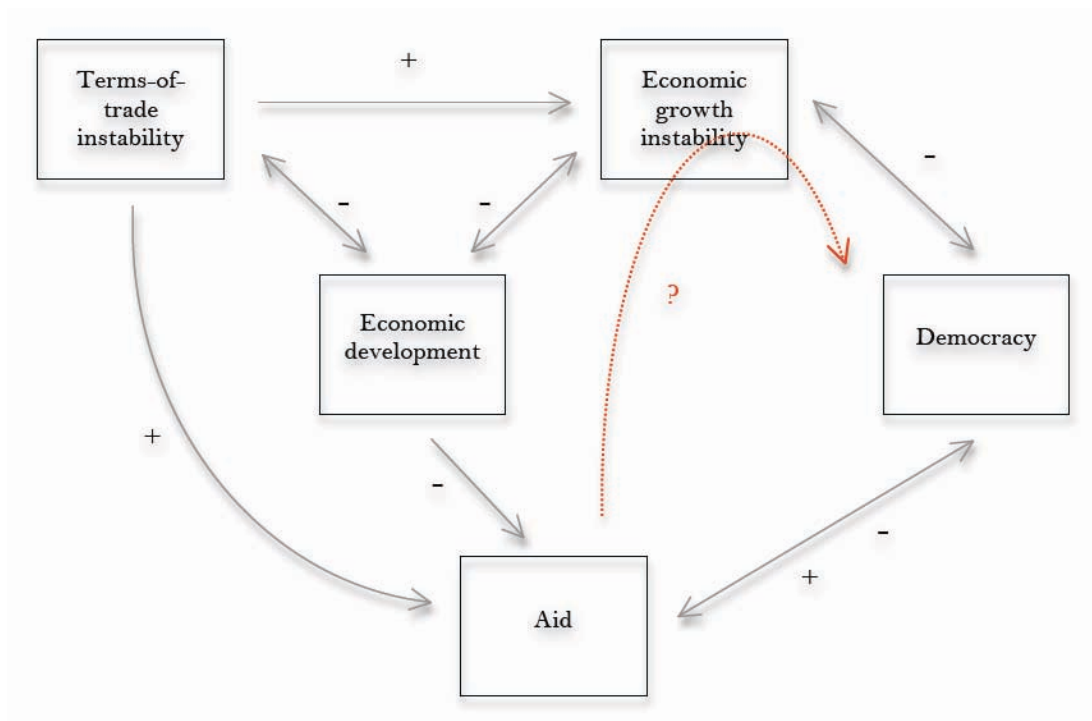
### 2.2.3 Does foreign aid promote democracy?

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Collier and Goderis (2009) have pursued this idea and have shown that the level of aid lower the negative effects of commodity export prices shocks on growth because aid finance precautionary expenditures, which reduce vulnerability to shocks. Elsewhere, Collier and Dehn (2001) have focused on export price shocks to explain aid effectiveness and have shown that while positive shocks have insignificant effects on the growth process, negative shocks reduce growth and the interaction between them and offsetting increases of aid is significantly positive, meaning that aid mitigates the negative effects of terms-of-trade deterioration on growth.

Easterly and Kraay (2000) have shown for small states that because of their greater openness, terms-of-trade shocks volatility is a source of growth instability. We can generalize this point to the under-developed countries because of their high dependence to trade and their specialized exports, making their growth performances fragile in cases of trade shocks. In the previous sections, we have provided some arguments explaining that growth instability is not good for institutions partly because a stable growth allow quality institutions to emerge. We deduce from this point that all causes of stable growth are indirect causes of the emergence of good institutions. So, if aid reduces growth volatility, it could also protect institutions in situation of instability. To put things briefly, our main theoretical prediction is that aid, by mitigating the adverse effects of shocks on growth could have a positive conditional effect on democracy (*ceteris paribus*). The next sections provide an empirical evaluation of this prediction.

Figure 2.1: From aid to democracy: interrelationships with other economic variables



Source: Author

## 2.4 Empirical evidence

### 2.4.1 The data

We use data from 71 developing countries over the period 1980-2003. Aid data are from the World Development Indicators (2005) and the Global Development Finance (2005) (originally taken from OECD/DAC). Data on exports and imports of goods and services, Gross Development Product (measured in constant dollars of 2000 and in purchasing power parity) and population, have been also gathered from the same source. The Global Development Network Growth Database collected by William Easterly provides us with data on legal origin,

ethno-linguistic fractionalization, geography and infant mortality. We focus in this chapter on political insitutions, and more precisely on democratic insitutions. So, we use two synthetic democratic indicators from the Polity IV project database and the Freedom House database (See appendix A for a complete description of these indicators). Data on terms-of-trade are from the United Nations Conference on Trade and Development(UNCTAD) statistics.

### 2.4.2 The measure of term-of-trade instability

Our terms-of-trade instability variable measures the gap between the terms-of-trade and an estimated trend of terms-of-trade. Instability is indeed always measured over a reference which is often an estimated trend. This requires to make some assumptions about the nature of this trend. As a matter of fact, estimations can give wrong results if a deterministic trend is estimated whith a non-stationary variable. Because most of economic variables include a trend which is not purely stochastic, we assume the trend in terms-of-trade to be mixed (both deterministic and stochastic). Then, we get the predicted value of terms-of-trade ( $\hat{X}$ ) by running the following regression (equation 3) on 12-year periods<sup>9</sup> ( $i$  refers to countries,  $t$  refers to years.  $X$  is the terms-of-trade variable and  $\epsilon$  is the idiosyncratic error term):

$$X_{it} = \alpha + \beta X_{it-1} + \gamma t + \epsilon_{it} \tag{2.1}$$

Then, we compute for each period, an instability index by using the following formula

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<sup>9</sup>We also considerer 12-year trends



(quadratic mean):

$$Instab_{ip} = 100 \cdot \sqrt{\frac{1}{T} \sum_{i=t_1}^{t_2} \left( \frac{X_i - \widehat{X}}{\widehat{X}} \right)^2} \quad (2.2)$$

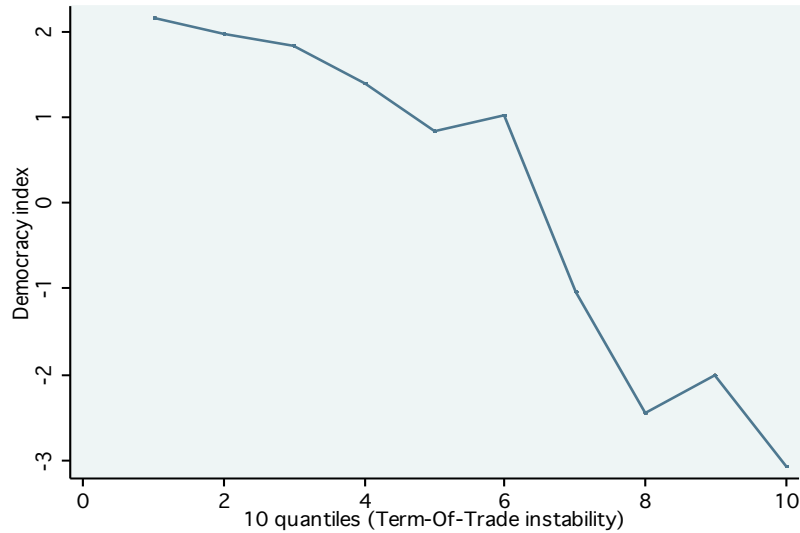
where  $T=t_2-t_1$  is length of periods  $p$ .

### 2.4.3 Some stylized facts

Our theoretical arguments predict a negative effect of instability on the quality of institutions (democracy). We have explained through literature in which directions causalities between institutions and instability can run. We use in this section some statistical tools to assess the correlation between these two variables. Figure 2.2 confirms the expected negative correlation between terms-of-trade instability and the quality of democracy. As a matter of fact, after sorting countries by deciles regarding their indexes of terms-of-trade instability<sup>10</sup>, we show by using the institutional quality index from Polity IV that the most unstable countries are the ones which have the weakest democratic institutions. Table 2.4 also confirms this statistical evidence, by indicating a negative and significant correlation between terms-of-trade instability and the Freedom House democratic index. Though a correlation does not mean a causality, we predict a causal effect of instability on democracy, since in our opinion, one can assume an exogeneity of terms-of-trade instability. As a matter of fact, most of developing countries rely on their primary sectors exports and are price takers on the world markets. So, by using a variable of terms-of-trade instability, we exclude the assumption of the causal relationship from institutions to instability.

<sup>10</sup>See previous section for the calculation method of instability and appendix C for the sample countries

**Figure 2.2: Quality of democracy (Polity2 combined score of democracy and autocracy) by deciles of TOT instability**



*Source: Author*

#### 2.4.4 Identification of causal effects

Our econometric model includes as main controls<sup>11</sup>, net aggregate Official Development Assistance, terms-of-trade instability, and an interaction term equal to the product of aid and terms-of-trade instability. This later variable allow us to test the dampening effect of aid. We write the baseline model as follows:

$$Democ_{it} = \alpha_i + \beta I_{it} + \gamma A_{it} + \kappa A_{it} \times I_{it} + \omega X_{it} + \nu_{it} \quad (2.3)$$

where  $Democ_{it}$  is an index of democracy,  $A_{it}$  is the aid variable,  $I_{it}$  is terms-of-trade instability and  $A_{it} \times I_{it}$  is the interaction term between aid and terms-of-trade instability.  $\alpha_i$

<sup>11</sup>See appendix B for a more detailed description and definition of the data

is country fixed effects which are included to capture time-invariant country characteristics.  $X_{it}$  is a vector of controls including geography, education, ethnolinguistic fractionalization, initial conditions, estimated settler mortality rate, life expectancy, and an african dummy variable<sup>12</sup>.  $i$  and  $t$  stand respectively for countries and time periods. Democracy in a country is indeed a function of many factors. Ethnic diversity (proxied by ethnolinguistic fractionalization) is often assumed to have an effect on political freedom and political competition, since democracy is less likely to prevail in countries which are socially divided and which lack cultural and linguistic coherence (Lijphart, 1977; Horowitz, 1993). Socioeconomic development (that we proxied by the purchasing power parity estimate of income per capita, and education) has long been believed to be conducive to the emergence or survival of democracy. Democracy can also be explained by geographical characteristics which are a good control for climatic conditions and contagion effects, and which may predict political regime classification. Initial economic conditions (proxied by initial level of per capita income) also matter for democracy, since they are assumed to determine the initial quality of democracy (and therefore current, because of the persistence of institutions). So, we anticipate positive estimated coefficients of the interaction term, geography, education, and negative coefficients of instability, and fractionalization. Since we focus on long-run effects of aid and instability, and because democratization is a long-term process, we average our variables on twelve-year periods (1980-1991 and 1992-2003).

### *Dealing with endogeneity issues*

It is often argued that aid and democracy are endogenously related, since countries which make progress in their democratization process are able to attract more aid ("conditionality" argument), as some donors reward recipients with better democratic performances with

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<sup>12</sup>Appendix B give a precise description of all of these variables

more aid. The econometric estimation of a such model facing reverse causality between aid and institutions requires to deal rightly with endogeneity. As demonstrated by Wooldridge (2006) Ordinary Least Squares (OLS) estimation of a such model produce biased and inconsistent estimators. Although in principle, the endogeneity problem can be avoided by applying instrumental variable techniques, the fundamental problem is that there are no ideal instruments available. A good instrument in this case would be a variable which is highly correlated with aid but not with the error term in the regression. Nevertheless, we have tried to control for the aid endogeneity problem by using as excluded instruments, the amount of official development assistance and grants of the five main donors (identified each year), weighted by the distance between the donor and the recipient. So, following Brun, Chambas, and Guerineau (2006), we create instrumental variables for aid *à la* Tavares (2003), which should be correlated with the level of foreign aid received by a country while being exogenous to the level of democracy in this country. For each recipient country and each year, the five main aid donors are identified (with dummies variables). The total amount of aid is then weighted by the geographical proximity (proxied by the inverse of bilateral distance) of the recipient country with Washington (for Canada and United States), Brussels (for european donor countries), Tokyo (for Japan) and Canberra (for Australia and New Zealand). As explained by Tavares (2003), the reasoning is that, when a donor country increases its total aid outflows, recipient countries that are closer to that donor experience an exogenous increase in aid inflows. The overidentification tests and statistics confirm the quality of these two variables as instruments for aid. We also use as instruments for the interactive variable, the instruments for aid crossed with terms-of-trade instability in order to get the exogenous variations of this variable. We assume terms-of-trade instability to be exogenous<sup>13</sup>; as a matter of fact, most of developing countries rely on their primary sectors exports and are price takers on the world markets. Moreover, the principal international markets for developing

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<sup>13</sup>Unfortunately, it remains difficult to test the exogeneity of this variable, because of the weak availability of good instrumental variables.

countries exports are the advanced industrial countries on which developing countries also rely regarding their imports. Thus, terms-of-trade shifts should be determined exogeneously.

#### 2.4.4.1 Findings

The main results are presented in table 2.1<sup>14</sup>. In columns (1), (2) and (3), the dependant variable is the quality of democracy, measured by the *polity2* combined index of democracy and autocracy. All of our estimations include country fixed effects to take into account country-specific heterogeneity. The aid variable is aid per capita in the three specifications. Column (1) is the baseline specification and includes as controls, geography, education, ethnolinguistic fractionnalization, and initial income. According to the findings of previous studies, the effect of aid on democracy is not significantly different from 0, even if the coefficient is negative. Table 2.2 confirms this evidence about the direct impact of aid on democracy. Columns (1) and (2) show that when aid (measured as pr capita) is included as an explanatory variable and the instability variable (and the interactive term) is excluded, democracy seems not to be directly influenced by aid. Unsurprisingly, table 2.1 show that an increase in terms-of-trade instability seems to be associated with a significant decline in democracy, which confirms our theoretical expectations. But since both the coefficients of terms-of-trade instability and the multiplicative variables are significant, the marginal effect of terms-of-trade instability on democracy must be interpreted with caution. As demonstrated by Wooldridge (2006), this marginal effect depends on aid values, and equals  $\frac{\partial Democ}{\partial Instab} = \alpha + \beta Aid$ , where  $\alpha$  is the estimated coefficient of terms-of-trade instability and  $\beta$  the one of the interaction variable. From our main findings,  $\frac{\partial Democ}{\partial Instab} = -0.51 + 0.005Aid$ . This mean that at the sample mean value of aid (per capita) which is 54.82, the marginal effect of terms-of-trade instability on the quality of democracy is always negative, and is about  $-0.51 + 0.005(54.82) = -0.235$ .

More interestingly, we find that aid dampens the effect of instability on democracy. This

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<sup>14</sup>Regarding the number of countries we basically consider, the number of observations seems to be somewhat small; this is due to gaps in some important variables we control for in regressions.

effect is showed by the positive and significant coefficient of the interactive variable, explaining that as instability increases, the effect of aid on the quality of democracy becomes positive. This coefficient is however small and about 0.005. Figure 2.3 confirms this evidence in a different way. It plots the evolution of the estimated regression coefficient of the terms-of-trade instability variable on democracy (which remains significant) according to the countries' levels of aid dependency. It clearly comes out that as the level of aid dependency increases, the impact of terms-of-trade instability on democracy decreases, indicating that the most aid-dependent countries are the ones that experience a weaker impact of trade instability on democracy.

Among the control variables, education is the most powerful predictor of democracy. As expected, its coefficient is positive and significant. Geography and initial income are not significant. Only ethnolinguistic fractionalization has not the expected sign, and is significantly different from 0. In columns (2) and (3), we successively include in the regression for robustness, other possible determinants of democracy that are the estimated mortality of european settler, the initial income and a dummy variable for african countries. This african dummy controls for group specific effects; life expectancy allows a better control for socioeconomic development, and settler mortality control for historical conditions. As a matter of fact, Acemoglu, Johnson, and Robinson (2001) have explained that the different environments (from the viewpoint of their hospitality) faced by european colonists, have fundamentally influenced the types of long-lasting institutions they created. We find that these specifications does not change the main findings, and that the coefficients of interest are stable. Aid remains not significantly related to democracy; increase in instability still leads to a decrease of democracy, and aid has still a dampening effect. In column (3), except settler mortality which has not the expected sign (but is however weakly significant), all others significant variables have the right sign: geography, education, and initial income predict positively democracy, while having a high fractionalization index and being an african countries predict negatively

democracy. The Hansen overidentification test confirm the quality of instrumental variables for aid, since all associated p-values are above 10%.

Columns (1) and (2) of table 2.5 attempt to explain the dampening effect of aid according to our theoretical expectations, that is terms-of-trade instability is a source of income instability and aid dampens the negative effect of the primer because it makes growth more stable. In column (1), we test the direct effect of terms-of-trade instability on democracy, with the same set of control variables, and confirm its negative effects. In column (2), we include in the regression, income instability<sup>15</sup>. As expected, while the effects of terms-of-trade instability remains negative and far from significance, the coefficient of income instability variable which is about -2.95, is negative and significantly different from 0. And because we suspect income instability to be endogenous to democracy (since it may depend of many internal factors correlated with the quality of democracy), we instrument it. As a matter of fact, Rodrik (1997) has shown that democracies produce greater stability in economic performance. So, to deal with this potential endogeneity, we use as instrumental variable for income instability, foreign direct investments (henceforth FDI) instability. The amount of FDI is indeed a strong predictor of the level of development and income, and is not obviously related to democracy. The Hansen overidentification test confirms the quality of this instrumentation, since the associated p-value is about 0.19. Among the control variables, except life expectancy, all of them have the expected sign, even if only geography and settler mortality are significantly different from 0. This result shows that income instability is a valid transmission channel of the effect of terms-of-trade instability on democracy. To come back to our question of interest, if the negative effect of terms-of-trade instability on democracy is channeled through income instability, so, aid may have a dampening effect, since some authors have shown that it makes income growth more stable.

Finally, we test the robustness of our main results regarding the use of another democracy

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<sup>15</sup>computed with the same methodology used for the calculation of terms-of-trade instability

index (the Freedom House index of democracy), the use of another measure of aid intensity (net official development assistance over GDP), and the use of different temporal periods (8-years periods). Our main results which are summarized in columns (1), (2) and (3) of table 2.6, stand. Except geography and settler mortality which have not the expected sign, terms-of-trade instability remains detrimental for the quality of democracy and aid remains stabilizing, while having no direct effect on democracy.

We also run all of regressions with a sample only including african countries; our main findings stand. The instability of terms-of-trade proved to affect negatively and significantly african countries's democratic institutions . So for the set of african states, aid mitigates this negative effects and do have a positive effect on democracy conditional on terms-of-trade instability and aid instrumental variables remain valid.



**Table 2.1: The impact of aid and terms-of-trade instability on democracy (Panel IV regressions, 1980-2003, 12-years periods).**

	Dependent variable <sup>a</sup> : democracy (polity2)		
	(1)	(2)	(3)
Aid	-0.07 <sub>(-1.31)</sub>	-0.072 <sub>(-1.31)</sub>	-0.07 <sub>(-1.32)</sub>
Terms-of-trade instab.	-0.51 <sup>(a)</sup> <sub>(-2.54)</sub>	-0.51 <sup>(a)</sup> <sub>(-2.54)</sub>	-0.51 <sup>(b)</sup> <sub>(-2.44)</sub>
Aid×instability	0.01 <sup>(b)</sup> <sub>(2.00)</sub>	0.01 <sup>(b)</sup> <sub>(2.00)</sub>	0.01 <sup>(b)</sup> <sub>(1.99)</sub>
Geography	-0.02 <sub>(-0.48)</sub>	0.13 <sub>(1.28)</sub>	0.35 <sup>(a)</sup> <sub>(3.27)</sub>
Education	0.25 <sup>(a)</sup> <sub>(3.23)</sub>	0.25 <sup>(a)</sup> <sub>(3.23)</sub>	0.25 <sup>(a)</sup> <sub>(3.13)</sub>
Eth. fractionalization	0.12 <sup>(a)</sup> <sub>(6.16)</sub>	0.08 <sup>(c)</sup> <sub>(1.77)</sub>	-0.07 <sup>(a)</sup> <sub>(-2.46)</sub>
Initial income	1.10 <sub>(0.30)</sub>	1.77 <sub>(0.50)</sub>	2.49 <sub>(0.68)</sub>
Settler mortality		0.24 <sub>(0.17)</sub>	4.03 <sup>(c)</sup> <sub>(1.88)</sub>
Life expectancy			-0.0002 <sub>(-0.00)</sub>
Africa			-13.8 <sup>(a)</sup> <sub>(-4.45)</sub>
Countries fixed effects	<i>yes</i>	<i>yes</i>	<i>yes</i>
$R^2$	0.86	0.86	0.87
Obs	88	88	88
Groups	44	44	44
<i>Overidentification test for aid instruments</i>			
Hansen J Stat. <sub>(p-value)</sub>	2.34 <sub>(0.12)</sub>	0.36 <sub>(0.54)</sub>	1.82 <sub>(0.17)</sub>

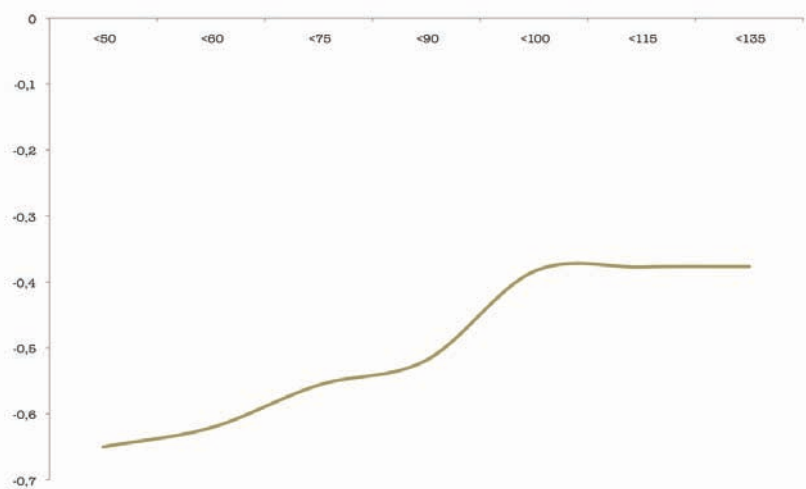
<sup>a</sup> Notes: (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. Heteroskedasticity robust t-statistics in parentheses. Aid is measured as per capita.

Table 2.2: Aid and democracy (Panel IV regressions, 1980-2003, 12-years periods).

	Dep. var. <sup>a</sup> : democracy (polity2)	
	(1)	(2)
Aid	-0.01(-0.34)	-0.03(-0.97)
Geography	0.05 <sup>(a)</sup> (2.00)	0.04(1.53)
Education	0.02(0.45)	0.01(0.45)
Eth. fractionalization	0.007(0.39)	0.01(0.78)
Initial income	0.33(0.45)	0.42(0.80)
Settler mortality	0.45(1.17)	0.45(1.44)
Life expectancy		-0.03(-0.52)
Africa		-0.29(-0.29)
Countries fixed effects	<i>yes</i>	<i>yes</i>
$R^2$	0.80	0.76
Obs	98	98
Groups	49	49
<i>Overidentification test for aid instruments</i>		
Hansen J Stat. <sub>(p-value)</sub>	2.30(0.13)	1.59(0.21)

<sup>a</sup> Notes: (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. Aid is measured as per capita.

**Figure 2.3: Evolution of the regression coefficient of the TOT instability variable according to the countries' levels of aid dependency (Aid per capita).** x-axis: aid per capita (2004 USD). y-axis: estimated coefficient of the impact of TOT instability on democracy (table 2.1 settings)



*Source: Author's calculations*

## 2.5 Concluding remarks and policy implications

Aid neither promote nor undermine democratic processes, but have a indirect positive effect on democracy in the long term by dampening the adverse effects of terms-of-trade instability. While the debate about how external assistance could improve political institutions is still ongoing, this study finds that aggregate aid flows mitigate instability from trade and protect democracy, this being probably due to the fact that aid makes growth more stable, as shown by some recent studies (Guillaumont and Chauvet, 2001; Chauvet and Guillaumont, 2004, 2009; Collier and Dehn, 2001; Collier and Goderis, 2009). We also shown that terms-of-trade instability is a source of income instability which have a negative effect on democracy. So, to come back to the development strategies we proposed in introduction, foreign aid can

## 2.2.5 Concluding remarks and policy implications

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be useful in promoting institutions through their determinants. However, in a context of a debate about how to significantly increase aid in developing countries to reach the Millenium Development Goals by 2015, the findings from this study must not be interpreted as a calling for a big push of aid. As a matter of fact, even if democracy is considered as a meta institution, others types of institutions (legal and economic institutions) also matter for growth and development, and numerous studies have shown that they can be severely dammaged as a result of large amouts of aid.

Our empirical findings also suggest some important policy recommendations regarding selectivity in aid allocation. In line with some recent researches which emphasized macroeconomic vulnerability as a selectivity factor, our results further suggest that allocating aid to the more vulnerable countries could have some positive impacts in terms of long-term institutional building. We indeed provided evidence that the long-run marginal impact of aid on democracy increases along with the level of terms-of-trade instability, which has proved to be a determinant of the income instability. The findings also give credit to the point that on top of increasing the importance of economic vulnerability as a selectivity criteria for aid allocation, donors' strategies might also enlarge aid's prerogatives by including the long-term reduction of vulnerability of developing countries.

## Appendix A The Freedom House and Polity IV indicators of democracy

### A.1 The Freedom House democracy index

The Freedom House index focuses on two aspects of democracy which are political rights and civil liberties. The methodology of assessing democracy consist in ranking each country regarding these two aspects, from 1 (worse democratic situation) to 7 (best democratic situation). Evaluations are made on the basis of the answers to a questionnaire submitted to actors from civil society, political world and the media, which are mostly non governmental organizations or press. Next, the synthetic index is computed by averaging the index of political rights (proxied through the election mode of the chief of executive and the existence of an electoral framework) and the index of civil liberties (proxied through the freedom of opinion, the freedom of believes, the freedom of association, the legitimate state and human rights, the autonomy of people and the economic rights). The questionnaire is made of 8 questions about political rights and 14 questions about civil liberties; the scale of each question goes negatively from 1 to 4. Finally, depending of the total score, the two index are given a note between 1 and 7 ([www.freedomhouse.org](http://www.freedomhouse.org)).

### A.2 The Polity IV democracy index

The Polity IV project from the University of Maryland provide a database about several indicators of democracy (executive constraints, political participation, openness in recruitment, etc.). The *polity2* index is computed by summing an index of democracy (*DEMOC*) which is positively scaled from 0 to 10, and an index of autocracy (*AUTO*) which is positively scaled from -10 to 0. The (*DEMOC*) index of democracy assesses democracy on the basis of four criteria: competition in political participation, competition and openness in the

## 2.A The Freedom House and Polity IV indicators of democracy

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executive recruitment, and institutional constraints on the executive power. For instance, to assess openness in executive recruitment, assessors will ask whether all people can potentially access to the power if elections are free, or whether the power are hereditary. For instance, in order to assess executive constraints, assessors will be interested in the existence of a legislative power or a constitutional strenght. These informations are used to compute a ranking for each variable. So, political participation will be coded by 3 in cases of competitive situations, by 2 in cases of transitional situations, and by 1 in cases of factional situations. The total score of these differents components of democracy will be the score for *DEMOC* variable. The *AUTOC* index of autocracy which assesses political competition and respect for political liberties is computed with the same methodology. Thus, situations of repressed competitiveness of participation will be coded by -2, and situations of supressed competitiveness of participation will be coded by -1. The scale for the *DEMOC* variable goes positively form -10 to 0. In the end, the *polity2* synthetic variable is obtained by summing the two indexes and by normalizing situations that assessors have considered as impossible to assess like periods of political transitions (Marshall, Gurr, and Jaggers, 2009).

## Appendix B Data description and sources

<u>Variable</u>	<u>Definition</u>	<u>Source</u>
Aid per capita	Net aggregate official development assistance transfers (2004 \$US millions) per capita	Author's calculations from Development Assistance Committee (DAC) online database and World Development Indicators, 2005
Aid/GDP	Net aggregate official development assistance transfers (2004 \$US millions) as share of gross domestic product	Author's calculations from Development Assistance Committee (DAC) online database and World Development Indicators, 2005
Polity2 index	Combined democracy and autocracy score, ranged from -10(full autocracy) to +10(full democracy)	Polity IV project
Freedom House index	Democracy index, ranged from 1 (best democratic situation) to +7 (worse situation)	Freedom House
Terms-of-trade instability	Net barter terms-of-trade instability (see section 5.2 for the calculation method)	Author's calculations
Income instability	instability of GDP per capita (2000 US \$), computed with the calculation method described in section 5.2	Author's calculations
Geography	Distance from equator of capital city measured as $\text{abs}(\text{latitude})/90$ .	World Bank (2002)
Education	Literacy rate, adult total (% of people 15+).	World Development Indicators, 2005
Ethnolinguistic fractionalization	Probability that two persons randomly selected in the population don't belong to the same ethnic group.	Atlas Narodov Mira
Settler mortality	Natural logarithm of estimated european settlers' mortality rate.	Acemoglu, Johnson, and Robinson (2001)
Life expectancy	Life expectancy at birth, for total population (years).	World Development Indicators, 2005
Africa	Dummy variable taking value 1 if a country belongs to Africa, 0 otherwise.	Author's calculations
Initial income	Natural logarithm of GDP per capita in 1980 (2000 US dollars and PPP).	World Development Indicators, 2005
Income growth	Natural logarithm of GDP per capita growth (2000 US dollars and PPP).	World Development Indicators, 2005

## Appendix C Base sample countries

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1. Algeria*	16. Costa Rica	31. Israel	46. Nepal	61. Sudan*
2. Argentina	17. Ivory Coast*	32. Jamaica	47. Nicaragua	62. Syrian Arab Republic
3. Bahrain	18. Cyprus	33. Jordan	48. Niger*	63. Thailand
4. Bangladesh	19. Dominican Rep.	34. Kenya*	49. Nigeria*	64. Togo*
5. Benin*	20. Ecuador	35. Kuwait	50. Oman	65. Trinidad and Tobago
6. Bolivia	21. Egypt*	36. Lao PDR	51. Pakistan	66. Tunisia*
7. Botswana*	22. El Salvador	37. Lesotho*	52. Panama	67. Turkey
8. Brazil	23. Fiji	38. Liberia*	53. Paraguay	68. United Arab Emirates
9. Burkina Faso*	24. Ghana*	39. Malawi*	54. Peru	69. Uruguay
10. Burundi*	25. Guatemala	40. Malaysia	55. Philippines	70. Venezuela
11. Cameroon*	26. Honduras	41. Mali*	56. Rwanda*	71. Zimbabwe*
12. Central African Rep.*	27. India	42. Mauritania*	57. Saudi Arabia	
13. Chad*	28. Indonesia	43. Mexico	58. Senegal*	
14. Colombia	29. Iran	44. Morocco*	59. Singapore	
15. Congo (Rep.)*	30. Islamic Rep.	45. Mozambique*	60. Sri Lanka	

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\*African countries



## Appendix D Descriptive statistics

Table 2.3: Descriptive statistics

	Obs	Mean	Std. Dev.	Min.	Max.
<b>A. Aid variables</b>					
Net ODA per capita (US \$)	204	54.82	71.29	-2.40	485.52
Net ODA as percent. of GDP (%)	198	0.11	0.14	-0.0002	0.89
<b>B. Institutional measures</b>					
Polity2 index	203	-0.86	6.41	-10	10
Freedom House index	204	4.61	1.59	7	1
<b>C. Terms-of-trade</b>					
Net barter terms-of-trade	150	113.37	42.39	26.25	397.54
Terms-of-trade instability (12-years trend)	150	9.53	9.33	7.63e-06	90.22
<b>D. Countries characteristics</b>					
Geography	204	16.84	10.92	0	39
Education	168	66.04	22.46	9.81	97.87
Eth. fractionalization	166	47.62	29.10	0	93
Settler mortality	138	4.90	1.06	2.43	7.98
Life expectancy	203	59.11	11.21	35.80	77.95
Africa	204	0.45	0.49	0	1
Initial income	174	2677.96	5898.56	126.35	46473.4
Income growth	193	0.88	0.65	-0.93	3.37

Table 2.4: Pairwise correlation matrix

	Aid per cap.	Aid%GDP	Polity2	Fr. House	tot ins.*	Income ins.*
Aid per cap.	1					
Aid%GDP	0.41 <sup>(b)</sup>	1				
Polity2	-0.07	-0.22 <sup>(b)</sup>	1			
Fr. House	0.02	-0.27 <sup>(b)</sup>	0.88 <sup>(b)</sup>	1		
tot ins.*	-0.07	0.06	-0.13	-0.17 <sup>(b)</sup>	1	
Income ins.*	0.09	0.13	-0.18 <sup>(b)</sup>	-0.19 <sup>(b)</sup>	0.19 <sup>(b)</sup>	1

Note:(b): denotes significance at 5%. \*Terms-of-trade instability and income instability are computed with 12-years trends.

## Appendix E Additional findings

Table 2.5: Democracy, term-of-trade and income instability (Panel IV regressions, 1980-2003, 12-years periods)

	Dependent Variable <sup>a</sup> : democracy (polity2)	
	(1)	(2)
Income instab.	-	-2.95 <sup>(a)</sup> (-2.61)
Terms-of-trade instab.	-0.18 <sup>(a)</sup> (-2.59)	-0.03(-0.33)
Geography	-0.61(-0.13)	-0.36 <sup>(a)</sup> (-5.08)
Eth. fractionnalization	-1.05(-0.55)	-0.02(-0.50)
Log(trade)	1.35(1.02)	0.30(0.17)
Settler mortality	-69.41(-0.36)	-7.75 <sup>(a)</sup> (-2.90)
Education	0.25 <sup>(a)</sup> (5.96)	-0.04(-0.62)
Life expectancy	-0.03(-0.33)	-0.51 <sup>(a)</sup> (-2.74)
Initial income	16.64 <sup>(a)</sup> (3.91)	1.44(0.89)
<i>Countries fixed effects</i>	<i>yes</i>	<i>yes</i>
$R^2$	0.81	0.68
Obs	128	126
<i>Overidentification test for income instab. IV</i>		
Hansen J Stat. <sub>(p-value)</sub>	-	1.74 <sub>(0.19)</sub>

<sup>a</sup> Notes: (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. Heteroskedasticity robust t-statistics in parentheses.

Table 2.6: Robustness checks (Panel IV regressions, 1980-2003)

	Dependent variable <sup>a</sup> : democracy		
	<i>freedom house</i>	<i>aid%gdp</i>	<i>8-years periods</i>
Aid	-0.027(-1.56)	-0.10(-1.50)	-0.06(-1.42)
Terms-of-trade instab.	-.18 <sup>(a)</sup> (-2.97)	-.184 <sup>(a)</sup> (-3.39)	-.054 <sup>(a)</sup> (-2.74)
Aid×instability	0.002 <sup>(a)</sup> (2.38)	0.01 <sup>(a)</sup> (2.90)	0.003 <sup>(c)</sup> (1.86)
Geography	0.06 <sup>(c)</sup> (1.86)	0.03 <sup>(a)</sup> (2.18)	0.07 <sup>(a)</sup> (2.34)
Education	0.02(0.99)	0.03(1.37)	0.02(1.48)
Eth. fractionalization	0.003(0.33)	-0.01(-1.12)	0.01(1.43)
Initial income	0.84(0.94)	0.94(1.02)	1.45 <sup>(b)</sup> (2.09)
Settler mortality	0.41(0.72)	0.77 <sup>(a)</sup> (2.43)	0.74(2.04)
Life expectancy	-0.05(-0.85)	-0.09(-1.43)	-0.01(-0.37)
Africa	-1.94 <sup>(b)</sup> (-2.12)	-2.12 <sup>(a)</sup> (-3.20)	-0.63(-0.92)
<i>Countries fixed effects</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>
$R^2$	0.85	0.85	0.82
Obs	88	88	131
<i>Overidentification test for aid instruments</i>			
Hansen J Stat. <sub>(p-value)</sub>	0.40 <sub>(0.52)</sub>	0.57 <sub>(0.44)</sub>	0.56 <sub>(0.45)</sub>

<sup>a</sup> Notes: (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. Heteroskedasticity robust t-statistics in parentheses.



# Chapter 3

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## **DOES AID UNPREDICTABILITY WEAKEN GOVERNANCE? NEW EVIDENCE FROM DEVELOPING COUNTRIES**

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A former version of this chapter has been published in the African Development Bank Working Paper Series:

- Kangoye, Thierry (2011). Does Aid Unpredictability Weaken Governance? New Evidence From Developing Countries. African Development Bank Group Working Paper Series, No 139, August 2011.

## 3.1 Introduction

Recent international initiatives have called on the aid donor community to urgently increase Official Development Assistance flow to allow poor countries to reach the Millennium Development Goals (MDGs). In 2007 (midway through the 15-year-long process of achieving the so-called MDGs), mid-term reviews of these goals stressed that a significant number of countries were way off the expected results and that there was an absolute necessity to bring aid flow to higher levels. Also, through international commitments like the Paris Declaration on aid effectiveness and the Accra Agenda for Action (recently adopted at the Accra High Level Forum on Aid), donor countries pledged to make aid more effective through better coordination of donors, better ownership by recipient countries, better alignment of aid interventions with national development strategies, better results-based management of aid, and better mutual accountability on the results achieved.

The Accra Agenda for Action also importantly stressed the need to improve other aspects of the quality of the management of aid, aiming at increasing the medium-term predictability of aid. Aid volatility and unpredictability issues are of crucial importance for the MDGs. Till now, aid flow towards developing countries have been widely volatile and unpredictable<sup>1</sup>. In comprehensive reviews of aid volatility, Bulir and Hamann (2001, 2003); Bulir and Lane (2002) provided strong evidence that aid is highly volatile, with coefficients of variation exceeding those of fiscal revenues of aid. Vargas (2005) provided the evidence for Sub-Saharan Africa that aid flows are five times more volatile than GDP and seven times more volatile than OECD countries' GDP. The work of Pallage and Robe (2001) also showed that aid is more volatile than the revenue of developing countries, while Fielding and Mavrotas (2005), disaggregating aid flows into programme aid and project aid, provided support for the fact that the former is more volatile than the latter.

According to a growing body of research examining aid flows instability issues, the un-

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<sup>1</sup>In this chapter, we will use the term uncertain interchangeably with unpredictable.

predictability of overall aid and various types of aid is a significant and potentially costly problem in aid-dependent countries. In general, aid commitments exceed aid disbursements and the former are known to be bad predictors of the latter (Bulir and Hamann, 2001). Aid predictability issues have attracted some research interest in recent years, to document the extent of its implication for development programs and macroeconomic management in recipient countries. According to the OECD (OECD, 2008), less than 50 percent of committed aid on average is delivered on schedule. Celasun and Walliser (2008) found significant absolute deviations between commitments and disbursements. They also provided evidence that aid flows are less predictable in countries that are weakly covered by IMF programs (a proxy of a stable country environment). The work of Fielding and Mavrotas (2005) confirmed that aid flows are unpredictable and that this lack of predictability is related to the type of aid, programmatic aid being more unpredictable than project aid. From a macroeconomic perspective, the lack of aid predictability<sup>2</sup> can have some adverse consequences in aid-dependent countries. One of the main consequences of aid unpredictability is that it makes fiscal planning and implementation of a recipient country's development agenda extremely difficult, since aid commitments have shorter terms than governments' development planning. Aid unpredictability also makes the ownership of development programs by recipients much more difficult since they are relying on funds that are uncertain. Elsewhere, the lack of predictability of aid may increase the likelihood of fiscal and monetary instability (Bulir and Lane, 2002). Aid unpredictability associated with aid pro-cyclicality also increases output volatility and hence reduces growth (Ramey and Ramey, 1995; Lensink and Morrissey, 2000). Lensink and Morrissey (2000) find that the effect of aid on growth is insignificant unless some measure of aid uncertainty is included in the regression, and that uncertainty about aid is detrimental to growth.

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<sup>2</sup>The sources of aid unpredictability are multiple. Aid can be unpredictable due to the fact that aid commitments, and disbursement approval are often made by different actors (e.g., ministry *vs* parliament), creating a gap between what is committed and what is really disbursed. The donors' conditions, which can be process-related or policy/performance-based, also contribute to the lack of aid predictability.



This chapter switches the attention from the macroeconomic effects of aid unpredictability to a more "political economy" approach by linking aid flow uncertainty to rent-seeking behaviors in recipient countries. Institutional issues have recently returned to the foreground in debates on economic development. Academic research has extensively investigated the impact of aid on the quality of institutions in aid-recipient countries and focused on aid intensity ratios (Aid/GDP, Aid/GNP, Aid/exports, Aid/public expenditures, aid per capita, etc.) as measures of aid dependence. A number of them have empirically demonstrated that aid is on average associated with more corruption and more rent-seeking activities in aid-recipient countries (Alesina and Weder, 2002; Svensson, 2000), while others have come to the opposite conclusion (Tavares, 2003).

To our knowledge, no work has focused on the effects of aid flow uncertainty on recipient countries' institutions. Looking for new evidence on the effect of aid on institutions in recipient countries, this paper switches from traditional measures of aid dependency to one feature of its delivery: its unpredictability. Does aid unpredictability lead to more corruption in aid recipient countries? Through this core research question, the paper focuses on aid-dependent countries and investigates whether higher aid flow uncertainty is associated with a higher level of corruption. The basic political economy rationale is that aid flow uncertainty reduces the temporal horizon of the aid rent capture. Ventelou (2001), investigating the effect of political survival on rent capture concludes that the shorter the probability of the political survival is, the greater is the incentive for leaders (kleptocrats) to engage in rent capture. The chapter uses a similar theoretical framework and explains that the greater the uncertainty of future aid flows is, the greater is the incentives of kleptocrat leaders to engage in rent-seeking in countries where institutions are weak. The chapter then provides an empirical evaluation of these theoretical arguments, and provides supportive results. Rent-seeking is proxied by an index of corruption. Corruption is, of course, an extreme form of rent-seeking. Even if rent-seeking can take forms other than corruption (costs of ensuring protection, costs

of seizing rents, costs of dealing with competition, etc.), the sparse availability of such data leads us to use this proxy. Fixed effects estimations with a sample of 67 developing countries over the period 1984-2002 confirm that aid dependency is associated with less corruption while aid unpredictability leads to more corruption. We find further evidence that this latter impact is more severe in countries with weak initial institutions. Sensitivity analysis then shows that the type of aid matters for the nature and the size of the effect. Program aid unpredictability has a greater negative effect on corruption than project aid unpredictability. The remainder of the chapter is organized as follows. The next section presents briefly the literature on the effect of aid on corruption. Section 3.3 discusses the link between aid unpredictability and rent-seeking behaviors. Section 3.4 deals with the empirical evaluation. Section 3.5 concludes.

## 3.2 Aid dependency and corruption in the literature

The need for aid-recipient countries to have good policies and good-quality institutions in order to ensure good management and effectiveness of aid has been a matter of interest to aid politics and academicians. More interestingly, the potential effect that aid could have on the quality of these institutions has also attracted the interest of many scholars. Even though the debate is still controversial, many empirical studies have concluded that aid dependence can potentially undermine institutional quality, by weakening accountability, encouraging rent-seeking and corruption, fomenting conflict over control of aid funds, siphoning off scarce talent from the bureaucracy, and alleviating pressures to reform inefficient policies and institutions. These empirical studies have focused on indexes of institutional quality (democracy, governance, corruption, economic liberties indexes, etc.) (Svensson, 2000; Goldsmith, 2001; Knack, 2001; Alesina and Weder, 2002; McNab and Everhart, 2002b; Hoffman, 2003; Tavares, 2003; Brautigam and Knack, 2004; Knack, 2004; FMI, 2005; Coviello and Islam, 2006; Dal-

### 3.3.2 Aid dependency and corruption in the literature

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gaard and Olsson, 2006).

Focusing on the specific impact of aid on corruption, some empirical studies fuel the controversy. In particular, a couple of them have demonstrated that aid leads to more corruption in recipient countries. The negative impact of aid on the quality of recipient countries' institutions is traditionally paralleled with the so-called "natural resources curse phenomenon" in the literature. This phenomenon explains that countries with great natural resource wealth tend to experience slower growth rates than resource-poor countries. Investigating the reasons for this, a huge amount of literature has provided a political economy theoretical framework to explain the resources curse, pointing out induced rent-seeking behaviors as the cause<sup>3</sup>. Sala-i Martin and Subramanian (2003) show that natural resources appear to cause no direct effect on growth; the negative effects, while being severe, are indirect and operate through the weakness of institutions. Lane and Tornell (1996); Tornell and Lane (1999) point out dysfunctional institutions inviting grabbing as the source of the disappointing growth performance after the oil windfalls in Nigeria, Venezuela, and Mexico. They explain how the "voracity effect" (the more-than-proportional increase in redistribution in response to a windfall) leads to lower growth. Ades and Di Tella (1999) empirically show that natural resource rents stimulate corruption among bureaucrats and politicians. Other things being equal, countries where firms enjoy higher rents (and thus where bureaucrats and politicians can extract them) tend to have higher corruption levels. According to Torvik (2002), a greater amount of natural resources increases the number of rent-seekers (entrepreneurs engaged in rent-seeking) and reduces the number of modern entrepreneurs (running productive firms). Entrepreneurs move into rent-seeking once profit in rent-seeking is higher than before the windfall while profit in modern production is the same as before. Acemoglu, Robinson, and Verdier (2004) provide case studies explaining how higher resource rents make it easier for

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<sup>3</sup>The "resource curse" literature provides another kind of answer with the "Dutch-disease" phenomenon, well-developed in Sachs and Warner (2001, 1997); natural resources abundance shifts factors of production out of sectors where production exhibits static or dynamic increasing returns to scale, pushing down productivity growth.

### 3.3.2 Aid dependency and corruption in the literature

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dictators to buy off political challengers. In the Congo the "enormous natural resource wealth including 15% of the world's copper deposits, vast amounts of diamonds, zinc, gold, silver, oil, and many other resources [...] gave Mobutu a constant flow of income to help sustain his power" (p. 171). Their work explains that resource abundance increases the political benefits of buying votes through inefficient redistribution. The work of Leite and Weidmann (1999) also suggests that resource (especially minerals) rich countries tend to be more prone to rent-seeking and corruption, thereby decreasing the quality of government. Natural resources create opportunities for rent-seeking behavior.

Closer to our research, some studies have concluded that foreign aid may also cause a resource curse. Foreign aid transfers have been considered as windfalls in several other studies, and thus as a source of rent-seeking. The work of Djankov, Montalvo, and Reynal-Querol (2008) interestingly points out that aid and natural resources share a common feature to the extent that they can both be captured by rent-seeking leaders. They are not constrained to be accountable with such resources as would be the case with resources from taxation. Acemoglu, Robinson, and Verdier (2004) also stress that aid and resource rents share the general character of "windfall gains" that disrupt political and economic incentives, although some important differences can be noted between them. Dalgaard and Olsson (2006) also explain that aid transfers and natural resources have both the character of windfalls, since poor countries can benefit from them without much effort, and the ability to generate rent-seeking. The key element of windfall gains in their view is a disproportionate revenue-to-cost ratio. Nonetheless, Dalgaard and Olsson (2006) discuss the differences and similarities between natural resource rents and foreign aid. These two resources have several different features. The first difference to emphasize is that foreign aid is clearly endogenous to the level of development (countries with low GDP per capita on average received more aid) whereas reserves of valuable natural resources are not (they are randomly allocated around the planet). Second,

### 3.3.2 Aid dependency and corruption in the literature

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aid resources are more subject to external influence through foreign donors' conditionalities<sup>4</sup> and strategic interests, although foreign firms extracting the natural resources can also have a large influence in the countries. Third, the ease with which aid and resource rents can be captured by rent-seekers and predators differs depending on the form of aid (microeconomic targeting with a weak government involvement or direct budget support). Fourth, aid and natural resources also differ in terms of the fixed costs of operation (relatively higher for the latter). The degree of externalities and volatility of the two resources is also a source of differences.

Several studies have provided empirical as well as theoretical evidence that foreign aid is associated with more rent-seeking activities and corruption<sup>5</sup>. Boone (1996), analyzing the importance of the political regime for the effectiveness of aid programs, finds from a panel of developing countries that foreign aid fails to raise the investment rate in recipient countries, because aid resources are mostly consumed.

As underlined in Economides, Kalyvitis, and Philippopoulos (2008) and Svensson (2000), the aid-rent-seeking relationship is basically linked to a common-pool problem, aid transfers being the common-pool resource. Competing political groups vie for aid resources (for private purposes) without coordination. Svensson (1996) shows that, in countries suffering from ethno-lingual fractionalization and weak political institutions, foreign aid receipts generate increases in corruption, implying a higher rent dissipation. Svensson (1996) presents both theoretical and empirical evidence that foreign aid is associated with more rent-seeking and corruption in ethnically diverse countries (with several powerful groups). When there are several competing social groups with a weak incentive to cooperate, foreign aid increases rent dissipation. This argument was then confirmed empirically using cross-countries data. The theoretical model provided in Tornell and Lane (1999) predicts that the receipt of foreign

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<sup>4</sup>Svensson (2000) also supports this point.

<sup>5</sup>Although a couple of studies have reached the opposite conclusion, based upon empirical results, that more aid leads to less corruption (McNab and Everhart, 2002b; Dalgaard and Olsson, 2008; Tavares, 2003).

### 3.3.2 Aid dependency and corruption in the literature

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aid induces powerful groups to increase their appropriation rates, dissipating the revenues and yielding no gain in welfare. Knack (2001) provides evidence that higher levels of aid increase the level of corruption and thus erode the quality of governance, by being a potential source of rents. He provides the example of Tanzania, where the increase of aid levels in the 1970s and 1980s helped enlarge the public sector, creating more opportunities for corruption by sustaining large government subsidies to state-owned enterprises and parastatals. According to data from the International Country Risk Guide (ICRG), including two six-point scale measures of corruption in government and rule-of-law (reflecting the potential for rent-seeking associated with weak legal systems and insecure property rights), aid levels have proved to be strongly and negatively related to changes in corruption and rule-of-law measures. Higher aid transfers induce rent-seeking competition among self-interested individuals in countries with large public sectors (Economides, Kalyvitis, and Philippopoulos, 2008). Self-interested leaders have an incentive to enter a game of rent-seeking competition and to extract rents from aid resources for private interests. They also provide evidence that aid generates rent-seeking through government activities, and that this is exacerbated with a large public sector.

Aid can also fuel corruption by increasing the size of resources that interest groups fight over (Alesina and Weder, 2002). An increase in foreign aid increases corruption according to their findings. Before reaching this conclusion, the authors succeeded in demonstrating empirically that less corrupt governments do not receive significantly more aid transfers and that donors do not discriminate against corrupt governments, although different behaviors have been discovered between some of them. These last findings partly explain the persistence of rent-seeking behaviors related to foreign aid.

## 3.3 Aid flow uncertainty and rent extraction

How does aid flow uncertainty explain rent-seeking behaviors and corruption by "kleptocratic" leaders? The question, while not seeming to be new, has not yet been explicitly addressed in the political economy literature on aid. There is a huge political economy literature on aid and endogenous political leaders' behavior. However, as shown in the previous section, this literature has focused only on the level of aid flows, investigating the impact on rent-seeking behaviors. This chapter incorporates a risk factor in the analysis, that is, the effect of aid flow uncertainty on political elites' behaviors. From a theoretical perspective, the expectation would be that a high aid flow uncertainty (under some assumptions) should generate a higher level of corruption and rent-seeking.

We consider a theoretical reasoning framework where the political leaders (the elites in and around the government) are rent-seekers (this assumption is strengthened by the considerable evidence of rent-seeking activity in many developing economies) and where aid transfers can be the subject of predation and dissipation. Moreover, we assume (from the evidence of aid flows uncertainty – see section 3.4.3.2) that the leaders face uncertainty about the future of the rents they extract. So we relax the assumption of a benevolent government found in the political economy literature of government spending and assume that, as a rule, aid recipient countries are managed by politicians who draw partial utility from rents and who face uncertainty about future aid flows.

The intuition of this chapter is as follows: in a theoretical setting where politicians aim to maximize the amount of the rent they capture and where they have intertemporal smoothing considerations, a greater unpredictability of aid can lead them to engage more than proportionally (compared with the optimal path) in rent-seeking, since they face a risk of a shortfall of aid. Investigating the political foundations of the negative impact of resources booms on the economy with a political economy model, Robinson, Torvik, and Verdier (2006) have shown that politicians have the incentive to over-extract natural resources (generating rents)

### 3.3.3 Aid flow uncertainty and rent extraction

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compared to the most efficient extraction path. This is led by their probability of staying in power, which is a discount factor of the future. In other words, the less certain they are of staying in power, the more they will have the incentive to over-extract the resource and benefit from the rents. Robinson, Torvik, and Verdier (2006) explain that the future stock of resources (and therefore rents) only matters if the politicians are in power.

The work of Ventelou (2001) also provides support for the point that political risk determines the incentive of politicians to over-engage in rent-seeking. Considering a government who have the choice either to invest the public resources in productive goods or to appropriate them to finance private consumption, he shows that as the probability of political survival decreases, the level of politicians' rent capture increases. The less the government in office has the chance to remain in power in the next period, the more it will have the incentive to capture the maximum of rents in the current period, since the return from productive investments will instead benefit the next government.

We rely on a similar theoretical reasoning, that the probability of receiving transfers from which the rent is extracted determines the behavior of leaders insofar as one can predict that they will tend to be more engaged in rent-seeking when this probability is low or unknown. Anticipations and expectations about the future can also be affected, not only by the probability of leaders of staying in power in the future (determining their ability to capture the rent) but also by the probability of receiving the income (foreign aid) from which the rent is extracted (determining their ability to capture the rent as well). So, things turn out as if the rent-seekers leaders are risk averse, over-extracting the current rent from aid instead of waiting for an uncertain amount of future rent. Contrary to Svensson (2000) who shows that the mere expectation of foreign aid provides incentives to increase rent dissipation, we suggest that the mere anticipation of an aid shortfall provides incentives to rent-seekers to increase rent dissipation. Acemoglu, Robinson, and Verdier (2004) show that aid provides kleptocratic rulers with greater resources to finance their tenure of power by buying off oppo-



### 3.3.3 Aid flow uncertainty and rent extraction

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nents. A greater uncertainty of such a resource for such leaders would increase their incentive to over-extract the rent.

This chapter's theoretical reasoning is inspired by the political economy literature describing the behavior of governments facing economic and political risk. Battaglini and Coate (2008) study the relationship between politicians' rent-seeking incentives and public debt and deficits, and find that in the presence of (political) risk, rent-seeking governments over-extract the rent and therefore hold a level of debt which exceeds that of benevolent governments. Myopic politicians facing a risk prefer to extract the rents as early as possible<sup>6</sup>.

#### *Does aid fungibility matter?*

The aid fungibility paradigm explains that aid delivered for a project that the recipient government would have undertaken anyway could end up financing some expenditure other than the intended project (Devarajan, Rajkumar, and Swaroop, 1999). A number of studies have been interested in discussing and demonstrating the fungibility of aid. While Devarajan, Rajkumar, and Swaroop (1999) find mixed evidence that aid to Sub-Saharan Africa is fungible, the work of Pack and Pack (1993) reaches the opposite conclusion, explaining that in the Dominican Republic, aid is diverted away from its intended purposes. Jha and Swaroop (1998), focusing on aid fungibility in India, also found that aid is fungible insofar as it substitutes for spending that governments would have undertaken anyway. They also found that when transferring external assistance to states, the central government reduces the other transfers to them. Using panel data, Feyzioglu, Swaroop, and Zhu (1998) show evidence that, except for loans to the transport and communication sector, concessionary loans to agriculture, education and the energy sector lead aid-recipient governments to reduce their

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<sup>6</sup>Caballero and Yared (2008) reach the same conclusion in the long term.

own resources going to these sectors and use it elsewhere.

On the assumption that aid is fungible, the question relevant for our research in this chapter should be about where the internal public resources are spent that would have gone to the sectors financed by aid. We argue that aid fungibility could matter in explaining the extra rent-seeking behaviors arising from aid unpredictability. As shown by Jha and Swaroop (1998), the funds freed by aid are spent on non-development activities in general and administrative services in particular. From that point, aid fungibility could lead to increased consumption expenditure and then to more rent-seeking if the diverted resources are more "exposed" to rent capture. The rationale that aid fungibility matters in explaining the extra rent-seeking behaviors arising from aid unpredictability, as discussed above, is based upon the point that aid fungibility may itself be a source of rent-seeking behavior.

Aid unpredictability may also directly increase the fungibility of aid resources. Indeed, as explained in the previous section, myopic rent-seeking politicians facing a risk prefer to extract the rents as early as possible (Battaglini and Coate, 2008; Caballero and Yared, 2008). Based upon that point, a capture by elites of the resources diverted through aid fungibility may occur when uncertain aid flows are delivered.

## 3.4 Empirical evidence

### 3.4.1 Data and base specification

The data<sup>7</sup> for this chapter come mainly from the World Bank statistics<sup>8</sup>, the International Country Risk Guide (ICRG), the Development Committee Assistance (DAC) statistics and the Global Development Network Growth Database. Our sample is made of 67 developing countries : 6 are from East Asia and the Pacific, 1 is from East Europe and Central Asia,

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<sup>7</sup>See Appendix A for data sources and definitions.

<sup>8</sup>World Development Indicators, 2008.

8 are from the Middle East and North Africa, 3 are from South Asia, 28 are from Sub-Saharan Africa and 21 are from Latin America and the Caribbean. The number of countries is relatively low due to our desire to have the most balanced possible database for our main variables. The International Country Risk Guide (ICRG) index of corruption is on a scale from 0 to 6. Lower scores indicate that "high government officials are likely to demand special payments", "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, police protection, or loans". We computed annual values of our index of corruption (taken from the ICRG) by taking the mean of the 12 monthly observations for each year and for each country. The index is provided on a scale from 0 (worst situation of corruption) to 6 (best situation of corruption). We choose not to rescale the index, so an increase means a reduction of corruption.

Our main measure of aid intensity is "official development assistance"<sup>9</sup> measured as a percentage of the Gross Domestic Product (GDP), which is a standard one in the empirical aid literature. Even though this measure of aid may reflect changes in GDP with aid constant, rather than changes in aid, it does capture the importance of aid. As indicated in Appendix A, aid data are available from the World Development Indicators (WDI), based upon aid data provided by the OECD's Development Assistance Committee. We also make use of two other measures of aid intensity for robustness, which are aid as a percentage of the Gross National Income (GNI) and as a percentage of total imports (also available from the WDI). Table 3.1, which presents some basic descriptive statistics for the main variables used in the empirical analysis (based upon 5 years of sub-period averages), shows that values of aid as a percentage of GDP range up to 53% (Mozambique). For aid as a percentage of the Gross National Income (GNI) and imports, the figures are higher. The table also shows that no country in the sample on the sub-period means reaches the maximum score that indicates the

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<sup>9</sup>According to OECD/DAC, "Official Development Assistance" includes grants and loans with a grant element of more than 25%.

best corruption situation (6). The average score of corruption is also relatively low (2.632, on a scale from 0 to 6), indicating that the developing countries we focus on in our analysis are on average corrupt.

We rely on the literature on the determinants of corruption to select the remaining control variables. Following Svensson (2000), we use an index of ethnolinguistic fractionalization (*fractionalization*) as a proxy of ethnic diversity. Ethnolinguistic fractionalization (the likelihood that two citizens belong to a different ethnic or linguistic group) is assumed to be a determinant of corruption, as bureaucrats may favor members of their own group (Mauro, 1995). We also include the level of income (*GDP par capita*) in our vector of controls, of which the net effect on the level of corruption might be ambiguous. A higher level of income can create more opportunities for rent-seeking as well as accompanying a reduction of corruption, since the quality of institutions in a country improves with the level of development. The other controls used are: *oil exporter* (a dummy indicating whether the country is a major oil exporter), total population (*population*), initial income (*initial inc.*), legal origin dummies (*British, French, socialist*). Sachs and Warner (2001) show that resource-endowed countries experience slower growth, partly due to government corruption. Some works suggest that larger countries are over-sampled in corruption indexes, which is a source of a sample selection bias (Knack and Azfar, 2000). Finally, a country's colonial history may explain the level of corruption since it may have inherited inadequate and weak institutional systems favoring rent dissipation. We capture that effect with dummies for the origin of the legal system. Table 3.1 reveals considerable variation in income (GDP per capita, constant \$2000 US) although the variation is substantially larger across countries than over time (the between standard deviation is 1712.35 while the within standard deviation is 266.65<sup>10</sup>).

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<sup>10</sup>Detailed statistics not shown

Table 3.1: Descriptive statistics (1984-2004)

Variable	Mean	(Std. Dev.)	Min.	Max.	N
<b>Panel A: Corruption measure</b>					
Corruption (ICRG)	2.63	(0.89)	0	5	268
<b>Panel B: Aid variables</b>					
Aid(%GDP)	7.58	(10.14)	-0.02	53.51	268
Aid(%GNI)	7.75	(10.09)	-0.02	58.06	267
Aid(%import)	18.73	(23.91)	-0.03	133.18	254
<b>Panel C: Countries characteristics</b>					
GDP per cap. (2000 cst)	1541.61	(1723.46)	83.5	8922.92	268
Urban pop.	45.35	(20.58)	9.78	92.02	268
Population (log)	16.32	1.44	12.87	20.77	268
Trade (%GDP)	66.12	(35.89)	13.55	226.87	267
Oil export.	0.12	(0.33)	0	1	268
Eth. fract.	51.30	(28.87)	1	90	252
Legal orig. (brit.)	0.30	(0.46)	0	1	268
Legal orig. (fr.)	0.69	(0.47)	0	1	268
Legal orig. (soc.)	0.015	(0.12)	0	1	268
Africa	0.48	(0.5)	0	1	268
Initial inc.	1385.75	(1527.29)	123.88	6762.18	268

### 3.4.2 Aid dependency and corruption: revisitating the causal effect

This section tests against the literature findings the assumption that high levels of aid have a significant (positive or negative) effect on corruption in recipient countries. We carefully address the issue of causality when investigating the effect of aid on corruption. Indeed, the relationship between foreign assistance and recipient countries' domestic institutions is two-way; while aid could affect the quality of these institutions, as demonstrated by a huge literature set, recipient countries' institutional performances might also be a determinant of aid to the extent that donors pay attention to that when allocating their assistance to countries. This is an important source of reverse causality bias, masking the true causal effect of aid on recipient countries' institutions. As stressed in the earlier sections, several empirical studies in the literature fuel the controversy, but it is worth noting that few of

them have succeeded in properly dealing with the potential endogeneity of aid. Traditional instrumental variables approaches have focused on instruments taken from the "recipient side" (recipient countries' characteristics such as population size (Hoffman, 2003; Svensson, 2000; Knack, 2004; Djankov, Montalvo, and Reynal-Querol, 2008), initial population size (Goldsmith, 2001; Brautigam and Knack, 2004), infant mortality (Hoffman, 2003; Knack, 2001, 2004; Brautigam and Knack, 2004), level of income (Svensson, 2000; Goldsmith, 2001; Brautigam and Knack, 2004), initial level of income (Knack, 2001; Djankov, Montalvo, and Reynal-Querol, 2008), terms of trade (Svensson, 2000), dummies for former French, British, Portuguese or Belgian colonies (Brautigam and Knack, 2004; Goldsmith, 2001), dummies for Sub-saharan Africa, the franc zone, Egypt, Central America (Djankov, Montalvo, and Reynal-Querol, 2008)).

Using such instrumental variables (from the "recipient side") may not be the best way to isolate the exogenous variations in aid since a recipient country's characteristics such as income, infant mortality, and terms of trade are not really exogenous to that country's institutions. Countries with weak institutional performance are precisely the poor performers. Weak institutions lead to slower growth and weak redistributive policies, meaning that countries are poor precisely because they have weak institutions. Such instruments are admittedly correlated with aid, but also with the quality of institutions. Better instrumental variables should isolate the variations in aid due to external factors. Tavares (2003) used such instruments to investigate the effect of aid on corruption. Aid from the largest donors, weighted by variables capturing cultural and geographical proximity with the donors, was used as an instrument. According to this study, when a donor country increases its total aid outflows, recipient countries that are culturally and geographically closer to that donor receive exogenously more aid. Alesina and Dollar (2002) also show that aid inflows in recipient countries are strongly correlated with cultural and historic proximity with donors, while being weakly related to their economic performance.

We use a similar procedure taken from Brun, Chambas, and Guerineau (2008) to construct our first set of instruments for aid. First, the five main donor countries are identified for each recipient country and each year. Then, the amount of aid (in constant US dollars) from those donors are weighted by the reverse bilateral geographic distance between the recipient countries and Washington (for Canada and the US), Brussels (for European donors), Tokyo (for Japan) and Canberra (for Australia and New Zealand). Linguistic and religious proximity are respectively proxied by a dummy indicating if there is a common official language between the donors and the recipient country and a correlation coefficient between the donor and the recipient country's religious structure.

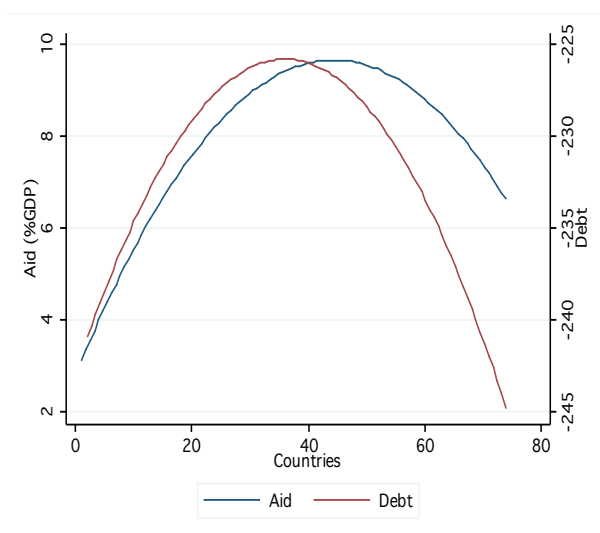
Official Development Assistance from a country could also be determined by its public finances. The better the finances are, the more willing the country is to give aid (Faini, 2006). Following that idea, our second set of instrumental variables is made of the conventional deficit and the total outstanding debt of the donor (GDP ratios), weighted by the reverse bilateral distance from the donor<sup>11</sup>. The scatters below give a sense of the strong correlation between aid and some of the constructed instruments for our sample countries. Aid inflows in a recipient country seem to be strongly correlated with the cultural proximity and the public finances of its main donors<sup>12</sup>.

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<sup>11</sup>See Brun, Chambas, and Guerineau (2008) for details.

<sup>12</sup>The same graphical evidence (not shown for reasons of space, but available upon request) comes out for the other constructed instruments (cultural proximity regarding religion, aid and grants from the main donors weighted by the geographic distance).

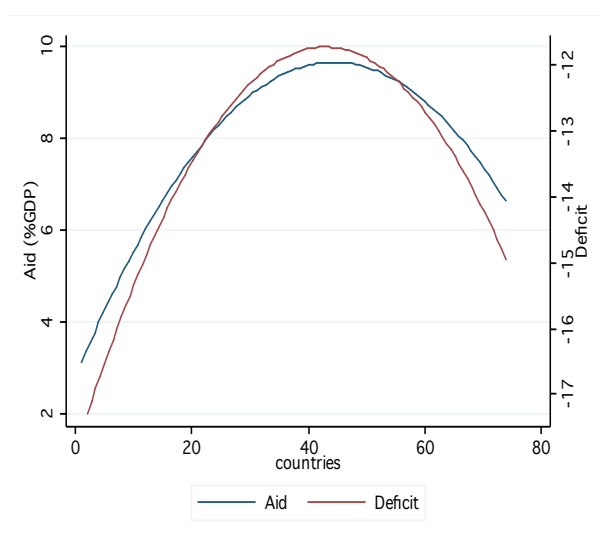
**Figure 3.1: Aid and donor countries' public finances (outstanding debt –GDP ratio–).**



*Source: Author.*

*Note: x axis, countries are represented, y left axis, numbers refer to Aid (%GDP) (1984-2004 average), y right axis, numbers refers to the total outstanding debt of the five main donors (adjusted in a such way that an increase mean an improvement).*

**Figure 3.2: Aid and donor countries' public finances (conventional deficit –GDP ratio–).**

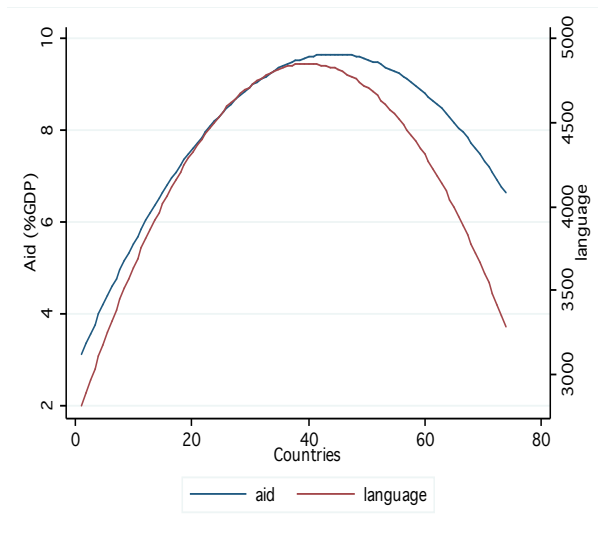


*Source: Author.*

*Note: x axis, countries are represented, y left axis, numbers refer to Aid (%GDP) (1984-2004 average), y right axis, numbers refers to the conventional deficit of the five main donors (adjusted in a such way that an increase mean an improvement).*



**Figure 3.3: Aid and cultural proximity with donor countries (common official language).**



*Source: Author.*

*x axis, countries are represented, y left axis, numbers refer to Aid (%GDP) (1984-2004 average), y right axis, numbers refers to the language proximity.*

Table 3.2 presents results using the corruption index as the dependent variable, with cross-section data (1984-2004 average). Columns 1 and 2 report respectively Ordinary Least Squares (OLS) and Two-Stage Least Square (IV) regression results, testing the effect of aid/GDP ratio on the level of corruption. Consistent with some studies in the literature (including Tavares (2003)), a strong positive effect of aid dependency is found: *ceteris paribus*, aid decreases corruption. The coefficient of aid increases from 0.045 to 0.149 from the Ordinary Least Squares (OLS) estimation to the Instrumental Variables (IV) estimation and is significant at 5%. These results fail to support the "voracity effect" found in Svensson (2000); Alesina and Weder (2002). As emphasised above in this section, we make use of a new set of instrumental variables suggested by Tavares (2003) and Faini (2006), which are "outside" the recipient countries, and which seem to be much more convincing than the traditional instruments (infant mortality, population size, income, etc.). We instrument for aid/GDP

by cultural proximity with the donors and by their public finances, as explained above. The usual over-identification statistics confirm the quality of the instrumental variables. The Hansen p-value is largely above 0.10 and indicates that the instruments are good.

Why might aid decrease corruption? If more corrupt countries receive more aid (according to the findings of Alesina and Weder (2002)), the effect of aid on corruption is negatively biased by reverse causation. According to Tavares (2003), even if aid is associated with less corruption, the fact that less corrupt countries tend to receive less aid biases the size of the coefficient, and properly instrumenting for aid uncovers the real relationship. Since we build upon his procedure to construct our instruments, this negative effect is what we were expecting to get.

The oil exporter dummy, population size, Africa dummy and urban population enter insignificantly in the 2SLS regression. Only ethnolinguistic fractionalization enters counter-intuitively with a positive sign (but only at 10%). This result is not expected, since the more diverse a country is, the more corrupt it should be, according to the literature (Svensson, 2000).

Summarizing the main findings, when instrumenting for aid with a new set of instrumental variables from the "donor side", we find that on average, foreign aid dependency is negatively associated with more corruption, that is to say, aid decreases corruption.

**Table 3.2: Aid dependency and corruption (OLS and IV cross-section regressions, 1984-2004).**

Variable <sup>a</sup>	Coefficient (Std. err.)	
	<i>OLS</i>	<i>2SLS</i>
Aid(% GDP)	0.05 <sup>(b)</sup> (0.02)	0.15 <sup>(b)</sup> (0.08)
Log(income)	1.45 <sup>(a)</sup> (0.45)	2.63 <sup>(a)</sup> (1.15)
Oil export.	0.13 (0.32)	0.96 (0.62)
Log(pop.)	0.07 (0.08)	0.25 (0.20)
Africa	0.266 (0.24)	0.07 (0.33)
Eth. frac.	-0.006 (0.004)	0.20 <sup>(c)</sup> (0.10)
Log(pop. urb.)	0.19 <sup>(c)</sup> (0.10)	-0.01 (0.01)
Intercept	-0.603 (2.13)	-7.92 (5.61)
Obs	66	50
R <sup>2</sup>	0.25	0.92
<i>IV quality statistics</i>		
Cragg-Donald Wald F statistic	–	0.89
Hansen J Stat. <sub>(p-value)</sub>	–	1.23 <sub>(0.87)</sub>

<sup>a</sup> Beside the coefficient value, the Std. Errors, which are computed using heteroskedastic-consistent standard deviations, are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. Heteroskedasticity robust t-statistics in parentheses.

### 3.4.3 Aid unpredictability and corruption

#### 3.4.3.1 Measuring aid unpredictability

Economic uncertainty has been widely studied in the economic development literature and several studies have investigated the empirical relationship between macroeconomic uncertainty and other economic variables. From a statistical viewpoint, uncertainty over an eco-

economic variable is in most of the studies, proxied by unconditional measures such as the standard deviation or the variance of the variable's movements. It is worth noting that simply using such proxies is questionable on both economic and statistical grounds. Variability does not necessarily imply unpredictability. As underlined by Knack (2001) when estimating the effect of aid volatility (using the coefficient of variation of aid) on the quality of governance, a high variability of aid should not be likened to uncertainty, since it could be the product of a strong and steady upward or downward trend in aid levels over time. Dehn (2000) also points out that simply using the standard deviation of a series to proxy its uncertainty leads to overestimation of the unpredictable part and underestimation of the predictable part, since the variable's trend is not taken into account. A high volatility can be anticipated or not, and what matters from a political economy perspective is unpredictability. A political leader facing a badly contained risk is not expected to show the same behavior as another one who has much more information on the future movement of a variable. So conditional measures of volatility are better proxies of the uncertainty faced by economic agents. GARCH-based approaches<sup>13</sup> are well suited to estimate uncertainty. The variance of aid conditional on the information available in past periods is specified to follow this GARCH (p,q) model:

$$\sigma_{it}^2 = \gamma_{i0} + \gamma_{i1}\epsilon_{i,t-1}^2 + \dots + \gamma_{ip}\epsilon_{i,t-p}^2 + \beta_{i1}\sigma_{i,t-1}^2 + \dots + \beta_{iq}\sigma_{i,t-q}^2 \quad (3.1)$$

where  $\sigma_t^2$  denotes the variance of the residuals  $\epsilon$  from the forecasting equation conditional on information up to period  $t$ .  $i$  stands for the countries and  $t$  for the time. The fitted  $\sigma_{it}^2$  from the equation above is then taken as the measure of uncertainty.

However, GARCH-based approaches are most appropriate with high frequency data, which are not available to us. We therefore make use of alternative measures of uncertainty, fol-

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<sup>13</sup>See Bollerslev (1986); Engle (1982)

lowing Aizenman and Marion (1993) and Lensink and Morrissey (2000), and consisting of two steps. First we estimate the following forecasting equation, specified as a second-order auto-regressive process and extended with a time trend<sup>14</sup>:

$$Aid_t = \alpha + \beta Aid_{t-1} + \gamma Aid_{t-2} + \kappa T + \nu_t \quad (3.2)$$

where  $Aid$  is total Official Development Assistance net disbursements,  $\nu$  is the forecast error,  $T$  is a time trend,  $t$  stands for the years. We then measure aid uncertainty by calculating for each country in our sample and for each subperiod<sup>15</sup> the standard deviations of the residuals of equation (3.2). This measure of aid unpredictability is intended to separate simple variation from uncertainty and thus to capture unanticipated changes in aid.

#### 3.4.3.2 How unpredictable is aid?

The scatters below present the time evolution of the aid forecast errors over the period 1982-2001, for a set of 12 countries out of our sample<sup>16</sup>, which are the most aid-dependent (the dependency ratio used is net ODA/GDP). These countries are Comoros, Djibouti, Guyana, Honduras, Liberia, Lesotho, Madagascar, Mali, Mozambique, Mauritania, Malawi, Niger, Rwanda, Sierra Leone, Zambia, Uganda, Tanzania and Chad. The error forecasts are computed from equation 3.2. The  $x$  axis represents year and the  $y$  axis the residuals, the variability of which is considered as a proxy of aid uncertainty. The scatters show that for all the selected countries, the residuals vary a lot around zero, and computations indicate that the mean standard deviation of the residuals for this subset of countries is relatively high at about 4.31.

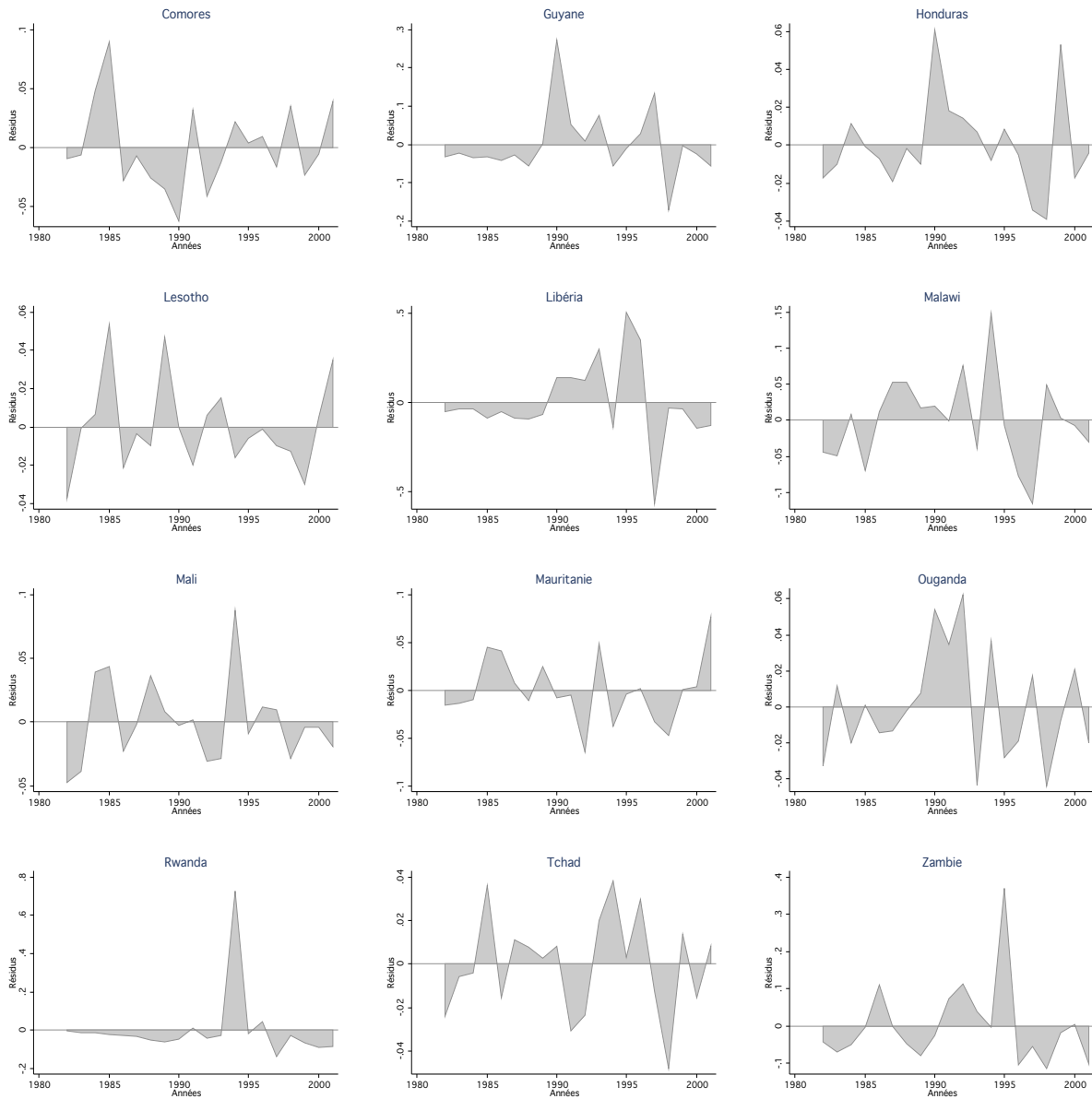
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<sup>14</sup>It is also possible to include a quadratic form of the trend and to estimate the model in difference.

<sup>15</sup>Our data are computed as two ten-year period averages.

<sup>16</sup>Figure 3.5

Figure 3.4: Net ODA errors forecasts for high aid-dependent countries



Source: author's computations

## 3.4.3.3 The identification strategy

*Baseline estimations and results*

In order to investigate the effect of aid unpredictability on corruption, we specify the following equation:

$$corruption_{it} = \alpha + \beta Aid_{it} + \gamma uncertainty_{it} + \zeta X_{it} + \tau_g + \eta_{it} \quad (3.3)$$

where *corruption* is the average level of rent-seeking (proxied by the ICRG index of corruption) in period  $t^{17}$  for country  $i$ ,  $Aid_{it}$  is foreign aid, *uncertainty* is a proxy variable of aid unpredictability,  $X$  is a vector of controls including income, oil exporter dummy, population size, urbanization, etholinguistic fractionalization, legal origin and an Africa dummy.  $i$  stands for countries and  $t$  for the periods.  $\tau$  is a time trend. Consistent with section 3.4.2, the models suggest that *Aid* should be treated as an endogenous variable and we instrument for aid using the same set of instrumental variables.

Table 3.3 presents results using the ICRG-averaged index of corruption as the dependent variable. All three columns report two-stage least squares (2SLS) regression results, testing the effects of aid unpredictability on corruption. All our regressions include regional fixed effects to take into account the unobserved heterogeneity across regions. In all the specifications, the aid coefficients are positive and significant at 5%, confirming that, on average, other things being equal, aid decreases corruption. As expected, we found that aid unpredictability increases rent-seeking proxied by corruption in a statistically significant way. A 1% increase in the aid uncertainty measure is associated with a 0.17% increase in the corruption index. From column 1 to columns 2 and 3, we gradually include in the regression additional controls

<sup>17</sup>Data are averaged over four periods: 1984-1989, 1990-1994, 1995-1999 and 2000-2004.

that are legal origin, urbanization and an Africa dummy, which are assumed to have an effect on corruption. All of them enter insignificantly and do not change the aid and uncertainty coefficients' size and significance. Income is found to have a positive and significant effect (at 10% in the specification with all controls) on the index of corruption, supporting the thesis that higher income is associated with more corruption. This result calls for some comments. One would have expected the opposite effect. Indeed if good quality institutions are considered as a "superior good", higher income should favor them (Lipset, 1959; Acemoglu, 2008). This regression result is probably due to a sample bias. Our sample of countries is made up of developing countries, having on average bad institutions. Finding from a such sample that the higher the income is, the greater is the corruption is not surprising because when income increases in these countries there are more opportunities for corruption because of the weak quality of institutions.

Table 3.6 presents results using cross-section data (averaged over the 1984-2004 period) and shows that the previous findings are not very sensitive to such a change in the data structure. Using averaged data over the whole period of the study in order to focus on the "between" variation of corruption, we found that aid uncertainty continues to be harmful in terms of corruption, whereas aid reduces it. The first column shows the effect of aid unpredictability on corruption without any control variable. The coefficient of the uncertainty measure is negative and significant at 1%, albeit very weak. This regression gives a basic sense of the effect of aid uncertainty on corruption, but fails to have a good explanatory power ( $R^2$  is only about 0.09). The second column of the table shows regression results controlling for the other determinants of corruption. The coefficient of the aid uncertainty variable is about 0.26 and is significant at 5%. Of all the controls, only the size of the population proves to be significant at 5%, while having a counterintuitive sign. The  $R^2$  of 0.92 is reasonably high for a cross-section data set.



**Table 3.3: Aid unpredictability and corruption (Panel IV regressions, 4-year periods averages, 1984-2004)**

Variable <sup>a</sup>	Coefficient (Std. err.)		
	<i>2SLS</i>	<i>2SLS</i>	<i>2SLS</i>
Uncertainty	-0.18 <sup>(b)</sup> (0.09)	-0.17 <sup>(b)</sup> (0.08)	-0.16 <sup>(b)</sup> (0.08)
Aid(% GDP)	0.17 <sup>(b)</sup> (0.08)	0.17 <sup>(b)</sup> (0.08)	0.16 <sup>(b)</sup> (0.07)
Log(income)	0.73 <sup>(b)</sup> (0.40)	0.72 <sup>(c)</sup> (.3861)	0.73 <sup>(c)</sup> (0.39)
Oil export.	0.15 (0.39)	0.13 (0.38)	0.17 (0.38)
Log(pop.)	0.20 (0.16)	0.19 (0.15)	0.19 (0.14)
Eth. frac.	-0.007 (0.005)	-0.006 (0.005)	-0.006 (0.005)
british		-0.08 (0.24)	-0.10 (0.23)
Log(pop. urb.)			-0.004 (0.01)
Africa			-0.48 (0.50)
Intercept	-7.27 (5.29)	-7.05 (5.16)	-6.90 (4.93)
<i>Regional dummies</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>
Obs	142	142	142
$R^2$	0.88	0.89	0.90
<i>IV quality statistics</i>			
Cragg-Donald Wald F statistic	3.13	3.20	3.43
Hansen/Sargant J Stat. <sub>(p-value)</sub>	0.01 <sub>(0.94)</sub>	0.03 <sub>(0.86)</sub>	0.13 <sub>(0.72)</sub>

<sup>a</sup> Beside the coefficient value, the Std. Errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. All the estimations include regional controls, which are not reported for reasons of space.

*Dealing with the potential endogeneity of the uncertainty variable*

The previous results could suffer from error measurement bias in the uncertainty variable we used following Aizenman and Marion (1993) and Lensink and Morrissey (2000). Pagan and Ullah (1988) proposed an Instrumental Variable (IV) non-parametric estimator, with instruments constructed from the information set.

The conditional variance of aid is taken as the unobserved volatility of aid and can be written as:

$$\text{var}_{prev}(A_{it}) = E_{prev}(A_{it}^2) - E_{prev}(A_{it})^2 = \sigma_{it}^2, \quad (3.4)$$

where  $\text{var}_{prev}()$  and  $E_{prev}()$  are respectively the expectation and the variance conditional on the previous time period information. From (3.2), we can write that<sup>18</sup>:

$$E_{prev}(A_{it}) = 0 \quad (3.5)$$

So, (3.4) can be rewritten as:

$$E_{prev}(A_{it}^2) = \sigma_{it}^2 \quad (3.6)$$

To account for the potential endogeneity of the uncertainty variable, we first re-estimate aid uncertainty with a non-parametric estimator, which takes advantage of the yearly availability of aid data and the period-based structure we give to our data<sup>19</sup>. The estimator was

<sup>18</sup>The scatters in section 3.4.3.2 give a sense of the zero sample mean of residuals.

<sup>19</sup>For this purpose, we averaged our data over the 1984-1994 and 1995-2004 ten-year periods.

introduced by Schwert (1989) and Schwert and Seguin (1990) and used in Andersen and Bollerslev (1998). The unobserved variability of aid in (3.6) is estimated with:

$$\hat{\sigma}_{it}^2 = \sum_{t=1}^{10} A_{tip}^2 \quad (3.7)$$

where  $A_{tip}$  is aid residuals from the forecasting equation in year  $t$  and period  $p$  for country  $i$ . This estimator has been demonstrated to be consistent for a general conditional variance specification for cases where  $t$  values are high (Andersen and Bollerslev, 1998). Contrary to these authors, who estimated daily exchange-rate volatility from intraday returns, we estimate aid volatility for each period and each country using yearly data. Ten-year periods are the structure giving the highest frequency of aid data while keeping a panel structure. We then rely on the Pagan and Ullah (1988) instrumental variable, which corrects for the large sample bias due to the weak number of sub-intervals (10 years). The first step of the procedure consists in proxying  $\sigma_{it}^2$  the residuals from ((3.4)) with  $A_{it}^2$ , since  $E_{prev}(A_{it}^2) = \sigma_{it}^2$  ((3.6)). Our baseline regression equation is then rewritten as:

$$Corruption_{it} = \alpha + \beta Aid_{it} + \gamma A_{it}^2 + \zeta X_{it} + \tau_g + \eta_{it} \quad (3.8)$$

where  $\eta_{it} = \xi_{it} + \gamma(\sigma_{it}^2 - A_{it}^2)$ . The proxy  $A_{it}^2$  being correlated with  $\eta_{it}$  and assuming that  $E(A_{it}^2 \cdot \xi_{it}) = 0$ , Pagan and Ullah (1988) show that:

$$E(A_{it}^2 \cdot \eta_{it}) = E(\sigma_{it}^2) - E(A_{it}^4) \neq 0 \quad (3.9)$$

The second step of the instrumental procedure consists in instrumenting  $A_{it}^2$  with  $\hat{\sigma}_{it}^2$  (in

(3.7)), which is computed with a set of information correlated with  $\sigma_{it}^2$ . This procedure has an additional advantage in that  $\hat{\sigma}_{it}^2$  should be quite strongly correlated with  $\sigma_{it}^2$  in spite of the weak number of sub-intervals (10 years in our case). We checked and confirmed this with our sample data.

Table 3.4 presents the results of the regression using the instrumented measure of aid unpredictability. Uncertainty and aid still enter significantly, respectively with a negative and positive sign. The new coefficient of the uncertainty variable is lower, at about 0.0057, while that for aid is a bit larger at about 0.224. Income level continues to increase corruption, with a coefficient of 1.56 that is significant at 1%. The oil exporter dummy enters positively and significantly, supporting the hypothesis that oil production is a source of rents favoring rent-seeking behaviors and corruption.

**Table 3.4: Aid unpredictability and corruption (panel IV regressions, instrumenting for unpredictability. Data are averaged over two ten-years periods (1984-1994 and 1995-2004))**

Variable <sup>a</sup>	Coefficient (Std. err.)
	<i>2SLS</i>
Uncertainty	−0.006 <sup>(b)</sup> (0.003)
Aid(% GDP)	0.22 <sup>(a)</sup> (0.09)
Log(income)	1.56 <sup>(a)</sup> (0.53)
British	−0.40 (0.34)
Oil export.	0.94 <sup>(b)</sup> (0.45)
Log(pop.)	0.37 <sup>(c)</sup> (0.23)
Africa	−0.64 (.54)
Eth. frac.	−0.004 (.006)
Log(pop. urb.)	−0.47 (0.45)
Intercept	−13.93 <sup>(c)</sup> (7.33)
Obs	94
R <sup>2</sup>	0.86
<i>IV quality statistics</i>	
Cragg-Donald Wald F statistic	0.82
Hansen/Sargant J Stat. <sub>(p-value)</sub>	1.25 <sub>(0.94)</sub>

<sup>a</sup> Beside the coefficient value, the Std. Errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. All the estimations include regional controls, which are not reported for reasons of space.

### 3.4.3.4 The importance of the initial institutional conditions

A growing body of empirical research has emphasized the importance of the long-term impact of historic events on institutions and their path-dependency as well. The most influential

studies examined the importance of the factors endowments and the earlier colonial rule as the historic determinant of institutions, which persisted over time. It is worth noting that most empirical investigations of the determinants of institutions emphasize the importance of the initial conditions and try to control for that by including in the vector of control a proxy of the initial institutional quality.

We share the same interest in this chapter and turn to check whether and how the initial institutional conditions matter for the impact of aid unpredictability on corruption. We test the hypothesis that this impact is more severe in countries with weak initial institutions. As a proxy of those initial institutional conditions, we use the average scores of the constraints on the executive power from Polity IV at the early period of our baseline regressions, *i.e.*, 1980-1985. We indeed assume that the quality and the strength of those constraints proxies well the overall institutional quality, as suggested by some authors (Acemoglu, Johnson, and Robinson, 2005). We then split our sample countries into two sub-samples, one including the countries having a score of executive constraints lower than the overall sample median value, and the other including the countries with higher scores. The regression results for each sample, summarized in Table 3.5, provide supportive empirical evidence for our hypothesis; the coefficient of the aid unpredictability variable is higher and more significantly related to higher corruption than the low-initial institutions sample. A 1% increase of aid unpredictability lead to a 0.002% increase in the corruption index in the upper sample and to a 0.093% increase in the corruption index in the lower sample *ceteris paribus*. It is worth noting that the remaining findings are consistent with the previous ones; aid, income and population size continue to reduce corruption for both sub-samples. The good quality of the instrumental variables is also validated by the over-identification test statistics. These findings seem to be somewhat in line with Dutta and Leeson (2008), who investigated the impact of aid on political institutions and argued that aid has the ability neither to make dictatorships more democratic nor to make democracies more dictatorial, but only amplifies

the existing political institutions. Our findings also suggest that, regarding corruption and rent-seeking behaviors, aid reinforces the trajectory of institutions by worsening the countries' institutional performances which were already weak .

**Table 3.5: Aid unpredictability and corruption: the importance of the initial institutions (panel IV regressions, instrumenting for unpredictability. Data are averaged over two ten-years periods (1984-1994 and 1995-2004))**

Variable <sup>a</sup>	Coefficient (Std. err.)	
	<i>(1): low-institutions sample</i>	<i>(2): upper-institutions sample</i>
Uncertainty	-0.09 <sup>(a)</sup> (0.37)	-0.002 <sup>(c)</sup> (.001)
Aid(% GDP)	0.21 <sup>(b)</sup> (.10)	0.29 <sup>(b)</sup> (.144)
Log(income)	1.12 <sup>(b)</sup> (.55)	1.60 <sup>(b)</sup> (.78)
British	-0.31 (.34)	-0.24 (.2)
Oil export.	0.61 (.505)	0.78 <sup>(a)</sup> (.31)
Log(pop.)	0.41 <sup>(b)</sup> (.20)	0.31 <sup>(c)</sup> (.18)
Africa	0.52 (.37)	0.65 (.43)
Eth. frac.	-0.03 (.03)	-0.002 (.001)
Log(pop. urb.)	0.03 (.02)	-0.48 (.615)
Intercept	-12.01 <sup>(b)</sup> (6.03)	-10.10 <sup>(b)</sup> (4.97)
Obs	46	47
$R^2$	0.7	0.72
<i>IV quality statistics</i>		
Cragg-Donald Wald F statistic	0.8	0.85
Hansen J Stat. <sub>(p-value)</sub>	1.40 <sub>(0.88)</sub>	1.35 <sub>(0.76)</sub>

<sup>a</sup> Beside the coefficient value, the Std. Errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. All the estimations include regional controls, which are not reported for reasons of space.

### 3.4.3.5 Sensitivity analysis and discussion

We conducted several sensitivity analyses. We have already shown that the results are robust to the use of differently structured data (cross-section dataset *versus* panel dataset). Another important question is about their sensitivity regarding the use of different types of aid. We broke up aid into loans *versus* grants, bilateral *versus* multilateral and project *versus* program. Table 3.7 in Appendix C presents the results. The first two columns (loans *versus* grants) show that the effect of aid unpredictability does not seem to vary from loans to grants, even though the coefficient for grants is more significant (1%). The Aid/GDP ratio has a greater (positive) effect on corruption, with a coefficient of 0.56 for loans.

The third and the fourth columns reveal that multilateral aid unpredictability has a greater negative effect (the coefficient is about 0.263 and significant at 1%) on corruption compared with bilateral aid uncertainty (the coefficient is about 0.137 and significant at 1%). This result is consistent with the work of Pallage and Robe (2001), who have shown that the instability of multilateral aid is greater than for bilateral aid (both net receipts and commitments), even though volatility does not necessarily mean unpredictability.

The three last columns of the table show the evidence for program aid, project aid and financial program aid. Based upon data from 37 IMF desk economists, the work of Bulir and Hamann (2003) mentions that program aid is more unpredictable than project aid. The regression results in columns 5 and 6 seem to be consistent with that point. The coefficient of program aid unpredictability is about 0.22 and is larger than the coefficient of project aid unpredictability. Both are significant at 10%. Financial program aid unpredictability is, however, not significant. All our over-identification test statistics indicate that the instruments for aid are good.

In Table 3.8, we test the robustness of our findings to the use of different measures of aid. Columns 1 and 2 respectively show regression results for Aid/GNI and Aid/Importations ratios. Aid unpredictability still enters negatively and significantly and the Aid/GDP ratio



significantly positively for both measures of aid. The coefficient of Aid/GNI unpredictability (0.235) is larger than that of Aid/imports unpredictability, which is about 0.144. Consistent with previous findings, the income level and the oil exporter dummy increase corruption. The Africa dummy enters negatively (even though weakly significant), meaning that, on average, the African countries in our sample are more corrupt.

Our main results call for some comments. We have found that aid is on average associated with less corruption, indicating that aid decreases corruption; meanwhile, aid unpredictability has been found to increase corruption. The first result is consistent with the literature (Tavares, 2003) promoting the use of new instrumental variables from the donors' side (and no longer instruments based upon recipients' needs that are probably correlated with their institutional performances), and allowing us to uncover the real relationship between aid and corruption. Tavares (2003) explains that the "conditionality" and "liquidity" effects of aid can partly explain that effect. The "conditionality" effect operates through the rules and conditions (from the donor) that go with aid regarding political reforms<sup>20</sup>. The "liquidity" effect of aid takes place by alleviating public revenue shortages and by allowing public sectors to implement reforms. But how can aid decrease corruption while aid unpredictability increases it? We relied on a political economy approach to explain that aid shares some common characteristics with rents from natural resources and how this could be a cause of rent-seeking activities by the political leaders. Aid may succeed in limiting rent-seeking by virtue of the donor's conditions, but, other things being equal, in the case of unpredictable aid, [corrupt] leaders have incentives or extra incentives to engage in rent-seeking activities. These empirical results suggest that the uncertainty of aid weakens the "conditionality" effect. In a theoretical framework where aid aims to "buy" political and institutional reforms, the stability and the predictability of aid matter. By being unpredictable, aid will fail to keep recipient governments committed to reform. Moreover, aid uncertainty also clearly weakens

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<sup>20</sup>This type of conditionality has been criticized in the literature. See Collier, Guillaumont, Guillaumont Jeanneney, and Gunning (1997).

the "liquidity" effect by failing to provide recipient governments with stable resources. As a result, rent-seeking activities and corruption increase.

## 3.5 Concluding remarks and policy implications

Recently a number of studies have emphasized the need to improve aid predictability, focusing their analysis on the macroeconomic effects of aid unpredictability in recipient countries and particularly in highly aid-dependent countries. This chapter addressed the issue of foreign assistance uncertainty from a political economy prospect, by investigating the effect of aid unpredictability on rent-seeking behaviors in aid recipient countries. We proxied rent-seeking activities by corruption mainly due to the sparse availability of data and to the fact that corruption is one of the main symptoms of rent-seeking activities. Consistent with the literature, statistical analysis in the paper provides evidence of a high unpredictability of aid flows, computed from an econometric forecasting model. Our major empirical findings are threefold: (1) there is a robust statistical relationship between high aid unpredictability and corruption in aid recipient countries; (2) there is a similarly strong relationship between higher aid levels and lower corruption, particularly when we correct for endogeneity; and (3) the impact of aid unpredictability on corruption is more severe in countries with weak initial institutional frameworks, as measured by the constraints on the executive power.

The findings of this analysis suggest that donors must keep on improving the management and the delivery of aid flows, since on top of complicating the fiscal planning and implementation of the development agenda in aid-dependent countries, aid unpredictability may have a detrimental effect on institutions through increased corruption. However, the policy implications must be phrased delicately. Aid predictability need to be improved not with the intention of reducing corruption, but with the aim of reducing the negative macroeconomic consequences in countries dependent on aid inflows. The unpredictability of aid is

### 3.3.5 Concluding remarks and policy implications

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associated with higher corruption not because it directly causes corruption, but because the political institutions are weak. Increased rent-seeking activities resulting from the uncertainty of aid flows should rather be interpreted as a symptom of weak institutions and weak checks and balances on the political power. This is an avenue for future research. Coming back to development funding strategy options, if the policy option to invest directly in the improvement of institutions and to make aid an instrument of such an investment plan is retained, this chapter then provides supplementary recommendations to improve the predictability of aid, since building and improving institutions through time requires stable and sustained resources. The findings also reveal that the damaging institutional impacts of aid unpredictability should rather be interpreted as a symptom of weak institutional frameworks, since evidence has been offered that the initial institutional conditions matter.

Appendix A Data definition and sources

Variable	Definition	Source
Official development assistance (ODA)	Total net disbursements includes grants and loans with a grant element of more than 25%.	OECD/DAC
Uncertainty	See section 3.4.3.1 for calculation details.	Author's calculations
Aid%GDP	ODA measured as a percentage of GDP	Author's calculations from OECD/DAC aid statistics and World Development Indicators 2008
Loans	Net ODA loans, current US\$ millions	OECD/DAC statistics
Grants	ODA grants, current US\$ millions	OECD/DAC statistics
Multilateral aid	ODA from multilateral donors, current US\$ millions	OECD/DAC statistics
Bilateral aid	ODA from bilateral donors, current US\$ millions	OECD/DAC statistics
Project aid	Total net of project ODA, current US\$ millions	Ouatara2005
Programme aid	Total net of programme ODA, current US\$ millions	Ouatara2005
Financial programme aid	Total net of programme ODA minus food aid, current US\$ millions	Ouatara2005
APD%GNI	Aid (% of gross capital formation). Aid includes both official development assistance (ODA) and official aid. Ratios are computed using values in U.S. dollars converted at official exchange rates.	OECD/DAC statistics and World Bank estimates
APD%imp.	Aid (% of imports of goods and services). Aid includes both official development assistance (ODA) and official aid. Ratios are computed using values in U.S. dollars converted at official exchange rates.	World Development Indicators 2007
Income	Gross domestic product (GDP) divided by midyear population (constant 2000 US\$)	World Development Indicators 2008
Corruption	Indicator of corruption as reported by international consultants. Scaled from 0 to 6, higher values denote less corruption	International Country Risk Guide

Appendix A (Cont.)

<u>Variable</u>	<u>Definition</u>	<u>Source</u>
Eth. Frac.	The probability that two random selected individuals within the country belong to the same religious and ethnic group	Atlas Narodov Mira
Oil exporter	Dummy taking the value 1 for oil exporting countries	World Development Indicators, 2008
Legal origin	Origin of country legal system. Dummy variables taking the value 1 for each British, French and 0 otherwise	Global Development Network Growth Database
Population	Population, total	World Development Indicators, 2008
Urban population	Urban population (% of total). Urban population refers to people living in urban areas as defined by national statistical offices	World Development Indicators, 2008
Africa	Dummy taking the value 1 for african countries	Author
Regions	Dummies indicating whether the country is part of East Asia and Pacific, East Europe and Central Asia, Middle East and North Africa, South Asia, Sub-saharan Africa or Latin America and Caribbea	Global Development Network Growth Database

## Appendix B The sample countries

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1. Angola	16. Egypt	31. Jordan	46. Pakistan	61. Uganda
2. Argentina	17. Ethiopia	32. Kenya	47. Panama	62. Uruguay
3. Burkina Faso	18. Gabon	33. Liberia	48. Peru	63. Venezuela
4. Bolivia	19. Ghana	34. Sri Lanka	49. Philippines	64. Vietnam
5. Brazil	20. Guinea	35. Morocco	50. Papua New Guinea	65. Congo Dem. Rep.
6. Botswana	21. Gambia	36. Madagascar	51. Sudan	66. Zambia
7. Chile	22. Guinea-Bissau	37. Mexico	52. Senegal	67. Zimbabwe
8. Cote d'Ivoire	23. Guatemala	38. Mali	53. Sierra Leone	
9. Cameroon	24. Guyana	39. Mozambique	54. El Salvador	
10. Congo (Rep.)	25. Honduras	40. Malawi	55. Suriname	
11. Colombia	26. Haiti	41. Malaysia	56. Syria	
12. Costa Rica	27. Indonesia	42. Niger	57. Togo	
13. Dominican Rep.	28. India	43. Nigeria	58. Thailand	
14. Algeria	29. Iran	44. Nicaragua	59. Tunisia	
15. Ecuador	30. Jamaica	45. Oman	60. Turkey	

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## Appendix C Additional results

**Table 3.6: Aid unpredictability and corruption (Cross-section IV regressions, 1984-2004)**

Variable <sup>a</sup>	Coefficient (Std. err.)	
	<i>2SLS</i>	<i>2SLS</i>
Uncertainty	-0.05 <sup>(a)</sup> (.019)	-0.26 <sup>(b)</sup> (.125)
Aid(% GDP)		0.26 <sup>(a)</sup> (.100)
Log(income)		1.12 (.838)
British		-0.13 (.363)
Oil export.		0.80 (.505)
Log(pop.)		0.31 <sup>(b)</sup> (.158)
Africa		0.06 (.286)
Eth. frac.		-0.0002 (.0049)
Log(pop. urb.)		0.05 (.338)
Intercept	2.78 (.101)	-11.01 <sup>(b)</sup> (5.38)
Obs	67	47
$R^2$	0.09	0.92
<i>Instruments quality statistics</i>		
Cragg-Donald Wald F statistic	–	0.45
Hansen J Stat. <sub>(p-value)</sub>	–	3.87 <sub>(0.57)</sub>

<sup>a</sup> Beside the coefficient value, the Std. Errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. All the estimations include regional controls, which are not reported for reasons of space.

Table 3.7: Aid unpredictability and corruption ((Panel IV regressions, by aid types (2SLS). 4-year periods averages 1984-2004))

Variable <sup>a</sup>	Coefficient (Std. err.)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	<i>loans</i>	<i>grants</i>	<i>bilateral</i>	<i>multilateral</i>	<i>project</i>	<i>prog.</i>	<i>fin. prog.</i>
Uncertainty	-0.19 <sup>(c)</sup> (0.11)	-0.17 <sup>(a)</sup> (0.06)	-0.14 <sup>(a)</sup> (0.04)	-0.26 <sup>(a)</sup> (0.12)	-0.16 <sup>(c)</sup> (0.09)	-0.22 <sup>(c)</sup> (0.13)	-0.19 (0.13)
Aid(% GDP)	0.57 <sup>(a)</sup> (0.24)	0.17 <sup>(a)</sup> (0.07)	0.19 <sup>(a)</sup> (0.07)	0.21 <sup>(a)</sup> (0.09)	0.22 <sup>(c)</sup> (0.13)	0.27 <sup>(c)</sup> (0.15)	0.31 (0.20)
Log(income)	0.59 <sup>(b)</sup> (0.28)	0.88 <sup>(a)</sup> (0.35)	0.76 <sup>(a)</sup> (0.27)	0.37 (0.23)	0.79 <sup>(b)</sup> (0.39)	0.43 <sup>(b)</sup> (0.21)	0.36 <sup>(c)</sup> (0.19)
Oil export.	0.33 (0.29)	0.62 <sup>(a)</sup> (0.28)	0.51 <sup>(b)</sup> (0.24)	0.04 (0.35)	0.06 (0.37)	-0.15 (0.30)	-0.12 (0.29)
Log(pop.)	0.03 (0.11)	0.05 (0.11)	0.05 (0.09)	-0.03 (0.09)	0.20 (0.15)	0.05 (0.10)	0.06 (0.09)
Eth. frac.	-0.01 (0.005)	-0.008 <sup>(c)</sup> (0.005)	-0.008 (0.005)	0.002 (0.006)	-0.01 <sup>(a)</sup> (0.004)	-0.02 <sup>(a)</sup> (0.004)	-0.02 <sup>(a)</sup> (0.004)
British	-0.31 (0.35)	-0.34 (0.31)	-0.04 (0.21)	-0.03 (0.26)	0.14 (0.30)	0.10 (0.26)	-0.02 (0.26)
Log(urb. pop.)	0.53 (0.42)	-0.64 (0.47)	-0.30 (0.31)	0.38 (0.34)	-0.13 (0.35)	-0.31 (0.37)	-0.36 (0.39)
Africa	-0.35 (0.34)	-0.59 (0.38)	-0.39 (0.36)	-0.49 (0.48)	-0.12 (0.37)	-0.18 (0.42)	-0.04 (0.46)
Intercept	-4.22 (4.10)	-2.11 (3.74)	-2.56 (3.07)	-2.60 (3.02)	-5.71 (5.39)	0.45 (2.45)	1.15 (2.20)
<i>Reg. dummies</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>	<i>yes</i>
Obs	163	163	163	125	126	126	126
R <sup>2</sup>	0.86	0.86	0.91	0.91	0.89	0.89	0.90
<i>IV quality statistics</i>							
Cragg-Don. F stat.	1.86	1.86	3.21	1.96	2.83	5.70	5.63
Hansen J Stat. <sub>(p-val)</sub>	2.75 <sub>(0.60)</sub>	3.02 <sub>(0.39)</sub>	3.90 <sub>(0.27)</sub>	7.29 <sub>(0.20)</sub>	0.80 <sub>(0.37)</sub>	2.24 <sub>(0.13)</sub>	3.27 <sub>(0.07)</sub>

<sup>a</sup> Beside the coefficient value, the Std. Errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. All the estimations include regional controls, which are not reported for reasons of space.

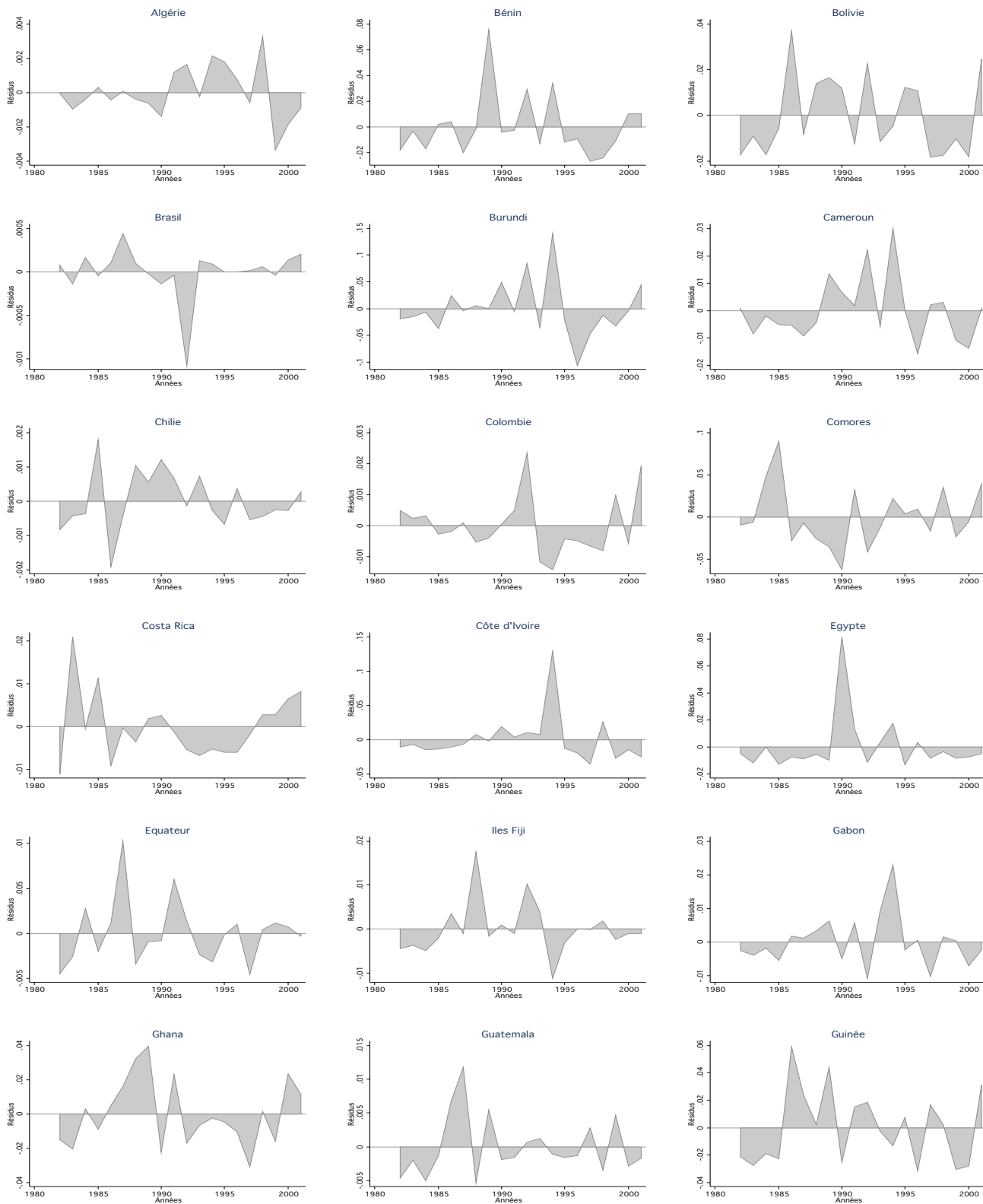


**Table 3.8: Aid uncertainty and corruption: robustness checks (aid types). (Panel IV regressions, 4-year periods averages, 1984-2004).**

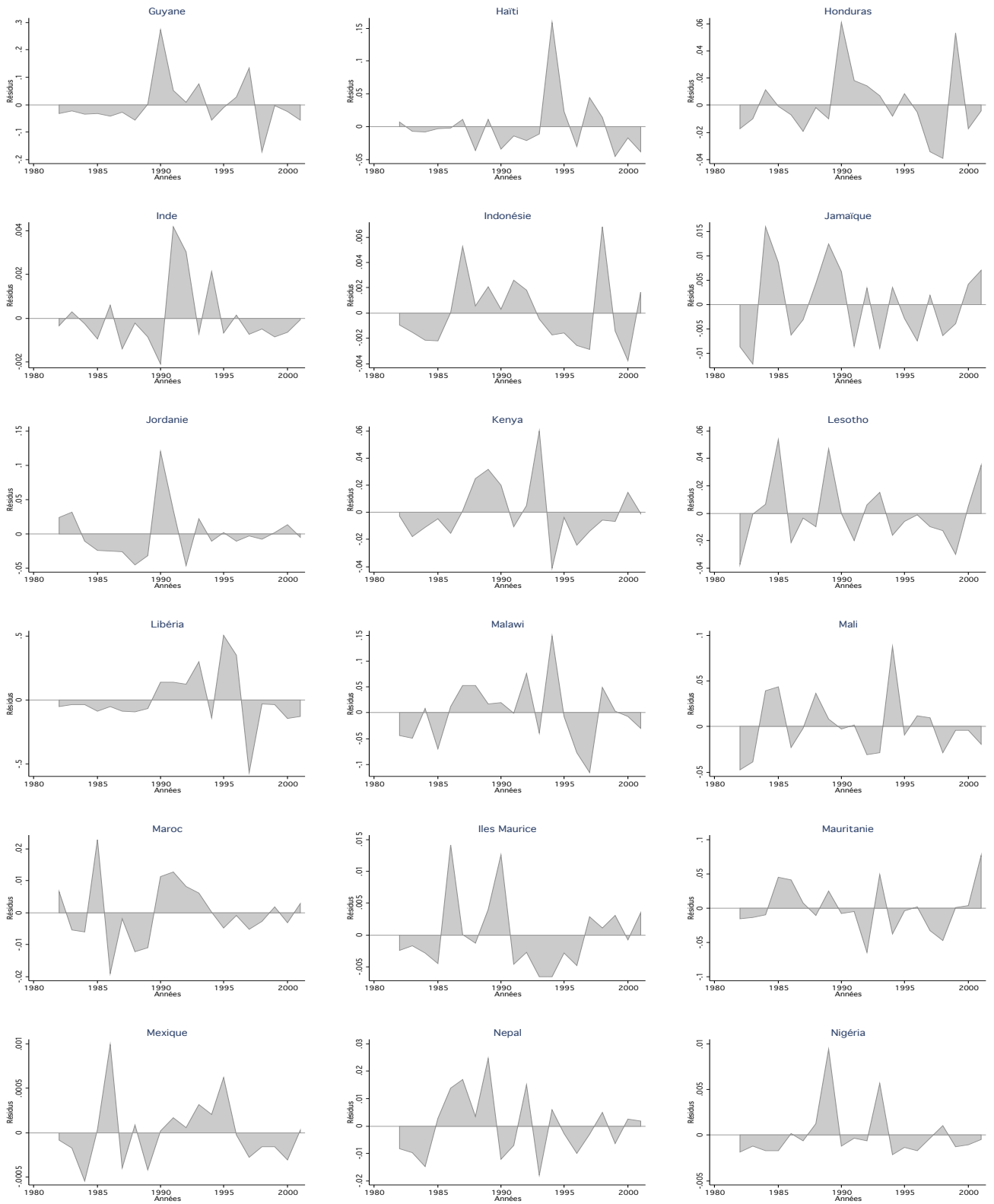
Variable <sup>a</sup>	Coefficient (Std. err.)	
	(1)	(2)
	<i>Aid(%GNI)</i>	<i>Aid(%import.)</i>
Uncertainty	-0.24 <sup>(b)</sup> (0.13)	-0.14 <sup>(a)</sup> (0.06)
Aid(% GDP)	0.19 <sup>(c)</sup> (0.10)	0.10 <sup>(a)</sup> (0.03)
Log(income)	0.89 <sup>(a)</sup> (0.39)	0.84 <sup>(a)</sup> (0.31)
Oil export.	0.99 <sup>(b)</sup> (0.48)	1.34 <sup>(a)</sup> (0.50)
Log(pop.)	0.05 (0.11)	-0.04 (0.08)
Africa	-0.77 <sup>(c)</sup> (0.47)	-0.40 (0.44)
Eth. frac.	-0.01 <sup>(c)</sup> (0.005)	-0.01 (0.005)
Log(pop. urb.)	0.06 (0.46)	1.04 <sup>(c)</sup> (0.58)
Intercept	-4.99 (4.65)	-7.24 (4.52)
Obs	139	134
$R^2$	0.86	0.89
<i>IV quality statistics</i>		
Cragg-Donald Wald F statistic	1.37	2.06
Hansen J Stat. <sub>(p-val)</sub>	6.12 <sub>(0.19)</sub>	4.90 <sub>(0.43)</sub>

<sup>a</sup> Beside the coefficient value, the Std. Errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. All the estimations include regional controls, which are not reported for reasons of space.

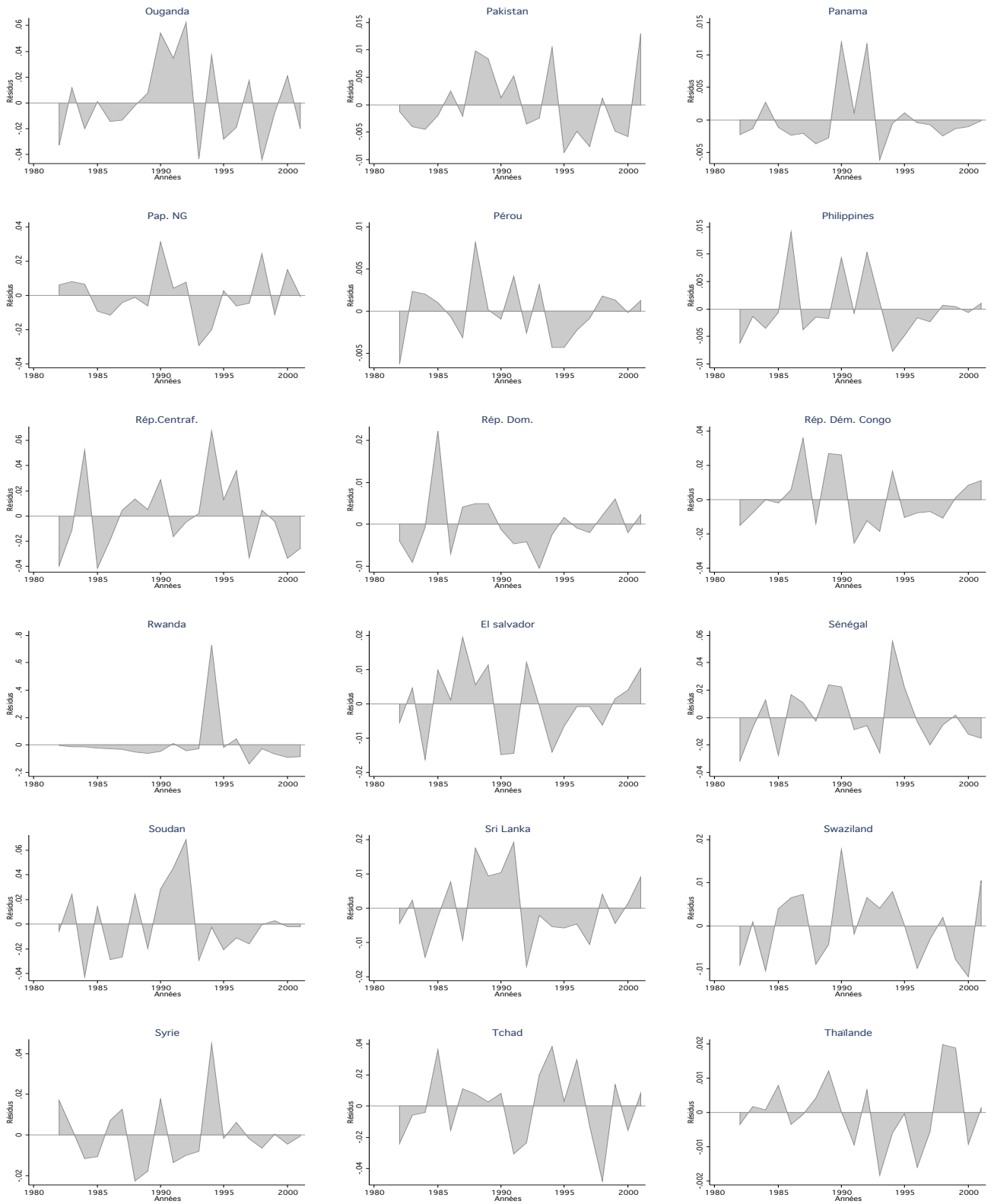
Figure 3.5: ODA(%GDP) forecasts errors (whole sample countries)



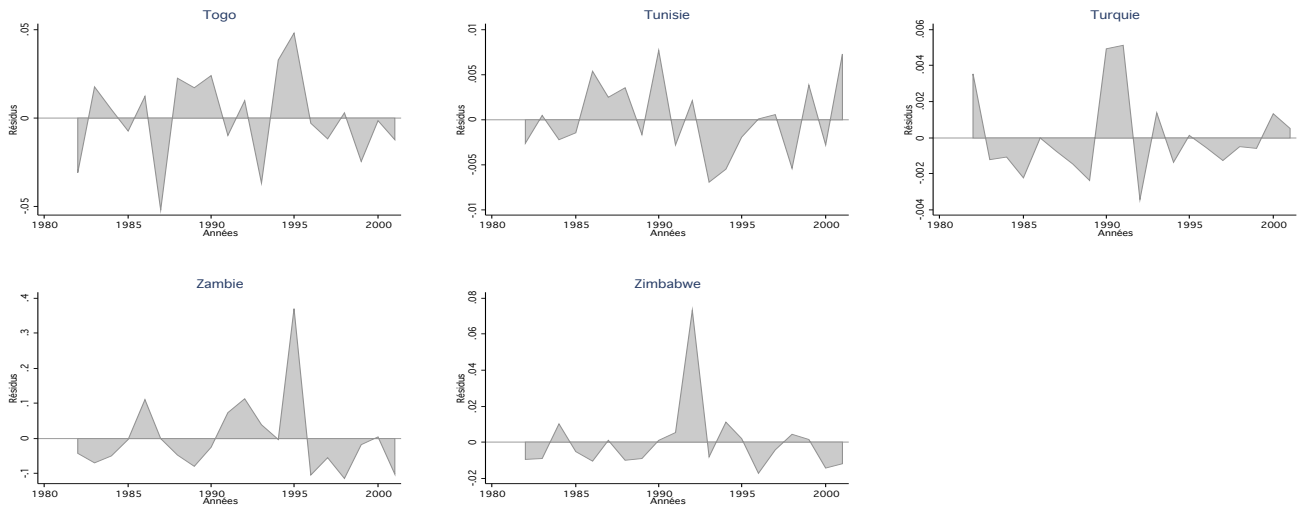
### 3.C Additional results



### 3.C Additional results



### 3.C Additional results



*Source: author's computations. See section 3.4.3.1 for details*

# Chapter 4

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## **AID, HISTORY AND DEMOCRATIC ACCOUNTABILITY**

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*"... institutional arrangements are, by necessity, country-specific. Discovering what works in any one country requires experimentation. After all, institutions are not hot-house plants capable of being planted in any soil and climate. Reforms that succeed in one setting may perform poorly or fail completely in others. . . "* (Dani Rodrik<sup>1</sup>)

## 4.1 Introduction

Much has been said about the role of institutions in the economic development process of countries, and a strong consensus has emerged that institutions are the root cause of development. A large body of literature has demonstrated that weak institutions are not simply "symptoms" of underdevelopment, but its root cause. A look at the global distribution of income reveals that the successful countries are those which have succeeded in creating the best institutions, while the poorest countries are those which have the most inefficient institutions. However, much less has been said about the origins of institutions or, in other words, how countries have ended up with different sets of institutions.

A look back over history reveals that institutional borrowing from one place by another is a widespread phenomenon. As emphasized by Djankov, Glaeser, La Porta, Lopez-De-Silanes, and Shleifer (2003), transplantation can be held responsible for a large part of the institutional variation between countries. For instance, the French legal system has been exported to Spain, Portugal, Holland, Latin America, West Africa and some parts of Asia, while the German legal system has been transplanted into Switzerland, Austria and Japan. Similarly, the USSR legal system was introduced into socialist countries (Djankov, Glaeser, La Porta, Lopez-De-Silanes, and Shleifer, 2003). These transfers occurred either on a voluntary basis or through wars or colonial experiences, as has been shown by extensive research (Berkowitz, Pistor, and Richard, 2003; Mamadouh, De Jong, and Lalenis, 2003; Rodrik, 2004; Englebert, 2000a; Beaulier, 2008).

Many scholars have discussed the fact that the transfer of institutions is key in determining

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<sup>1</sup>Copyright: Project Syndicate, September 2002

the outcomes of institutional and economic development for host countries. Acemoglu, Johnson, and Robinson (2001) provided one of the most audacious explanations of comparative development, shedding light on the impact of colonial experiences on early and current institutions. According to these authors, the types of institution that were set up by Europeans in the colonies determined the quality of post-colonial institutions. Indeed, colonization strategies led to the establishment of extractive institutions in the places where the colonizers were unable to settle (due to difficult environmental conditions) and led to the establishment of extensive civil rights, secured property rights and strong checks and balances against the power of the government in the places where they were able to inhabit. Importantly, these institutions persisted long after their establishment and led on to the current institutions, according to Acemoglu, Johnson, and Robinson (2001).

Other scholars have discussed the role of history and institutional transplantation in shaping the modern institutions of developing countries in different ways. Englebert (2000a) explored the hypothesis that the extent to which colonial institutions clashed with indigenous ones can significantly explain the state of institutions in developing countries today. This rationale is also supported by Dia (1996), who discusses the point that the crisis caused by the weak institutional capacity of developing countries is essentially due to a structural and functional disconnection between the informal indigenous institutions which are embedded in the local context and the formal institutions which have been borrowed from abroad.

Early debates regarding aid effectiveness raised the issue of the potentially damaging effects of aid on the recipient countries' institutions, blaming aid for the institutional crisis in recipient countries as it fuels corruption and weakens democratic accountability and the quality of governments. Many empirical studies have indeed shown that aid dependence can undermine institutional quality by weakening accountability, encouraging rent-seeking and corruption, fomenting conflict over the control of aid funds, siphoning off scarce talent from the bureaucracy and alleviating the pressure to reform inefficient policies and institutions (Hoffman,



2003; Knack, 2001; Svensson, 2000; Alesina and Weder, 2002; Brautigam and Knack, 2004). The purpose of this chapter is to explore the hypothesis that the failure of institutional transplants (*i.e.*, the extent to which the imported colonial institutions clashed with the pre-existing indigenous institutions) can account for some of the adverse effects of aid on recipient countries' institutions. The research question is as follows: does the institutional crisis which arises from the failure of transplants account for the adverse effects of aid on the quality of institutions? The rationale is that the countries in which the indigenous institutions were not successfully meshed with colonial institutions ended up with weak post-colonial institutions which persisted over time. These institutions helped to create a base for the weak pre-existing institutional conditions and allowed aid to have a negative impact on institution-building, as suggested in the previous chapter. Following on from the work of Desai and Snively (2007), we discuss the failure of institutional transfers from two perspectives: the feasibility of transfers and the appropriateness of the transfer. We provide insight into the theory that the inadequacy of institutional transfers (*e.g.*, in terms of whether or not they addressed a specific local demand) jeopardizes the functioning of the transplanted institutions.

We provide an empirical investigation of the causal effects of aid and this crisis on the quality of institutions, for which an index of democratic accountability is used as a proxy. This focus on democratic accountability is relevant because political accountability, which is defined as the extent to which policy makers and elites can be held accountable for their actions, is regarded as an extremely important feature of democracy and is associated with low levels of corruption, good governance practices, checks and balances on executive power and freedom of press, which makes it an excellent proxy for overall institutional quality (Lederman, Loayza, and Soares, 2005). Competent, transparent and accountable political institutions are considered to be a central element of a functioning democracy, which is key for determining a good institutional framework. As pointed out by Acemoglu, Johnson, and Robinson (2001), constraints on the actions of elites, politicians and other powerful groups are a key

characteristic of a good institutional framework.

Following on from the work of Englebert (2000b) and Dia (1996), we built a proxy of the unsuccessfulness of institutional transplants (State political illegitimacy) on the basis of the assumption that a structural disconnection between indigenous norms and the modern transplanted practices and institutions will create a crisis concerning the legitimacy of state institutions. Our state political illegitimacy proxy is a dummy which indicates whether or not a country could be characterized as having had an illegitimate state at the end of the colonial period, which is importantly assumed to have persisted over time. State legitimacy refers to the general social agreement over the principle(s) upon which the "right to rule" is based (Holsti, 1996) and can be viewed as an outcome of an institutional transplant process from a historical perspective. As pointed out by (Englebert, 2000a), most African states lacked legitimacy at the time of their birth, as the post-colonial state clashed with pre-colonial indigenous institutional frameworks due to the weak links with the post-colonial state institutions in these local institutions. Cross-country regressions on a sample of 68 developing countries between 1984-2003 provide results which support the hypothesis that the institutional crisis caused by unreceptive transplants conditions the impact of aid on the quality of institutions.

The remained of the chapter proceeds as follows: section 4.2 reviews the main channels of institutional transfers, namely history and foreign assistance to development; section 4.3 discusses the feasibility and appropriateness of institutional transplants; and section 4.4 examines the implications for the aid effectiveness debate. Section 4.5 present two case studies (Kenya and Botswana) giving the intuition of the empirical analysis presented in section 4.6, while section 4.7 concludes.

## 4.2 How institutions are transplanted from one place to another

Countries have often relied on experiences from abroad, either on a voluntary basis or under pressure or influence. Political institutions, business practices and policies have been repeatedly borrowed across countries for a long time (Mamadouh, De Jong, and Lalenis, 2003). The following sections discuss this condition within the framework of institutional transplants between countries and sheds some light on two of the most influential channels through which institutions are transferred from one country to another, namely history and foreign assistance with development.

### 4.2.1 The influence of history

Looking back over history, it is worth noting that most developing countries obtained their formal institutions through historical events. With a few exceptions, the countries that are at a developing stage today have experienced colonial rule which occasioned institutional transfers. Berkowitz, Pistor, and Richard (2003) studied the determinants of legal institutions by analyzing the process through which legal institutions have been transplanted into colonies and explained that these transfers were successful in colonies in which the transplanted institutions adapted to local conditions or where the population was familiar with the law. The work of Berkowitz, Pistor, and Richard (2003) dealt with the transplantation of legal families and tried to identify what they called the "transplant effect", explaining that the process of legal institutional transplantation matters in determining the ability of countries to develop effective legal systems. They also explained that colonization resulted in the extensive transplantation of Western legal systems to other parts of the world and particularly to developing countries.

However, several types of institution other than legal ones (laws, legal norms, etc.) are

#### 4.4.2 How institutions are transplanted from one place to another

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also prone to transplantation: formalized regulations, managerial procedures and informal norms can be quoted as examples (Mamadouh, De Jong, and Lalenis, 2003). Acemoglu, Johnson, and Robinson (2001, 2002)'s theory of institutional development focuses on the settlers' type of institutional designing strategy and distinguishes between settlement and extractive colonialism. In settlement colonies which had benign disease environments, settlers supported the building of institutions that protected property rights and promoted effective legal systems. Conversely, in what they called extractive colonies (marked by a bad disease environment), they failed to promote institutions of the same quality, due to their desire to expropriate wealth from the colonized territories.

As emphasized by Dia (1996), the lack of an indigenous underpinning and related political and moral legitimacy allowed public administrations that were set up during the colonial period to be more compliant with the extraction of resources and to meet the needs of the colonizing countries rather than the needs of the local population. Moreover, this was accompanied by a concentration of executive, legislative and judicial powers with the executive administrators which resulted in a highly centralized public administration.

#### 4.2.2 External assistance

Foreign assistance with development also plays a very important role in transplanting institutions. This is mainly supported by the desire to replicate successful models in the recipient countries and to avoid the costs of innovation and experimentation. In the institutional transfer literature relating to aid, technical assistance (which consists of transferring skills and expertise through dispatching consultants, creating scholarships and organizing seminars and training sessions) and conditional loans emerge as being amongst the main channels used by donors to replicate institutional models in the recipient countries.

Since the 1950s and 1960s, industrialized countries have been supporting the transfer of policy-making and administrative institutions from their systems into developing countries

(Desai and Snavely, 2007). This accelerated after the collapse of the communist system, with an increase in the number of institutional capacity-building programs aimed at consolidating democracies and market economies. The United States (US) played a particularly active part in this process by transferring "modern administrative institutions", under the rubric of "development administration" and "modernization", to developing countries through its technical assistance programs as part of its foreign aid (Jones, 1970).

Since the end of the 1980s, which marked the collapse of communism, bilateral as well as multilateral donors have been enthusiastically promoting institutional development with a special focus on democracy and governance in developing countries (some donors like the US have taken the lead in this endeavor) and have placed these aims at the center of their foreign development assistance policies under the impetus of developmental and geopolitical goals. USAID (US Agency for International Development), which is by far the largest provider of democratic assistance in the community of donors, leverages the support of the rule of law, the civil society, elections and the electoral process and governance in order to strengthen democratic processes (McMaho, 2001). As stressed by Desai and Snavely (2007), technical assistance which is intended to strengthen institutional capacities is one of the main channels of institutional transplants, as it aims to promote institutional changes. In Sub-Saharan African countries in particular, political transitions have been influenced by external pressure to change. This began in the early 1990s, when donor countries started to promote political pluralism (Larmour, 2005).

## 4.3 Do institutional transplants work?

We now turn to the effectiveness issues relating to institutional transfers (in the broader sense). This question has been of interest to some researchers who have discussed and in-

investigated whether or not these transfers brought what the initiators and adapters expected from them (Mamadouh, De Jong, and Lalenis, 2003), *i.e.*, a replication of the original success of the institution. Following on from the work of Desai and Snavely (2007), we discuss the challenges facing the effectiveness of these transplants from the perspective of the following two points: the feasibility of transplanting institutions from abroad and the suitability of these transplants. These points are important to discuss as they illustrate the core challenges which determine the success of the replication of institutional models and, more importantly, the institutional effects of foreign assistance, which will be discussed in the later sections of this chapter.

Institutional transplants have occurred between countries (and particularly in developing countries) through several channels, from historical events to global factors such as cooperation for development. This discussion focuses on technical assistance programs designed to support institution-building, which have proven to constitute a strong transfer channel as they involve the transfer of managerial practices, formal administrative structures, public policies, etc.

#### 4.3.1 Are institutional models transferable?

The assumption that political, social and economic institutional settings can be transferred from one country to another is the foundation of technology transfer projects (Desai and Snavely, 2007). However, this assumption can be challenged. With the aim of promoting the building of institutions and fostering democracy, Western industrialized countries have been devoting significant efforts to "modernize" developing countries' administrative institutions through technical assistance programs, with the US taking the lead. These attempts were built mainly on the assumption that the institutional models of the beneficiary countries were superior and a good fit (Desai and Snavely, 2007). However, the theoretical foundations of these transfers have been the subject of a great deal of criticism by some scholars who have

challenged the feasibility of institutional transplants from one country to another due to their high level of context-specificity (Pollitt, 2003). Desai and Snavely (2007) raise the issue of the host country's historical and cultural remoteness, which would cast doubt on the feasibility of the transfers. The authors discussed the marked cultural and historical differences between the US and Russia regarding the conceptualization of a civil society, which problematized the success of the technical assistance programs for institutional capacity-building during the period 1993-2004 which were supported by the US in Russia, and which implied a transfer of norms and practices. Indeed, the authors explained that, contrary to the bottom-up conception of the civil society in the US, Russian civil society was marked by the strong role of the State.

Importantly, the same social organization discrepancies also stand in US-Africa relations as regards the attempt to transfer managerial practices and organizational structures through technical assistance programs. These transplants are problematized in the African context insomuch as the historical context of African countries has led to a civil society which is organized in a different way to that of the US.

Similarly, technical assistance programs for institutional capacity-building provided by European countries occasion a transfer of norms and practices which are not necessarily in phase with the local context. The civil society in Western Europe has been driven by the bourgeoisie, who managed to separate private and public economic interests and made this the ideal, while the Africa context is marked by ethnic considerations and small and uncoordinated actions (Woods, 1992).

#### 4.3.2 Are institutional transplants suitable?

The feasibility of institutional transfers raises other concerns regarding their suitability, *i.e.*, whether or not the transplanted institutions fit a particular need and whether they are efficient, or more generally, whether they are appropriate for the recipient country's local context.

This issue is addressed in the work of Desai and Snavely (2007), which focuses on the transfer of institutional norms and structures (administrative practices) from the US through institutional and professional capacity-building projects to some formerly communist European countries and Russia. Their basic argument is that institutional efficiency and effectiveness are context-dependent, meaning that institutional settings and models that have proven to be effective in one country may end up failing in another country into which they have been transplanted. Rodrik (2006) discusses this point in light of the failure of the implementation of the Washington Consensus precepts<sup>2</sup>, which called for policy and institutional reforms aimed at resolving the debt crisis which was developing in the 1990s. The issues associated with initiating institutional reforms using the model of Western political institutions in the Washington Consensus only emerged at a later stage (the "second generation" reforms in the mid-1990s), when the consensus practitioners recognized that the implementation of the policies that were expected to work would need to be backed by strong institutions (Dunning and Pop-Eleches, 2004). This marked the beginning of massive support for institutional transplants from the models of developed countries which were assumed to be the best, following a "one-size-fits-all" approach. This process took into account Anglo-American institutional blueprints such as political democracy, an independent judiciary, a professional bureaucracy, a small public enterprise sector, a developed stock market, a financial regulation regime that encourages prudence and stability, labor market institutions that guarantee flexibility, etc. (Ha-Joon, 2006). However, these transfers revealed a weak match with local contexts and did not lead to the expected economic outcomes.

It is also worth noting that the Washington Consensus experience revealed that there was a degree of confusion between the "form" and the "function" of institutions, as the emphasis was

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<sup>2</sup>The term "Washington Consensus" summarizes the ten economic prescriptions offered by the Bretton Woods institutions to revitalize the developing economies affected by the debt crisis in the 90s; those recommendations advocated fiscal discipline, the reorientation of public spending, tax reforms, trade and market liberalization, the stabilization of exchange rates, the improvement of competitiveness, the removal of trade barriers, the liberalization of foreign direct investments, the massive privatization of public enterprises, the deregulation and the safeguarding of property rights.



placed exclusively on the transfer of institutional "forms" without worrying about the fact that they may not perform the expected functions in the host countries. This point made the success of these transplants more problematic, as the forms of institutions are neither uniquely influenced by their function nor guarantee it (Rodrik, 2006), as different institutional forms are able to perform the same function (Ha-Joon, 2006).

Jacoby (2000) emphasizes the importance of legitimacy in the institutional transplantation process and explains that a transplanted institution must have political legitimacy in the host country in order to function well. Legitimacy is acquired through a good fit with local norms and pre-existing institutional settings. As stressed by Ha-Joon (2006), institutional imitation does not guarantee successful institutional development; formal institutions which are successful in Western countries may not work well when transplanted into developing countries, as they could be designed to function alongside a particular set of informal institutions. He provided the example of Value-Added Tax (VAT), which cannot be easily introduced into countries where people do not do business with receipts.

Tilly (1990) showed, for instance, that bureaucratic institutions in Europe are the result of a particular historical process which did not take place in Africa, making the success of their transfer more problematic. Indeed, he indicated that this historical process was based upon the density of the population in Europe during the Middle Ages, which made land at that time a very scarce good, making its control by the monarchy as profitable as it was difficult. The monarchy, in order to raise funds for war through taxation, was provided with tax revenues from the elites, who in turn called for stronger accountability from the government. This process resulted in the establishment of an institutional infrastructure (administrative institutions, rule of law, etc.) which was specific to the European context in the 19th century. From this perspective, countries that are hosting transplanted institutions may be faced with some issues regarding institutional fitness, as they did not undergo the same historical experience.

#### 4.4.4 Implications for the aid-institutions literature (AIL)

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In African countries in particular, because of the structural conditions, this historic process did not take place (Herbst, 2000). Based upon the structural differences between the indigenous institutions of different countries which arise due to their different historical trajectories, one can understand the difficulty of creating a coherent and effective institutional system, as the transplanted institutions are not suited to the local contexts of the recipient countries. The thesis by Roland (2004) supports this point with an original classification of institutions which helps us to understand how institutional change occurs. The interplay between what he calls "slow-moving institutions" (culture, norms, etc.) and "fast-moving institutions" (political institutions) would produce institutional change. Thus, if "fast-moving institutional" models are imposed alongside (indigenous) "slow-moving institutions", the process of institutional change could not be optimal. Roland (2004) therefore argues that transplants are made problematic because institutions, which by definition have the potential to evolve quickly and suddenly (and their political rules in particular) are introduced alongside institutions that change slowly (*e.g.*, norms, beliefs and values), causing problems of compatibility between these different institutions as a result of their different origins. Indeed, some "fast-moving" institutions may not be appropriate in some cultural and historical contexts or simply not alongside the "slow-moving" institutions with which they interact (Dunning and Pop-Eleches, 2004).

## 4.4 Implications for the aid-institutions literature (AIL)

This chapter discusses the causal relationships between the adverse effects of aid and the failure of institutional transplants, including how these failures (which have adverse effects on institutional development) could explain the negative impact of aid on institutions. What is the role of aid in the nonsuccess of institutional transplants? The interesting point to emphasize in that, as discussed in the previous sections, aid itself through technical assistance

#### 4.4.4 Implications for the aid-institutions literature (AIL)

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programs and governance-related conditions is a strong transfer channel for institutions in the developing world. Therefore, the relevant question is: to what extent can this role of aid (the transfer of "best-practice" institutions) be blamed for the direct adverse effects of aid on institutional development that have been identified in the AIL?

We examine these points in the following sections by discussing the arguments which have been developed in the AIL for the negative effect of aid in light of the failure of institutional transplants. In order to be in line with the arguments developed above, we focus on democratic accountability, which measures government responsiveness to the citizenry.

##### *Aid and democratic accountability*

Does aid hinder institutional development? This issue has been the subject of a great deal of investigations in the aid effectiveness literature. A substantial part of this literature has blamed aid for weakening government accountability. As is stressed in the previous sections, aid has also been held responsible for the transfer of a wide range of institutions through conditions and technical assistance programs.

According to Dia (1996), the ongoing institutional crisis in developing countries is caused by the structural disconnection between the formal institutions which have been transplanted from modern Western models and the informal institutions which are rooted in the local culture. This crisis is present at three levels: public administration, private sector and enterprise management.

This thesis suggests that the failure of institutional transplants could serve to explain the weak government accountability which persists in most developing countries and for which aid dependence has been blamed. His core argument is that the structural disconnection between indigenous and modern practices and institutions has created a crisis of legitimacy and accountability, affecting governance and the efficiency of public administration.

#### 4.4.4 Implications for the aid-institutions literature (AIL)

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Government accountability concerns the obligations of a government to ensure the provision of good-quality institutions in return for taxation resources obtained from citizens. According to Brautigam (1992), with high levels of aid, recipient governments are accountable primarily to foreign donors rather than to taxpayers, as aid reduces the government's dependence on tax revenues. Indeed, large sustained aid flows would reshape the relationship between government elites and local citizens by weakening the incentive for recipient government officials to maintain legitimacy and invest in institution-building, as they would not be collecting revenues from their own population. Aid, which can be considered as an "unearned" income, makes governments primarily accountable to the external agencies which provide them with financial resources, rather than citizens Moss, Pettersson, and Van De Walle (2006). Dia (1996)'s argument upholds that the central government and the civil society have become disconnected in developing countries and particularly in Africa, and that the origins of this phenomenon can be found prior to the independence period, when governments were strongly centralized without being accountable to the civil society, and lacked transparency and strong legislative checks and balances. Dia (1996) pointed out that modern governance and public administration systems were superimposed onto the traditional institutions and the indigenous management system of civil society and that this is the root cause of the disconnection crisis, which favored clientelism to the detriment of political legitimacy. By relying on the theory of the persistence of inefficient state organization (Acemoglu, Ticchi, and Vindigni, 2010), one can therefore understand how this socio-political configuration has persisted over time. This theory explains that the rich elites tend to choose an inefficient state structure which will allow them to reduce the amount of redistribution which occurs in a democracy, which creates its own constituency and which tends to persist over time.

Nevertheless, it is worth noting that, as is the case for historical factors, aid itself is a channel for the transfer of knowledge, practices and norms, modeled on donors' institutions, and that this has important implications for the debate about the persistence of the adverse effects of

aid on institutions and, more importantly for this section, on government accountability.

## 4.5 Kenya and Botswana: two illustrative cases

### 4.5.1 Kenya

This sub-section provides a case which explains the long-term impact of British colonial rule on the indigenous institutions in Kenya. It provides an analytical framework which shows how the introduction of the property rights system by the British disrupted the institutional structure in the traditional society of Kenya and helped to create a weak institutional framework marked by rent-seeking behaviors and weak state political legitimacy.

Kenya's pre-colonial history was marked by the hegemony of one ethnical group, the *Maasai*, which was largely due to their military power. The *Maasai* are a semi-nomadic group of subsistence pastoralists located in the Rift Valley of Kenya and Tanzania, and in the pre-colonial period, they were able to spread their culture, values and economic organization beyond their territorial boundaries (Berntsen, 1976). The elderly people had an important place in the traditional *Maasai* society, which was mainly organized into the warriors (15-30 years old) and the elders (above 30 years old), the latter being the only ones who were allowed to get married (Berntsen, 1976). As noted by Blewett (1995), the *Maasai* society was a strongly patriarchal one, with elderly men making most of the major decisions for each group.

The agriculturalist *Kikuyu* were also part of the ethnic landscape and settled at the boundaries of the *Maasai* territories. They used to have close, peaceful and mutually beneficial interactions with the *Maasai* (Blewett, 1995). Indeed, *Kikuyu* farming enclaves were considered by the *Maasai* as a necessary part of their pastoral economy's safety net. Relationships with the *Kikuyu* were also regarded as a form of insurance against shortages of vegetables and grain or in times of starvation, as rainfall was uncertain and the climate was semi-arid (Spear, 1993).

#### 4.4.5 Kenya and Botswana: two illustrative cases

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As emphasized by Blewett (1995), the common property rights system was a central aspect of the pastoral economy set up by the *Maasai* insofar as it ruled the access to the land, which was used for both grazing and farming. The *Maasai* developed informal institutions which controlled and prevented outsiders from accessing well-watered, dry-season grazing lands and watering points, thus avoiding the tragedy of commons. Importantly, these informal institutions shaped collective cooperation, coordinated the allocation of resources and ensured the long-term viability of common resources (Blewett, 1995; Sutton, 1993). These common property rights were accompanied by a high social capital which facilitated cooperation among individual herders who were able to move their livestock to other grazing areas in hard times (Blewett, 1995).

##### 4.5.1.1 The colonial experience: a clash of ideologies

The confrontation with the British settlers and German troops who also participated in the invasion of the *Maasai* land in the late 1890s occurred in a context in which a series of droughts and diseases affecting livestock had depopulated the *Maasai* land and weakened the military power of the *Maasai*, thus facilitating the invasion and the imposition of treaties aimed at imposing the British concept of modernity (Blewett, 1995).

A number of cultural and ideological clashes occurred with the British rulers. These mainly concerned: differences in the conceptualization of land, differences in the conceptualization of the management of property rights and misunderstandings of the importance of the *Maasai* social structure Blewett1995. Indeed, unlike the *Maasai*, who viewed the land as a set of social relationships and something everyone could use but which could not be owned, the British considered property rights as the most efficient way to use the land and minimize environmental degradation (Waller, 1993). This view failed to integrate the local cultural context and the economic reality. The imposition of the British treaties of 1904 and 1912 was also accompanied by the creation of a "closed" reserve which was restricted to the *Maasai*, as

#### 4.4.5 Kenya and Botswana: two illustrative cases

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the British were convinced that this form of property rights was necessary for the success of communally-held grazing land Blewett1995.

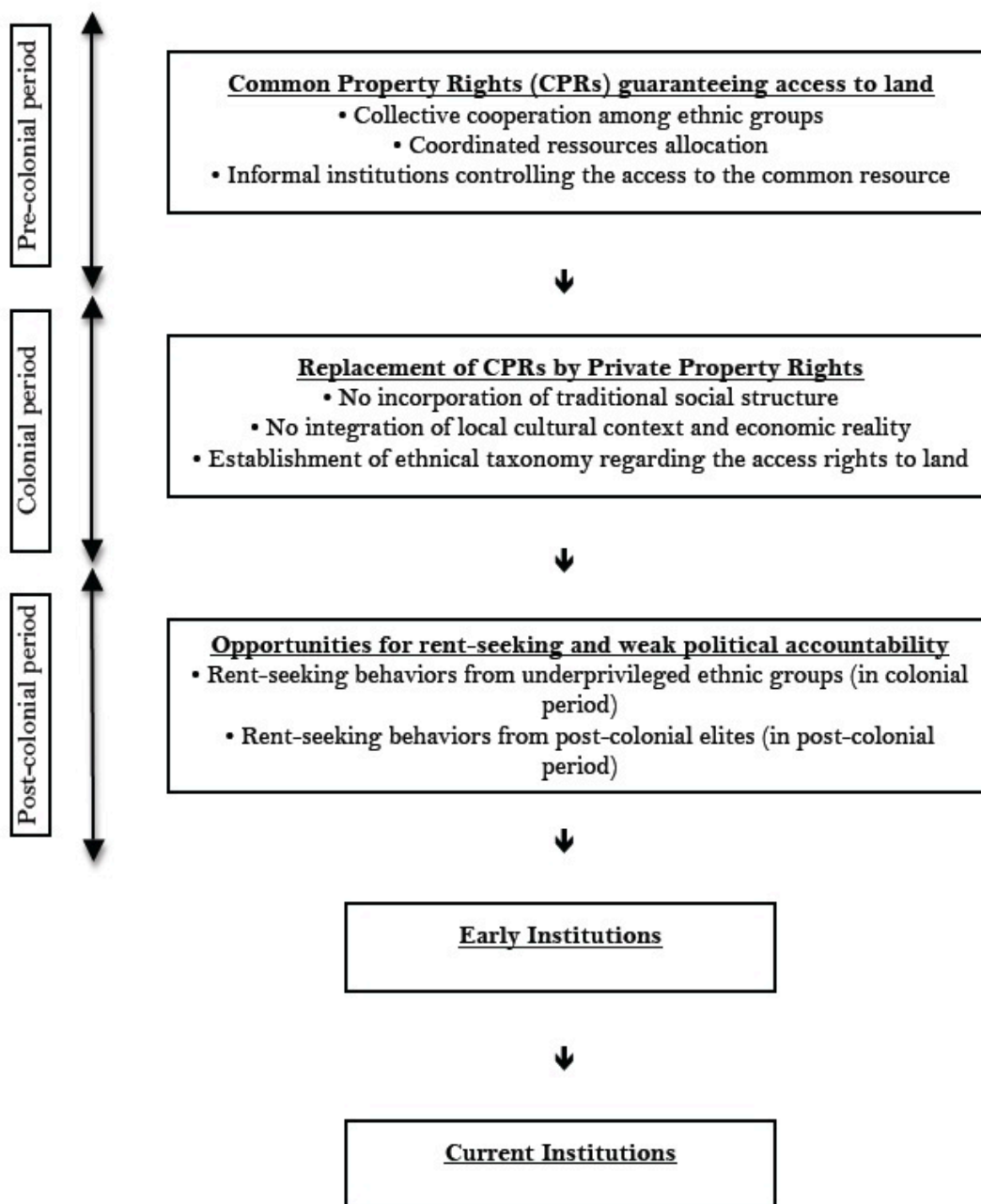
The introduction of the private property rights system by British colonial rule created room for rent-seeking in the colonial period, as well as the post-colonial period in many respects.

- First, the reinforcement of ethnic boundaries through the exclusive access to the reserve by the *Maasai* broke the tacit social rules which existed between the *Maasai* and the other groups which were no longer able to respect *Maasai* conventions as their territories were occupied by the British. This occupation encouraged them to "...redefine themselves to fit into the ethnic taxonomy believed to exist by their colonial rulers", thus embracing rent-seeking behavior, according to Blewett (1995).

- Second and more importantly, the post-colonial government continued to encourage the private property rights system and land privatization, leading the Kenyan elites to engage in rent-seeking through policies supporting the distribution and the sale of the products of the land which they received through the privatization process (Auty, 2007).

In conclusion, the Kenyan case shows that moving from a system of common property rights for ruling access to and use of the land towards a legal institutional framework (such as the private ownership system which was imposed upon colonial Kenya) without incorporating indigenous social institutions ended up disrupting those institutions and creating opportunities for rent-seeking. This subsequently created a basis for a lack of government legitimacy, which persisted after independence and formed the basis of the current institutions, as hypothesized by Acemoglu, Johnson, and Robinson (2001). Indeed, as emphasized by Englebert (2000a), several post-colonial states started to lack political legitimacy as they increased the gap between the informal local institutions and the formal ones which appeared through colonialism, as not all of the ethnic groups benefitted in a context of high levels of ethnic heterogeneity.

Figure 4.1: The colonial experience in Kenya: institutional transplants and institutional change





### 4.5.2 Botswana

Botswana is traditionally considered to be one of the most dynamic economies in Africa and appears to be one of the most cited examples of a success story due to its economic and institutional performance. A look at the World Bank's online World Development Indicators for 2011 supports this point; indeed, from the first year of its independence (1966) to 2009, Botswana's real per capita income increased by 1292%, while its average real growth per capita was 6.36% over the same period. A huge body of studies has examined the historical foundations of this success, emphasizing the capacity of pre-colonial institutions and leaders to adapt and limit the influence of colonial institutions during and after the colonial era. Unlike the Kenyan case, this case illustrates the hypothesis that countries in which indigenous institutions were successfully meshed with colonial ones emerged with strong state legitimacy and a good institutional framework.

Botswana<sup>3</sup> inherited its political institutions from the *Tswana* tribe<sup>4</sup>, which formed the most influential and hegemonic ethnic group (79% of the population, according to the Central Intelligence Agency's World Factbook 2009 estimates), and which succeeded in spreading their cultural behaviors to the other ethnic groups. Like in Kenya and many other places in pre-colonial Sub-Saharan Africa, the traditional authority of chiefs in the *Tswana* tribe played a central role and was very strong. The *Tswana* chiefs were in charge of the securitization of property rights and held the legal, judicial and executive power, even though they were constrained by a set of sound informal institutions such as the *Kglota* (Beaulier, 2008). The *Kglota* was a traditional assembly which was presided over by the chief and which was intended to generate a consensus for its decisions through a consultation process (Seidler, 2010). The informal institutions shaped by the *Kglota* meant that the chief was not above the law and strongly promoted checks and balances of the chief's authority.

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<sup>3</sup>The name of the country was changed from Bechuanaland (the former British protectorate) upon its independence in 1966.

<sup>4</sup>See Robinson (2009) and Acemoglu, Johnson, and Robinson (2003)

##### 4.5.2.1 The colonial experience: at the crossroads of institutions

Botswana was a protectorate of the British Empire from 1885 to 1966. The Bechuanaland Protectorate was created by the British in 1885 (Acemoglu, Johnson, and Robinson, 2003). It is worth noting that Botswana experienced a "light" indirect British colonial rule due to the inhospitable environment (Acemoglu, Johnson, and Robinson, 2003). The proportion of British settlers did not exceed 1% of the population. As pointed out by Englebert (2000a), there was no explicit clash between the local institutions and the British formal institutions. Indeed, neither formal institutions like the *Kglota* and the traditional authorities nor the structure of property rights were changed.

Nevertheless, British colonial rule did have an impact on *Tswana* indigenous institutions in some respects, as emphasized by Seidler (2010): first, the introduction of colonial taxes introduced cash-based habits into the society and strengthened the political and economic power of the chiefs, as this system granted them 10% of the collected taxes (Good, 1999). Second, the introduction of Christianity weakened the legitimacy of the traditional chiefs by supplanting their magical and religious roles. As a result, they adopted Christianity and developed close relationships with the missionaries (Schapera, 1993). Third, the colonial administration used to act as an alternative judicial court, dealing with appeals against the verdicts given out by the tribal courts (Schapera, 1993).

##### 4.5.2.2 The post-colonial period: successful institutional adaptation

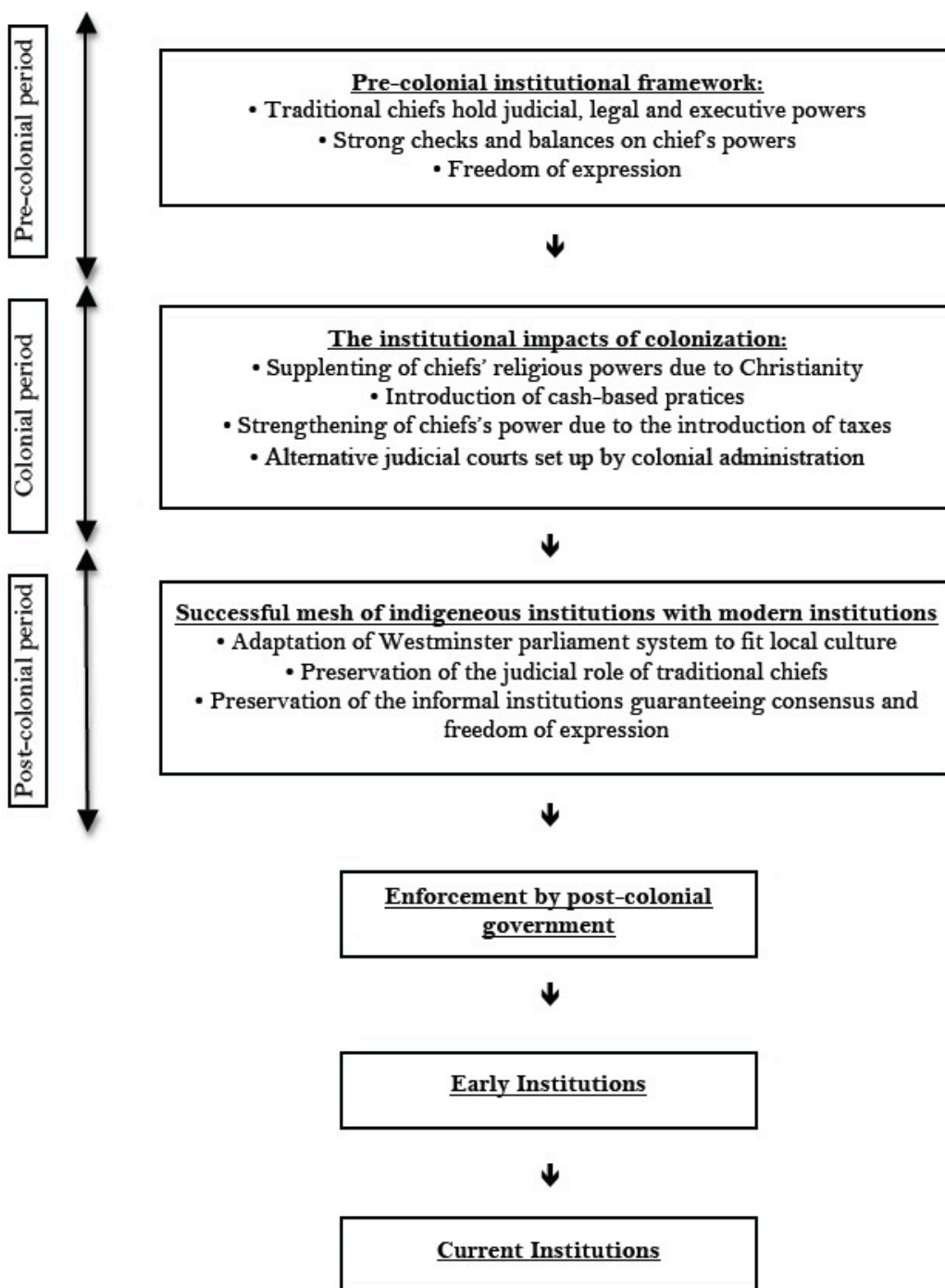
It is worth noting that at the end of the colonial period, local political leaders managed to preserve the indigenous institutions by incorporating the essential informal indigenous institutions into the institutional framework of a modern state, as they placed a great deal of value on those local institutions (Beaulier, 2008). As pointed out by Seidler (2010), the transitional post-colonial government was well-informed and created a mix of indigenous informal and imported formal institutions in order to establish a new institutional framework.

#### 4.4.5 Kenya and Botswana: two illustrative cases

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The British formal institutions were successfully meshed with *Tswana's* informal institutions. The best illustration of this success is the adaptation of the Westminster parliamentary system to fit the *Tswana* culture. The traditional chiefs continued to play an important role alongside the modern institutions by advising the Assembly on tribal affairs and customary laws without influencing the legislation. They also continued to preside over the customary courts and to pass judgment on minor offences (Parson, 1984). Moreover, traditional institutions which guarantee consensus and freedom of expression such as the *Kglota* were kept in the institutional structure (Beaulier, 2008). Most of the historical studies on the institutional development of Botswana agree that the lightness of its colonial experience coupled with the good leadership of the local political leaders were the key success factors for institutional adaptation.

Figure 4.2: The colonial experience in Botswana: institutional transplants and institutional change



### 4.5.3 Implications for the institutional impacts of aid

As shown in chapter 3, pre-existing institutional frameworks (*i.e.*, the early state of institutions) are vital for explaining the adverse effects of aid on current institutions. We indeed found that the adverse impact of aid unpredictability on rent-seeking is higher in the countries having a low initial quality of institutions.

Acemoglu, Johnson, and Robinson (2001) theorized and discussed institutional persistence in their empirical investigation of the colonial origins of comparative development. The rationale for this is threefold: first, as emphasized by Acemoglu and Verdier (1998), establishing institutions which restrict the power of elites is costly, as the new local elites may not be willing to pay the costs of improving the extractive colonial institutions and may exploit them for their own benefits. Second, the small size of the ruling elites at the time of independence may have led them to maintain the extractive institutions in order to retain a large share of the revenues for each member. Third, the irreversibility and the importance of the investments made by some agents which are supported by a particular set of institutions may lead these agents to devote significant efforts to enforcing those institutions. Thus, if the aforementioned hypotheses are validated (*i.e.*, it is shown that the early quality of institutions matters in determining the impact of aid on institutions and that institutions tend to persist over time), then history has an obvious role to play in explaining the adverse effects of aid on the quality of institutions, as we will attempt to evidence in the next empirical analysis.

As previously discussed, at its very worst, aid could have a "worsening effect" instead of a "direct weakening effect". Figures 4.3 and 4.4 plot the Polity IV combined index of democracy and autocracy<sup>5</sup> and the net ODA as a percentage of the GNI<sup>6</sup> against yearly periods for Kenya

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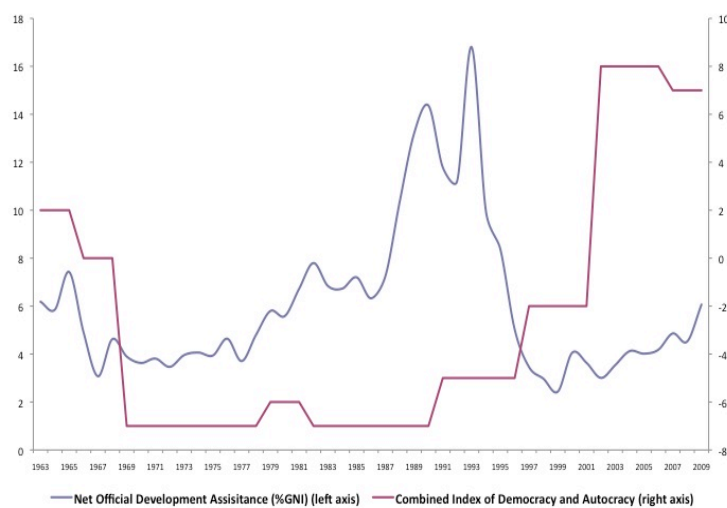
<sup>5</sup>The combined scores of democracy and autocracy positively range from -10 (full autocracy) to +10 (full democracy). Please refer to chapter 2 for a detailed description.

<sup>6</sup>World Development Indicators online statistics.

#### 4.4.5 Kenya and Botswana: two illustrative cases

and Botswana<sup>7</sup>. The figures illustrate the relative institutional persistence of Botswana and Kenya from their independence to 2009, although the evidence is mixed for Kenya. Interestingly, they show that when aid arrives in a country which is already on a good institutional path, the institutions are strengthened instead of being weakened. As discussed in the cases studies, Botswana enjoyed a good institutional framework at the time of independence thanks to the successful mesh of indigenous informal institutions with formal modern ones. In a less strikingly way, the Kenyan case tells the opposite story. As pointed out in this case, Kenya's institutions deteriorated during the early stages of independence. This persisted and even worsened alongside the increase in aid until the beginning of the 1990s, when internal and external pressures led to the abolition of the unique party system and reversed the trend. As discussed by Acemoglu, Johnson, and Robinson (2001), this also helps to show that current institutions are not predetermined by history and can be changed.

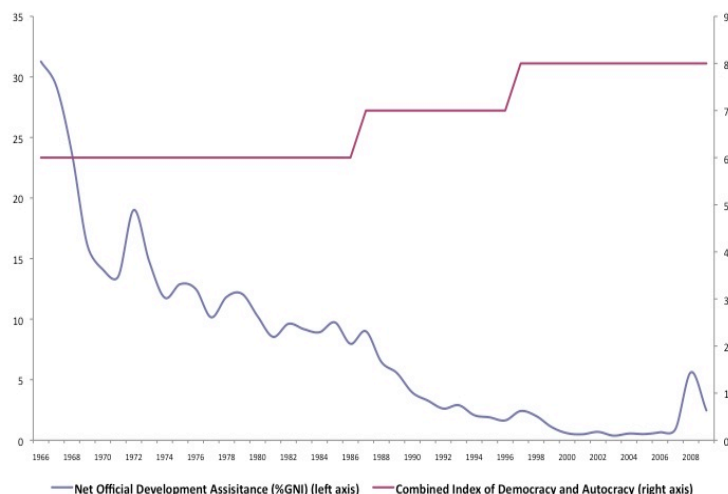
**Figure 4.3: Evolution of aid flows and democracy scores in Kenya (1963-2009)**



*Source: Author*

<sup>7</sup>The choice of the Polity IV synthetic index of democracy to represent the overall quality of institutions is motivated by the fact that Polity IV is the only institutional index source which covers a broad period of time, providing the opportunity to assess the evolution of institutions starting from the independence period.

**Figure 4.4: Evolution of aid flows and democracy scores in Botswana (1966-2009)**



*Source: Author*

## 4.6 Empirical evidence

### 4.6.1 The data

This chapter tests the assumption (illustrated in the two case studies above) that the adverse impact of aid on the quality of institutions can be accounted for by the institutional crisis which arose from the disconnection of formal transplanted institutions from the indigenous ones grounded in the local context and culture, and which has persisted over time in developing countries.

The International Country Risk Guide (ICRG) index of democratic accountability is used as a proxy for institutional quality. The ICRG institutional dataset offers the advantage of consistently covering the widest range of countries and the longest period compared with the other institutional indexes sources. The ICRG's democratic accountability index assesses

how responsive a government is to its people on the basis that the less responsive it is, the more likely it is that the government will fall, peacefully in a democratic society, but possibly violently in a non-democratic one. The index is positively ranged on a scale from 0 to 6, with higher scores indicating better accountability. Aid dependency is measured by scaling Official Development Assistance (ODA) by the Gross Domestic Product (GDP) and the Gross National Income (GNI).

We used data from 68 developing countries for the period 1984-2003, and we relied on the literature about the determinants of institutional quality in order to select our set of controls. *Ethnolinguistic fractionalization* (the likelihood that two citizens belong to a different ethnic or linguistic group) was assumed to be a determinant of state accountability, as bureaucrats may favor members of their own group (Mauro, 1995). Countries with a higher degree of fractionalization should therefore experience lower democratic accountability. We also included as a control the level of income (GDP per capita), with the expectation that a higher income should lead to greater accountability, as it will be accompanied by a higher demand for efficient institutions. We also controlled for legal origin (a dummy variable indicating whether or not the country is a former British colony). However, the expected effect of this variable is ambiguous, as a country's colonial history may positively or negatively explain the level of democratic accountability due to the type of institutional systems that they may have inherited. Sachs and Warner (2001) show that resource-endowed countries experience slower growth, partly due to the corruption in governments and weak overall institutional performance. In order to take these factors into account, we controlled for the share of primary product exports in the gross national product, which we measured as of 1980 in order to deal with the fact that countries that have been primary product exporters for a long time may be affected in different ways from countries with less exporting experience. We therefore expected this variable to have a negative effect on the level of democratic accountability. The other controls we used are: *landlock* (a dummy indicating whether or not the country is land-



locked) and *disteq*, which measures the distance from the equator of the country. Following the work of Barro (1999), we also included as a control the countries' urbanization rates; a larger urban population should exert more pressure on governments to ensure better political accountability. The ODA data were taken from the World Development Indicators, which were originally taken from the OECD/DAC (Organization for Economic Co-operation and Development/Development Assistance Committee). Data on income (measured as GDP per capita at constant prices), legal origin, ethnolinguistic fractionalization, urban population and exportations were taken from the Global Development Network database and the World Bank's World Development Indicators

#### **4.6.2 State illegitimacy as a proxy for historical institutional disconnection: discussion and computation details**

We relied on the approach of Englebert (2000b) to build our proxy of the disconnection between the transplanted norms and the indigenous ones. Importantly, we focused on the historical channel of institutional transfer, namely colonial experience, following the rationale of Dia (1996), who assumes that the disconnection between the central government and the civil society existed before the independence period, when governments were strongly centralized and lacked accountability to the civil society, transparency and strong legislative checks and balance. This structural disconnection between indigenous and modern practices and institutions created a crisis concerning the legitimacy and accountability of state institutions.

The basic rationale is that institutions which evolve endogenously to a society as a result of domestic social relations are more likely to be historically legitimate from a societal point of view (Englebert, 2000b). The historical continuity of state institutions and the homogeneity of the mix of pre-colonial and post-colonial political institutions are therefore key for legitimacy. The computation process of the state illegitimacy dummy (which is summarized in

Table 4.1) is as follows<sup>8</sup>: for each country in our sample, a set of five dichotomous steps was defined, and for each of these phases, the country was tested for illegitimacy and received a score of 0 or 1. If at any step, a country scored 1, the process ended and the country was given the status "legitimate". If not, it moved on to the next stage. If a country had not scored 1 by the final step (5), it was considered to be "illegitimate", with a score of 1 given to the Illegitimacy dummy variable. The first step assesses whether or not the country has a colonial history and allowed us to focus exclusively on the channel of history for institutional transplants, while the remaining steps deal with the impact of settlement, political independence and the post-colonial time on the pre-existing local norms. According to Englebert (2000b), it is assumed that if there was no human settlement before colonization, there can be no conflict between pre- and post-colonial institutions.

State illegitimacy is expected to reduce the quality of institutions. As emphasized by Englebert (2000b), the lack of state legitimacy which was inherited during the post-colonial era is a source of political contestation and regime instability, leading elites to implement neo-patrimonial rather than developmental policies. The final impact of state illegitimacy is to weaken the effectiveness of government institutions and reduce the quality of governance. We emerged with 28 legitimate state countries and 40 illegitimate state countries. The legitimate countries included Argentina, Brazil, Botswana, Chile, Columbia, Costa Rica, Cuba, the Dominican Republic, Egypt, Guyana, Honduras, Haiti, Iran, Jamaica, Morocco, Mexico, Nicaragua, Oman, Pakistan, Panama, Paraguay, El Salvador, Thailand, Tunisia, Turkey, Uruguay, Venezuela and Vietnam, while 28 out of the 40 illegitimate state countries were African countries.

As we hypothesized that aid could have a direct effect on legitimacy, we ran a simple bivariate probit regression of aid dependency on state legitimacy. Table 4.2 summarizes the results and reveals a significant positive relationship: an increase in aid seems to be associated with

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<sup>8</sup>Please refer to the work of Englebert (2000b) for more details.

a lower probability that the recipient country will have an illegitimate state. Column (1) displays the simple probit regression results, which show that an increase of aid is associated with a lower probability for the recipient country to have a non-legitimate State. In column (2) we address the potential endogeneity of the aid variable by running Instrumental variable probit estimations. We use as instruments for aid the conventional deficit and the total outstanding debt of the donor (GDP ratios), weighted by the reverse bilateral distance from the donor<sup>9</sup>. We also include as additional controls<sup>10</sup> income, legal origin, ethnic fractionalization, geography (distance from the equator), and a proxy of institutional quality, which is the constraints on the executive power. The *Amemiya-Lee-Newey minimum chi-square* statistic and the associated *p-value* confirms that the null hypothesis of valid instruments is not rejected ( $p=0.15$ ). The instruments seem not to have a direct effect on the state legitimacy, their only effect on this variable seems to go via their effect on aid. Summing up, the findings summarized in table 4.2 suggest that aid have an direct effect on state non-legitimacy as measured by our dummy variable.

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<sup>9</sup>Please refer to chapter 2 and 3 for details explanations

<sup>10</sup>Please refer to appendix A for the detailed descriptions

Table 4.1: Constructing the State illegitimacy dummy

Steps	Legitimate (0)	illegitimate (1)
(1) Was the country colonized in modern times?	No	Yes (go to step 2)
(2) When reaching independence, did the country recover its previous sovereignty, identity or effective existence?	Yes	No (go to step 3)
(3) If the country was created by colonialism, was there a human settlement pre-dating colonization?	No	Yes (go to step 4)
(4) Did the colonizers (and/or their imported slaves) reduce the pre-existing societies to numerical insignificance (or assimilate them) and become the citizens of the new country?	Yes	No (go to step 5)
(5) Does the post-colonial state do severe violence to pre-existing political institutions?	No	Yes

Source: Englebret (2000b)

**Table 4.2: Impact of aid dependency on state illegitimacy (Probit, cross-section, 1984-2003).**

Variable <sup>a</sup>	Coefficients (Std. err.)	
	(1)	(2)
	<i>Probit</i>	<i>IV Probit (two-step)</i>
Aid%GDP	0.09 <sup>(b)</sup> (2.68)	2.14 <sup>(b)</sup> (1.96)
Income		0.004 (.00)
Legal origin		-39.40 <sup>(b)</sup> (-5.95)
Eth. fract.		-0.83 (-0.01)
Disteq		1.49 (0.01)
Exec. const.		25.5 (0.01)
Intercept	-0.28 (-1.28)	-108.20 <sup>(b)</sup> (-2.88)
Obs	67	39
Pseudo $R^2$	0.15	-
ALN min. chi-sq stat.*	-	6.72
p-value	-	0.15

<sup>a</sup> z-statistics are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%. \*Amemiya-Lee-Newey min. chi-sq stat.

### 4.6.3 Some stylized facts

Table 4.3 reports the results of comparisons of the institutional and economic average performances of the countries with legitimate states and those with illegitimate states. A look at these statistics reveals that countries with legitimate states perform better than the illegitimate group of countries as regards a range of institutional variables including democratic accountability, government corruption, the rule of law, bureaucratic quality and democracy.

Illegitimate countries also tend to have slightly lower levels of income. Interestingly, it also emerged that illegitimate states tend to receive significantly more aid. Table 4.3 shows that the illegitimate States in our sample were, on average, three times more dependent on aid. While it is conceivable that this may be due simply to the fact that state illegitimacy is correlated with poor institutional quality and a low level of income, aid may also be feeding illegitimacy directly through the inadequate transfer of institutions and norms, as suggested in the previous sections (see section 4.2.2). The next sections will proceed to empirical tests of the argument that state illegitimacy is vital to explaining democratic accountability.

**Table 4.3: Selected institutional and economic performance indicators compared among legitimate and illegitimate states in the sample countries**

Variable	Illegitimate (n) [a]	Legitimate (n) [b]	P-value (a<b)
Dem. Account	2.85 (40)	3.36 (28)	0.0131
Corruption	2.60 (40)	2.76 (28)	0.1757
Law and Order	2.66 (40)	3.22 (28)	0.0031
Bur. Qual.	1.47 (40)	1.80 (28)	0.0330
Polity index	-.94 (40)	2.76 (28)	0.0032
Income (log)	22.57 (40)	23.93 (27)	0.0005
Aid%GDP**	10.32 (40)	3.20 (27)	0.0008

P-values refer to the probability that the observed difference;

\*\*P-values referring to the probability of (a>b)

#### 4.6.4 Model and identification strategy

In order to test the effect of aid on democratic accountability (taking into account State illegitimacy), we specified the following econometric model:

$$Accountability_i = \alpha + \left\{ \begin{array}{c} \beta (Aid)_i \\ \gamma (State\ illegitimacy)_i \\ \delta (Controls)_i \end{array} \right\} + \mu_i \quad (4.1)$$

The regression coefficients  $\beta$ ,  $\gamma$ ,  $\delta$ , and  $\zeta$  respectively quantify the impact of aid dependence (aid/GDP ratio), state illegitimacy (computed as explained above) and a set of control variables including: the log of income, legal origin, ethnolinguistic fractionalization, the log of the urban population, geography (distance from equator and a dummy indicating whether or not the country is landlocked) and the share of exports of primary products in the gross national product. In order to obtain robust standard errors in these estimations, we used the Huber-White sandwich estimators of standard errors.

As we are focusing on long-term effects (institutional variables have proven not to vary substantially over time), we considered the average values of all of our variables over the period of estimation (1984-2003). Indeed, in this case, the "between-groups" variation in democratic accountability is more relevant than the "within-groups" variation, as we assume that it has been relatively persistent since the end of the colonial period.

As in the previous chapters, we addressed the potential endogeneity of aid with instrumental variables techniques. Indeed, it is fully conceivable that aid may, in turn, be influenced (directly or indirectly) by the quality of institutions which have been being pointed out as determinants of aid effectiveness and therefore as selectivity factors. Elsewhere, countries with weak institutions seem to attract a greater flow of aid, not because aid conditionalities are not effective, but simply because low-quality institutions are correlated with low levels of



development and income, which are targeted by donors. In order to deal with this potential reverse causality bias between aid and democratic accountability, we relied on two instrumental variables: the conventional deficit and the total outstanding debt of the donor (GDP ratios), weighted by the reverse bilateral distance from the donor. As explained by Faini (2006) and Brun, Chambas, and Guerineau (2008), the rationale behind these instruments is that the better donor countries' finances are, the more willing they will be to provide aid<sup>11</sup>. It is worth noting that some concerns may be raised about an obvious correlation between our state legitimacy variable and democratic accountability as measured by the ICRG. One may rightly believe that state illegitimacy and political accountability develop together and are mutually reinforcing. However, this may not be the case for a developing country, as legitimacy and accountability can be determined by different factors. A country may indeed be categorized as having a legitimate state according to the approach proposed by Englebort (2000b) while not performing very well as regards democratic accountability (case of Egypt). Similarly, a country with an illegitimate state may perform relatively well regarding democratic accountability (case of Ghana). In order to strengthen this argument, we estimate the impact of democratic accountability on State illegitimacy using a probit model on our base sample of countries. Table 4.9 summarizes the main findings and show that democratic accountability enters insignificantly in the regression.

### 4.6.5 Findings and discussion

The estimation results which are reported in Table 4.4 show that our hypothesis finds strong empirical support. Not surprisingly, the results presented in column 1 show that higher levels of aid dependency are significantly and negatively correlated with weak democratic accountability. Using ordinary least squares regressions, we also confirmed that being an illegitimate state country significantly reduces the level of democratic accountability by 0.50%.

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<sup>11</sup>For an illustration of the correlation between aid and these instruments, please refer to Chapter 3

The results presented in column 3 indicate that after controlling for state legitimacy, aid no longer had a significant effect on democratic accountability. This finding supports the argument that state illegitimacy (acting as a proxy for the disconnection between the formal transplanted institutions and the indigenous institutions) is vital to explaining institutional quality (proxied in this chapter by democratic accountability) beyond the impact of aid. This may even suggest that the adverse effects of aid on institutional quality operate partly through feeding the institutional disconnection crisis via the inappropriate transfer of norms and practices. In column 4, all of the remaining controls are included in the regression. State illegitimacy remained detrimental for democratic accountability and aid continued to have a neutral effect. State illegitimacy leads to a significant reduction in the level of democratic accountability of 0.50%. Income, ethnolinguistic fractionalization, and distance to the equator never approached statistical significance, while legal origin, urbanization and exports of primary products emerged as the most powerful predictors of democratic accountability. However, the coefficient of the British legal origin dummy was significantly negative. This is somewhat counter-intuitive, as most of the studies investigating the effect of legal origins on the quality of institutions have found that former British colonies perform well compared with other former colonies. However, as democratic accountability is not an index of overall institutional quality, this may be plausible. With the exception of column (2), all of the specifications were tested using two-stage least squares (2SLS) in order to correct for the possible reverse causation between aid and democratic accountability. The over-identification test statistics for aid instruments (the weighted debts and deficits of the main donors) confirmed the quality of the instrumentation strategy; in all of the specifications, the *p-values* associated with the Hansen statistic were well above 0.10. Table 4.7 further validates the quality of the instruments; the first-stage regression statistics show that the two instrumental variables exerted a significant effect with the expected signs.

In a further step, we checked the robustness of our main results against the use of an al-

ternative measure of aid dependency and the exclusion of outlier countries (regarding aid dependency). Table 4.8 summarizes the results, which fully confirm the previous findings. Columns (1) and (2) replicate specifications (1) and (4) of Table 4.4 respectively, but using the aid/GNI ratio instead of the aid/GDP ratio. Columns (3) and (4) present a similar replication, but exclude Liberia, Mozambique and Guinea-Bissau, which were identified as outliers in our base sample using Hadi (1994, 1992)'s method. Notwithstanding, due to the unbalanced structure of our data, some countries were dropped in the regression. Liberia was the only outlier country in our regression sample.

## 4.4.7 Concluding remarks and policy implications

**Table 4.4: State illegitimacy, aid and democratic accountability  
(Cross-section, 1984-2003).**

Dependant variable: Democratic accountability				
	(1)	(2)	(3)	(4)
Variable <sup>a</sup>	<i>2SLS</i>	<i>OLS</i>	<i>2SLS</i>	<i>2SLS</i>
Aid(%GDP)	-0.05 <sup>(c)</sup> (0.03)		0.03(0.03)	0.05(0.04)
Ilegitimacy		-0.51 <sup>(a)</sup> (0.22)	-0.76 <sup>(a)</sup> (0.31)	-0.80 <sup>(a)</sup> (0.34)
Income (log)				0.15 (0.14)
Legal origin				-0.64 <sup>(a)</sup> (0.28)
Eth. fract.				0.01 (0.01)
Urban pop. (log)				0.76 <sup>(b)</sup> (0.37)
Disteq				-0.01 (0.01)
Exp80				-1.65 <sup>(b)</sup> (0.85)
Landlock				0.59 <sup>(c)</sup> (0.32)
Intercept				0.59 <sup>(c)</sup> (0.32)
$R^2$	0.93	0.07	0.93	0.95
Obs	43	68	43	39
<i>Overidentification test for aid's instruments</i>				
Hansen J Stat. <sub>(p-val)</sub>	9.27 <sub>(0.23)</sub>	-	4.25 <sub>(0.37)</sub>	3.11 <sub>(0.53)</sub>

<sup>a</sup> Beside the coefficient value, the robust standard errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%.

## 4.7 Concluding remarks and policy implications

This chapter importantly addressed the role of history in explaining the current institutional performances of developing countries and the impacts of aid on these performances. We

#### 4.4.7 Concluding remarks and policy implications

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introduced the point that the failure of institutional transplants has to be taken into account in the debate about aid's impacts on institutional quality in recipient countries. The point that the institutional crisis in developing countries can be traced back to the colonial and post-colonial era, and more precisely to the legacy of colonization was also emphasized. We first reviewed the literature explaining that successful or "modern" institutional models (administrative structures, legal norms, business practices, etc.) have been transferred across countries mainly through historical events and external assistance for development. That literature also importantly emphasized the point that institutional transplants from one country to another are particularly problematic due to their complexity and context-dependency and may have some adverse and persistent effects on institutional quality. Following the literature, we indeed assumed that the institutional crisis rising from the failure of the transplants can be proxied by State illegitimacy. Using cross-country regressions, we provided supportive evidence that State illegitimacy largely accounts for the damaging impacts of aid on democratic accountability; indeed, once included in a regression model explaining aid's impact on democratic accountability, aid dependence completely loses statistical significance.

The chapter also offered empirical evidence that aid does feed State illegitimacy, weakening the evidence of a direct impact of aid on institutions. The chapter then turned to the historical examination of how the introduction of formal institutions by the colonial rules ended up setting a base for rent-seeking and State illegitimacy in Kenya due to the clash with the pre-existing informal institutions, or ended up setting up a good institutional development path in Botswana thanks to the successful mesh of pre-colonial informal norms in the formal transplanted institutions. In short, the findings suggest that aid's damaging impacts on institutions are in some extent the symptoms of longer-run historical institutional factors.

The main findings of the chapter allows to draw several important policy insights. First, as emphasized by Acemoglu, Johnson, and Robinson (2001) and Berkowitz, Pistor, and Richard (2003), it's worthy to note that the findings do not imply an institutional predetermination;

#### 4.4.7 Concluding remarks and policy implications

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finding that history matters does not suggest that institutions cannot be changed. The Kenyan case (Figure 4.3) shown that as path dependent as institutions may be, a reversal can happen under the impetus of mindful reforms. The findings also suggest that institutional transplants are not damaging per se, the key point being to care about pre-existing local conditions when importing institutional models. Second, as suggested by Berkowitz, Pistor, and Richard (2003), institutional reforms (particularly those inspired from outside) need to be domestic demand-driven in order to ensure a fit between the supply and the demand, which is an important condition of legitimacy. Third, closer to the aid effectiveness debate, since we have assumed and evidenced that aid itself plays a role in transferring institutions in the recipient countries, aid may indeed be given a direct role in correcting the long-lasting impacts of history. The findings of the chapter lastly suggest that the constraints associated with the institutional transplants, regardless of the source of transfer, should be addressed with mindful implementation strategies by donors, taking into account the local circumstances and keeping in mind the potential uniqueness of contexts. Institutional building tools such as skill building, knowledge dissemination, technical assistance in building effective institutions, policy advices, conditionalities aiming at improving institutions, incentives to undertake institutional reforms should all incorporate the need to consider the local constraints and opportunities.

## Appendix A Data definition and sources

<u>Variable</u>	<u>Definition</u>	<u>Source</u>
Official development assistance (ODA)	Total net disbursements includes grants and loans with a grant element of more than 25%	OECD/DAC
Aid%GDP	ODA measured as a percentage of GDP	Author's calculation from OECD/DAC aid statistics and World Development Indicators 2008
APD%GNI	Aid (% of gross capital formation). Aid includes both official development assistance (ODA) and official aid. Ratios are computed using values in U.S. dollars converted at official exchange rates.	OECD/DAC statistics and World Bank estimates
Illegitimacy	State Illegitimacy. Dummy variable taking the value 1 for countries having a non-legitimate State at independence and 0 otherwise. See section 4.6.2 for computation details	Englebert (2000)
Dem. Account	Democratic accountability; measure of how responsive government is to its people. Scaled from 0 to 6, higher values denoting greater accountability.	International Country Risk Guide
Corruption	Indicator of corruption as reported by international consultants. Scaled from 0 to 6, higher values denoting less corruption	International Country Risk Guide
Law & Order	Indicator of corruption as reported by international consultants. Scaled from 0 to 6, higher values denoting less corruption	International Country Risk Guide
Bur. Qual.	Indicator of corruption as reported by international consultants. Scaled from 0 to 6, higher values denoting less corruption	International Country Risk Guide
Freed. House ind.	Democracy index, ranged from 1 (best democratic situation) to 7 (worse situation)	Freedom House
Polity index	Combined score of democracy and autocracy, ranged from -10 (full autocracy) to +10 (full democracy)	Polity IV project
Income (log)	Natural logarithm of gross domestic product (GDP) divided by midyear population (constant 2000 US\$)	World Development Indicators 2008

#### 4.4.7 Concluding remarks and policy implications

Appendix A (Cont.)

<u>Variable</u>	<u>Definition</u>	<u>Source</u>
Legal origin	Origin of country legal system. Dummy variable taking the value 1 for former British colonies and 0 otherwise.	Global Development Network Growth Database
Eth. Frac.	The probability that two random selected individuals within the country belong to the same religious and ethnic group	Atlas Narodov Mira
Urban population (log)	Natural logarithm of urban population (% of total). Urban population refers to people living in urban areas as defined by national statistical offices	World Development Indicators, 2008
Disteq	Distance from Equator of capital city measured as $\text{abs}(\text{Latitude})/90$	Rodrik (2004)
Exp80	Share of primary products in the Gross National Product in 1980	Global Development Network Growth Database
Landlock	Dummy variable indicating if the country is landlock (1) or not (0)	Global Development Network Growth Database
Debt	Outstanding debt of the five main donors weighted by the geographical distance	Brun, Chambas, and Guerineau (2008). This refer to the data used in Brun, Chambas, and Guerineau (2008) and kindly provided to us by the authors.
Deficit	Conventional deficit of the five main donors weighted by the geographical distance	Brun, Chambas, and Guerineau (2008)



## Appendix B The sample countries

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1. Angola*	16. Ecuador*	31. Jamaica	46. Oman	61. Turkey
2. Argentina	17. Egypt	32. Jordan*	47. Pakistan	62. Tanzania*
3. Burkina Faso*	18. Gabon*	33. Kenya*	48. Panama	63. Uganda*
4. Bolivia*	19. Ghana*	34. Liberia*	49. Peru*	64. Uruguay
5. Brazil	20. Guinea*	35. Sri Lanka*	50. Philippines*	65. Venezuela
6. Botswana	21. Gambia*	36. Morocco	51. Papua New Guinea*	66. Vietnam
7. Chile	22. Guinea-Bissau*	37. Madagascar*	52. Paraguay	67. Zambia*
8. Cote d'Ivoire*	23. Guatemala*	38. Mexico	53. Sudan*	68. Zimbabwe*
9. Cameroon*	24. Guyana	39. Mali*	54. Senegal*	
10. Congo (Rep.)*	25. Honduras	40. Mozambique*	55. Sierra Leone*	
11. Colombia	26. Haiti	41. Malawi*	56. El Salvador	
12. Costa Rica	27. Indonesia*	42. Malaysia*	57. Syria*	
13. Cuba	28. India*	43. Niger*	58. Togo*	
14. Dominican Rep.	29. Iran	44. Nigeria*	59. Thailand	
15. Algeria*	30. Iraq*	45. Nicaragua	60. Tunisia	

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\*Countries classified as having an Illegitimate State (See section 4.6.2)

Table 4.5: Descriptive statistics (selected variables) (1984-2003)

Variable	Mean	Std. Dev.	Min.	Max.	N
<b>Panel A: State legitimacy and institutional variables</b>					
Illegitimacy	0.41	0.50	0	1	68
Dem. Account	3.07	0.94	1.19	5.04	68
<b>Panel B: Aid variables</b>					
Aid(%GDP)	7.45	9.28	.041	47.74	67
Aid(%GNI)	7.63	9.37	.042	50.11	67
<b>Panel C: Countries characteristics</b>					
Income (log)	23.12	1.72	19.08	27.05	67
Legal origin	0.31	0.47	0	1	68
Eth. fract.	50.25	29.21	1	93	64
Urban pop. (log)	3.71	0.51	2.41	4.50	68
Debt	228.90	34.87	113.86	295.58	51
Deficit	-0.01	0.01	-0.05	-0.005	49

Table 4.6: Pairwise correlation matrix

	Aid(%GDP)	Aid(%GNI)	Dem. Account	Income (log)	Eth. fract.	Urban pop. (log)
Aid(%GDP)	1.00					
Aid(%GNI)	0.97 <sup>(b)</sup>	1.00				
Dem. Account	-0.33 <sup>(b)</sup>	-0.30 <sup>(b)</sup>	1.00			
Income (log)	-0.76 <sup>(b)</sup>	-0.75 <sup>(b)</sup>	0.39 <sup>(b)</sup>	1.00		
Eth. fract.	0.33 <sup>(b)</sup>	0.32 <sup>(b)</sup>	-0.34 <sup>(b)</sup>	-0.25 <sup>(b)</sup>	1.00	
Urban pop. (log)	-0.46 <sup>(b)</sup>	-0.48 <sup>(b)</sup>	0.23	0.45 <sup>(b)</sup>	-0.46 <sup>(b)</sup>	1.00

Note: (b): denotes significance at 5%

Table 4.7: First-stage regressions (refer to table 4.4)

Variable <sup>a</sup>	Coefficient (Std. err.)
Illegitimacy	2.06 (2.01)
Income (log)	-3.16 <sup>(a)</sup> (0.62)
Legal origin	-0.69 (2.31)
Eth. fract.	-0.02 (0.05)
Urban pop. (log)	-3.61 (3.01)
Disteq	0.07 (0.09)
Exp80	4.33 (6.77)
Landlock	-1.76 (2.54)
Debt	-0.10 <sup>(a)</sup> (0.03)
Deficit	-19186.60 <sup>(c)</sup> (10701.62)
Obs	39
$R^2$	76.40

<sup>a</sup> Beside the coefficient value, the robust standard errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%.

Table 4.8: Robustness checks (IV cross-section, 1983-2004).

Dependant variable: Democratic accountability				
Variable <sup>a</sup>	Aid(%GNI)		Excl. outliers	
	<i>2SLS</i>	<i>2SLS</i>	<i>2SLS</i>	<i>2SLS</i>
Aid(%GDP)	0.03 (0.04)	0.06 (0.05)	0.04(0.04)	0.07 (0.05)
Illegitimacy	-0.76 <sup>(a)</sup> (0.32)	-0.75 <sup>(a)</sup> (0.31)	-0.71 <sup>(a)</sup> (0.31)	-0.73 <sup>(a)</sup> (0.30)
Income (log)		0.18 (0.19)		0.19 (0.19)
Legal origin		-0.56 <sup>(a)</sup> (0.26)		-0.48 <sup>(c)</sup> (0.27)
Eth. fract.		0.01 (0.01)		0.01 (0.01)
Urban pop. (log)		0.92 <sup>(a)</sup> (0.42)		1.06 <sup>(a)</sup> (0.44)
Disteq		-0.01 (0.01)		-0.01 (0.01)
Exp80		-1.52 <sup>(b)</sup> (0.72)		-1.27 <sup>(b)</sup> (0.65)
Landlock		0.61 <sup>(c)</sup> (0.32)		0.59 <sup>(c)</sup> (0.32)
Intercept	2.66 <sup>(a)</sup> (0.42)	-5.22 (6.08)	2.65 <sup>(a)</sup> (0.46)	-6.14 (6.13)
$R^2$	0.93	0.96	0.93	0.96
Obs	43	39	41	38
<i>Overidentification test for aid's instruments</i>				
Hansen J Stat. <sub>(p-val)</sub>	3.93 <sub>(0.41)</sub>	2.40 <sub>(0.49)</sub>	3.38 <sub>(0.33)</sub>	2.18 <sub>(0.53)</sub>

<sup>a</sup> Beside the coefficient value, the robust standard errors, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%.

**Table 4.9: Impact of democratic accountability of State illegitimacy (IV probit cross-section, 1984-2003).**

Variable <sup>a</sup>	Dependant variable: State illegitimacy	
	Aid(%GNI)	Excl. outliers
	<i>2SLS</i>	<i>2SLS</i>
Aid(%GDP)	6.29 <sup>(b)</sup> (2.02)	6.81 <sup>(c)</sup> (1.65)
Dem. account.	-38.11 (-0.01)	-40.57 (-0.01)
Income (log)	16.17 (0.02)	3.17 (0.00)
Legal origin	-9.90 (0.00)	-48.69 (-0.01)
Eth. fract.	1.29 (0.01)	2.72 (0.01)
Urban pop. (log)	60.43 <sup>(a)</sup> (2.83)	144.53 (0.01)
Disteq	1.47 (0.00)	1.52 (0.00)
Exp80	-52.13 (-1.18)	-39.77 (-0.85)
Landlock	67.71 (0.01)	95.49 (0.01)
Intercept	-636.94 (-1.78)	-682.07 (-1.51)
Obs	39	38
<i>Overidentification test for aid's instruments</i>		
Hansen J Stat. <sub>(p-val)</sub>	4.92 <sub>(0.30)</sub>	4.80 <sub>(0.31)</sub>

<sup>a</sup> Beside the coefficient value, the robust z statistics, which are computed using heteroskedastic-consistent standard deviations are reported in parentheses. (a): denotes significance at 1%; (b): denotes significance at 5%; (c): denotes significance at 10%.



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# CONCLUSION

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WHAT are the impacts of macroinstabilities on institutions and what role does aid play in these contexts? These issues have come to be of crucial importance for developing countries since both variables (aid and macroeconomic instability) have been having strong macroeconomic consequences in under-developed countries, as demonstrated by some bodies of researches. This thesis addressed these issues from different perspectives and has attempted to contribute to the debate through four chapters. After analyzing the substantial literature about the impacts of aid on the quality of a wide range of institutions, and highlighting the proposed explanatory factors, the first chapter emphasized that there is no robust consensus in the findings. While roughly no study comes to the conclusion that aid has no effect on institutions, the bulk of the papers either concludes that aid can support institutional building (through beneficial effects on education, income level, effective conditionalities, through a dampening effect on external shocks, or by being directly targeted on institutional development) or concludes that aid may undermine it (through the weakening



of the incentives to reform institutions, the weakening of government accountability or the feeding rent-seeking behaviors). The chapter then highlighted the institutional theoretical frameworks, the data quality issues, and especially the quality of empirical strategies as the key explanatory factors of the lack of robustness in the empirical findings and the theoretical argumentation. A meta-study of the Aid-Institutions Literature provided supportive results to those points, by evidencing some publication bias. Indeed, affiliation with think tanks, the quality of control variables and the time coverage significantly increase the likelihood to report a negative effect. However, these findings have to be interpreted with caution since more studies are needed for a more thorough and robust meta-analysis.

The second chapter directly attempted to analyze the impact of terms-of-trade instability on democracy in the long-run and the role of aid in mitigating this impact. We found strong evidence that aid can have a positive role in democracy building in the long term by dampening the adverse effects of terms-of-trade instability on growth. Indeed, while no direct effect of aid on democracy were found, evidence was provided that aggregate aid flows mitigate the adverse effect of trade instability on growth stability and then "protect" democracy (as measured by synthetic indexes). The chapter also shows that terms-of-trade instability is a source of income instability which has a negative effect on democracy. These findings call for better timely disbursements of aid regarding the need to dampen the effects of external shocks on macroeconomic performances, since this could have at the end some beneficial impact on institutions. A large literature has indeed discussed the role of aid as an insurance mechanism against external shocks. The policy implications of this chapter are in line with the advocacies for a stronger role of aid in attenuating the vulnerability to trade shocks.

The third chapter, which is a more political economy-based one, investigated the impact that could have the instability of aid itself on the quality of governance and corruption, namely its unpredictability. Unlike the majority of studies that focused on aid dependence to explore whether more aid can support improved governance, the chapter focused on aid flows

unpredictability as a determinant of rent-seeking behaviors (proxied by an index of corruption). Statistical evidence confirmed the high unpredictability of aid flows, computed from a forecasting econometric model. The main findings of the chapter can be summarized as follows: *(i)* there is a robust statistical relationship between high aid unpredictability and corruption in aid recipients countries; *(ii)* there is a similarly strong relationship between higher aid levels and a lower corruption, particularly when we correct for endogeneity; and *(iii)* the impact of aid unpredictability on corruption is more severe in countries having weak initial institutional frameworks. These findings importantly emphasize the importance of initial institutional conditions.

The fourth and final chapter of the thesis went back over the importance of the initial institutional conditions for by linking them to the history. The chapter first emphasized the point that the potential failure of institutional transplants from one country to another has to be taken into account in the debate about aid's impacts on institutional quality in recipient countries, especially as external assistance for development has been pointed out as one of the most relevant channel of transfer. Indeed, several studies has stressed that institutional transfers are highly problematic because of their complexity and context-dependency and that they may have adverse and persistant effects on institutions. The chapter focused on an index of democratic accountability to proxy institutional quality. The core theoretical assumption is that the failure of institutional transplants, which can be seen through a weak State legitimacy, account for the adverse impacts of aid on institutions. Supportive empirical results and country cases (Kenya and Botswana) were provided to this assumption, regarding the impact of aid on democratic accountability. The chapter then suggested that the constraints associated with the institutional transplants, regardless of the source of transfer, should be adressed with mindful implementation strategies by donors, taking into account the local circumstances and keeping in mind the potential uniqueness of contexts.

**The concluding message of the message is the following: macroeconomic insta-**

bilities does have adverse impacts on institutions and aid can be given a role. Moreover, the long-lasting impact of history on institutional development matter in explaining the impact of aid on institutions and has to be taken into account in the design of aid institutional building strategies.

### *Policy implications*

One of the main challenges for a greater aid effectiveness is to help recipient countries deal with their development challenges (stronger macroeconomic performances, lower vulnerability, good management practices, etc.) while avoiding the damaging their root foundations which can be summarized in the term "institutions". The findings of this thesis draw policy implications related to this issue.

First, the lack of consensus in the literature about the net impact of aid on institutions point out that aid can damage some institutions and improve some other in the same time. One might not give full credit to the authors setting about aid's damaging impacts on institutions, especially as the literature review (Chapter 1) revealed a lack of robustness in the empirical findings and some publication bias as well. The chapter indeed suggested that the institutional theoretical frameworks, data quality issues, and especially the quality of empirical strategies feed the controversy by supporting conflicting results. As shown by some other authors, there may be some reasons to believe that aid, if directly targeted on institutional building and coupled with mindful implementation strategies, can work. The findings from the first chapter also calls to **deepen the researches about the institutional impacts of aid** insofar as this will bring more knowledge about how aid is changing institutions (positively or negatively) and therefore more greater opportunities to make it a better instrument for institutional building.

Second, as evidenced in the chapter 2, trade instability is bad for democracy in the long run

and aggregate aid flows does mitigate its macroeconomic impacts, which positively impacts democracy. As suggested by the findings of some recent studies (Guillaumont and Chauvet, 2001; Chauvet and Guillaumont, 2004, 2009; Collier and Dehn, 2001; Collier and Goderis, 2009), **the insurance role of aid against macroinstabilities need to be reassessed** since aid is likely to be more effective in countries exposed to shocks. Our findings support this view insofar as making this stabilization function work would be beneficial for institutional building in the long term. In other words, the thesis put forward that aid can be useful in promoting institutions through their determining factors such as growth stability. However, in a context of debates about how to significantly increase aid in developing countries to reach the Millennium Development Goals, the findings from this study must not be interpreted as a calling for a big push of aid. As a matter of fact, even though democracy can be considered as a meta-institution, some other types of institutions, which also matter for growth and development may be severely damaged as a result of large amounts of aid as suggested by several studies.

Third, the thesis emphasized the political economy of aid and stressed that as much as aid can play a positive role in mitigating the adverse effects of macroinstabilities on institutions, its volatility and unpredictability can have damaging impacts on institutions. In this respect, the findings suggest that donors must keep on improving the management and the delivery of aid flows, since on top of having adverse macroeconomic effects in terms of development planning, aid unpredictability could have some adverse effects on overall institutional quality through increased corruption. The Paris Declaration on Aid Effectiveness and the Accra Agenda for Action (respectively endorsed in 2005 and 2008), importantly called for such actions, putting an emphasis on the necessity for donors to provide reliable indicative commitments of aid over a multi-year framework and disburse aid in a timely and predictable way. Yet, these aforementioned policy insights must not be misleadingly interpreted. Evidence has indeed been offered that the initial institutional conditions matter, revealing that the

damaging institutional impacts of aid uncertainty should rather be interpreted as a symptom a weak institutional frameworks. As discussed in the chapter 3, aid would mainly have some "amplification effects" on institutional quality, highlighting the relevance of donors' institutional building efforts. This need to have adequate implementing strategies is further confirmed by the necessity for the institutional reforms supported by aid to take into account the local circumstances and the potential uniqueness of recipient countries' contexts.

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## **Abstract:**

This thesis examines the impact of macroeconomic instabilities on institutions in developing countries and the role played by aid. The thesis further investigates the role of history in explaining those impacts. The thesis consists of four essays analyzing the impacts of macroinstabilities, aid and history on institutions. The **first chapter** provides a comprehensive literature survey on the institutional impacts of aid and sheds light on the controversial findings evidenced. The **second chapter** focuses on the impact of trade instability on institutions and the role that aid can play in this context. We provide evidence that aid can have a positive role in democracy building in the long term by dampening the adverse effects of terms-of-trade instability on growth and thereby by making it more stable. The **third chapter** examines the instability of aid flow and addresses the question of whether unpredictable aid flows can create or aggravate corruption among the elites, and thereby weaken institutions. The findings from the empirical analysis provide evidence that higher aid unpredictability is associated with more rent-seeking and corruption, this impact being more severe for the countries having weak initial institutions. The **fourth chapter** investigates the extent to which those pre-existing institutional conditions matters for explaining the impacts of aid on institutions, by introducing the role of history and more particularly the role of institutional transplants. The chapter provides supportive findings to the hypothesis that the institutional crisis caused by the unreceptive transplants largely accounts for aid's impacts on the quality of institutions.

*Keywords:* aid, institutions, democracy, corruption, instabilities, unpredictability, institutional transplants, instrumental variables, meta-regression analysis.

## **Résumé:**

Cette thèse s'intéresse à l'impact des instabilités macroéconomiques sur les institutions dans les pays en développement et au rôle joué par l'aide. Le rôle de l'histoire dans l'explication de ces impacts est aussi examiné. La thèse se structure en quatre essais qui analysent l'impact des instabilités macroéconomiques, de l'aide et de l'histoire sur les institutions essentiellement mesurées par des indices de démocratie et de corruption. Le **premier chapitre** résume la littérature sur les impacts de l'aide sur la qualité des institutions et analyse les résultats controversés qui en ressortent. Le **deuxième chapitre** étudie l'impact de l'instabilité des termes de l'échange sur la démocratie et le rôle que l'aide peut jouer dans ce contexte. Nous confirmons l'hypothèse que l'aide peut bien avoir un impact positif sur la démocratie dans le long terme en atténuant les effets néfastes de l'instabilité des termes de l'échange sur l'instabilité sur la croissance et ce, en rendant cette dernière plus stable. Le **troisième chapitre** s'intéresse à l'instabilité même de l'aide et aborde la question de savoir si l'imprévisibilité des flux d'aide peuvent susciter ou aggraver la corruption et ainsi affaiblir les institutions. Les résultats empiriques confirment cette hypothèse et montrent en plus que cet impact est plus important pour les pays ayant une faible qualité initiale des institutions. Le **quatrième chapitre** revient sur l'importance de ces conditions institutionnelles pré-existantes pour expliquer les impacts institutionnels de l'aide en introduisant le rôle de l'histoire et plus particulièrement le rôle des transferts institutionnels. Le chapitre conclut que la crise institutionnelle provoquée par l'échec de ces transferts explique en grande partie les effets pervers perçus de l'aide sur la qualité des institutions.

*Mots clés:* aide, institutions, démocratie, corruption, instabilités, imprévisibilités, transferts institutionnels, variables instrumentales, analyse de meta-regression.