Essays on the Economics of Foreign Aid in Niger

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Thesis submitted for the degree of

DOCTOR OF PHILOSOPHY

in the School of Economics, Faculty of Commerce

UNIVERSITY OF CAPE TOWN

August 2016

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Declaration

I, Jose Antonio Pedrosa Garcia, hereby declare that all the work on which this thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university. I authorise the University to reproduce for the purpose of research either the whole or any portion of the contents in any manner whatsoever.

Signature Signed by candidate. Date……12th August, 2016……

Acknowledgements

The process of elaborating this thesis has been a true lifetime experience. During the 2 years I lived in Niger I had "palu" several times, typhoid fever, went through a coup d'état, my wife and children became seriously ill, and I experienced first-hand the flaws in the country's services, as well as its ruthless weather conditions. Nigeriens live continuously in these circumstances, yet I found them universally friendly and willing to share whatever they had. From Ali, Dioffo, Ousmane, Colette or Amadou I learnt lessons for life. In a similar vein, the « Institut National de la Statistique » (INS) graciously shared the data required to carry out the analyses in some of the chapters. I am profoundly grateful to the INS for the human calibre of its staff, and hope that in return for their efforts, this thesis will contribute to the debate about aid effectiveness in Niger.

This work would not have been possible without the support of key people at the University of Cape Town, such as Paula Bassingwaighte, Mare Sarr and very especially Tony Leiman, who I felt treated me like family. I am sincerely grateful for their support, encouragement and patience throughout these years. Other people who gave me comments and I must sincerely thank are Anthony Black, Quy-Toan Do, Fernando Cantu-Bazaldúa, Matthew Perkins, Salim Araji, Aljaz Kuncic, Niranjan Sarangi, Souraya Zein, Naren Prasad, Denise Sumpf and others I may shamefully forget. They might not feel they helped me much, but at times their feedback was what kept me going.

Besides all the efforts I've put in this dissertation, a dear price has been paid by my family. I am deeply grateful to my beloved Mape, Enzo and Nia for their support despite all the evenings, weekends and holidays they spent without me, as well as to my parents for their empathetic suffering and unconditional backing.

Abstract

This thesis identifies the gaps in the literature on foreign aid, and tries to fill some of them focusing particularly on Niger, a country that has received aid since its independence in 1960, yet remains one of the world's poorest. The work contributes to the literature in three ways:

First, it addresses moral hazard: the relationship between the International Monetary Fund (IMF) and the country is analysed through a historical case study. Niger's requests for assistance are accompanied by promises to undertake reforms; however, once aid is disbursed, these undertakings rarely materialize. Despite this record of poor (and deteriorating) compliance, IMF aid continues to flow, engendering perverse incentives and moral hazard.

Secondly, it analyses whether aid is associated with poverty reduction. Aid is correlated with poverty, which is to be expected due to its pro-poor targeting nature. However, this study found increases in poverty associated with communities which were recipients of aid. To shed more light on this, households receiving aid were compared with those receiving no project assistance at all, and with households who benefited from non-aid based development projects. The results showed that changes in poverty levels among aid recipient households were not statistically different to those among households receiving no assistance. However, households benefiting from aid under-performed those who benefited from other projects.

Thirdly, it explores whether aid brings utility to households through the provision of public goods. The results suggest that aid projects do help households. However, other sources of development projects are more efficient at doing so. Information is the key: it is a vital prerequisite for projects to address the needs of the population, and not all donors have the same information. Information can be obtained through co-funding projects with other donors, although there are also coordination costs.

The models estimated allow the prediction of the benefits a project could provide to a household. Such predictive abilities could allow policymakers to coordinate donors' initiatives to maximize their effectiveness. However, at present Niger lacks the capacity to achieve such coordination. Furthermore, such an approach would involve having to reduce the least efficient donors to mere providers of finance (i.e. channel their resources through other donor types), a role they might not be willing to accept.

Abbreviations and Acronyms

AfDB	African Development Bank
AfDF	African Development Fund
AFRITAC	Regional Technical Assistance Centre for West Africa
BBC	British Broadcasting Corporation
BC	Before Christ
BS	Budget Support
CCA	Cellule de Coordination de l'Aide
CCE	Commissariat Chargé à l'Economie
CCD	Commissariat Chargé du Développement
FCFA	Franc de la Communauté Financière Africaine (UEMOA/WAEMU currency)
CPIA	Country Policy and Institutional Assessment
CRS	Creditor Reporting System (OECD)
DAC	Development Assistance Committee (OECD)
DB	Direction du Budget
DC	Direction de la Comptabilité
DCDP	Direction de la Dette Publique
DCP	Direction de la Comptabilité Publique
DCS	Direction des Comptables Secondaires
DCT	Direction des Correspondants du Trésor
DD	Direction de la Dépense
DDP	Direction de la Dette Publique
DE	Direction des Etudes
DGB	Direction Générale du Budget
DGE	Direction Générale de l'Economie
DGCF	Direction Générale du Contrôle Financier
DGEPD	Direction Générale de l'Evaluation des Programmes de Développement
DGF	Direction Générale du Financement
DGB	Direction Générale du Budget
DGMP	Direction Générale des Marchés Publics
DGPS	Direction Générale des Programmes Sectoriels
DO	Direction de l'Ordonnancement

DONGAD	Direction des Organisations Non-Gouvernementales et des Associations de Développement
DR	Direction des Recettes
DS	Direction de la Solde
ECF	Extended Credit Facility
ECOWAS	Economic Community of West African States (UEMOA in English)
EIU	Economist Intelligence Unit
ENCVM	Enquête Nationale sur les Conditions de Vie des Ménages
EITI	Extractive Industries Transparency Initiative
ESAF	Enhanced Structural Adjustment Facility
EU	European Union
FDI	Foreign Direct Investment
GAVI	Global Alliance for Vaccines and Immunization
GDP	Gross Domestic Product
GNI	Gross National Income
GNP	Gross National Product
HIPC	Highly Indebted Poor Countries
HIV	Human Immunodeficiency Virus
IDA	International Development Association (World Bank)
IFC	International Finance Corporation
IMF	International Monetary Fund
INS	Institut National de la Statistique
IV	Instrumental Variable
MCC	Millennium Challenge Corporation
MEF	Ministère de l'Economie et des Finances
MTEF	Medium Term Expenditure Framework
NGO	Non-Governmental Organization
NMJ	Nigérien Movement for Justice
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OECD/Stat	Organization for Economic Cooperation and Development - Statistics
PD	Paris Declaration
PEFA	Public Expenditure and Financial Accountability

PEMFAR	Public Expenditure Management and Accountability Review
PIU	Project Implementation Unit
PRGF	Poverty Reduction and Growth Facility
PRS	Poverty Reduction Strategy
QUIBB	Questionnaire des Indicateurs de Bien Etre de Base
RCT	Randomised Control Trials
SAF	Structural Adjustment Facility
SDR	Stratégie de Développement Rural
SDRP	Stratégie de Développement Accéléré et de Réduction de la Pauvreté
SP	Special Programme of the Republic's President
SRP	Stratégie de Réduction de la Pauvreté
SSA	Sub-Saharan Africa
USD	United States Dollar
UK	United Kingdom
UEMOA	Union Economique et Monétaire Ouest Africaine (WAEMU in French)
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund (now United Nations Children's Fund)
USA	United States of America
VAT	Value Added Tax
WAEMU	West African Economic and Monetary Union (UEMOA in French)
WB	World Bank
WFP	World Food Programme
ZD	Zones de Dénombrement

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Chapter 1. Foreign Aid

"Why would a donor pay a recipient to do something that is anyway in his own interest? And if it is not in his interest, why would the recipient do it anyway?"

(Streeten 1988)

1.1. Introduction

This chapter introduces foreign aid.[1] It presents the main features in the research literature, the policy realm and other practical concerns. Based on the knowledge gaps and trends identified, the contributions of this dissertation are highlighted.

Foreign financial assistance was conceived as a source of finance to poor countries and territories between World War I and World War II, however, aid as we know it today emerged with the Marshall Plan after World War II (Lal 2006). The world political context changed in the aftermath of that war and development aid soon became a tool to gain political clients (ibid). Decades later, the end of the Cold War led to another reconversion of aid's goals, this time towards humanitarian purposes, although the old ones were not necessarily abandoned. Thanks to these changes, aid has not only survived, but thrived. The number of aid agencies has continued to increase and their business models have been reinvented, while most of the agencies created since 1945 still exist (Harford, Hadjimichael & Klein 2004a). For example, the UNICEF broadened its mandate from emergency situations to long-term issues relating to children and women everywhere.[2] As a result, the 'aid business' (Hancock 1992) has become very substantial in many developing economies, going beyond 20 per cent, 30 per cent, and even 50 per cent of Gross National Product (GNP) (Lensink, White 1999). Without counting donors that are not part of the Development Assistance Committee of the Organization for

[1] The Development Assistance Committee of the Organization for Economic Cooperation and Development (OECD/DAC) defines Official Development Assistance (ODA) as "those flows provided by official agencies under the following two criteria: i) they are administered with the promotion of the economic development and welfare of developing countries as their main objective, and ii) they are concessional in character and convey a grant element of at least 25 per cent" (OECD Stat 2016).

[2] UNICEF was established in 1946 to meet the emergency needs of children in post-war Europe and China. Its full name was the United Nations International Children's Emergency Fund. In 1950, its mandate was broadened to address the long-term needs of children and women in developing countries. UNICEF became a permanent part of the United Nations system in 1953, when its name was shortened to the United Nations Children's Fund (but its acronym did not change). Source: https://www.unicef.org/about/who/index_faq.html

Cooperation and Economic Development (OCDE/DAC), the mean number of donors per recipient country has been estimated at 16 (Rahman, Sawada 2010).

Perhaps the most interesting aspect of aid is that, despite this expansion, it remains unclear whether it works. The debate, as old as aid itself, has intensified over the decades. Several features of the discussion can be highlighted. At its core is the disagreement as to whether aid contributes to development or not. On the one hand, some authors argue that aid leads to growth (Hansen, Tarp 2001), although it has also been suggested that national growth-inducing policies may reduce its effectiveness because good policies and aid are substitutes (Dalgaard, Hansen 2001). A second group of authors argues that aid's ability to engender growth is conditional on some key feature; for instance, aid works if it is provided to countries that implement good policies (Burnside, Dollar 2000), or if the climatic environment is appropriate (Guillaumont, Chauvet 2001). A third group argues that aid is clearly counterproductive, although the recommendations within that group also differ. Some authors argue that aid should be stopped altogether (Friedman 1995) whereas for others, the reason why the different development panaceas (such as investment or debt relief) have not worked, is because purported basic economic incentives were not taken into account in the policy making (Easterly 2002).

A fourth group adopts a different perspective and argues that aid's effectiveness depends on the goal set. Several objectives may be considered, such as poverty reduction, non-income factors such as starvation, education or health, donor countries' guilt-relief or political support, or the maximization of some aid agencies' flows (Kenny 2006). For instance, it has been found that school feeding programmes significantly improve the growth and cognitive performance of disadvantaged children in developing countries (Greenhalgh, Kristjansson & Robinson 2007), or that male circumcision significantly reduces the risk of Human Immunodeficiency Virus (HIV) acquisition in young men in Africa (Bailey et al. 2007). It is argued that it is the high cost-effectiveness of aid that targets public health interventions which makes this aid worthwhile on average, even when other aid interventions may be worthless (Ord 2011).

Different diagnostics lead to different policy recommendations. Some economists call for more aid (Sachs 2014), while others say developed states should 'give what they can' (Ord 2011), and yet others claim that the international community should stop looking for big ideas and adapt its expectations to small incremental improvements (Hobbes 2014). Although warning against superficial and overly optimistic judgments on aid, a different view notes that there may be no convincing case for abandoning or rejecting aid, because the enduring justification for development assistance lies in its fundamental expression of the humanitarian

impulse (Riddell 1987). Hence, the focus can only be how to improve it. To better a system that is too technocratic and accountable to donors rather than recipients, a paradigm shift may be necessary though, and complex adaptive systems has been proposed as the way to go (Ramalingam 2013). This view envisions a reformed aid system in which donors do not rigidly adhere to pre-determined blueprints, but instead engage in experimental innovation, implement projects that work in partnership with local systems, and adapt on the fly to changing conditions (ibid). The political agenda underpinning aid is a central element in the debate: focusing on small interventions weakens the scope for donors to drive recipient countries' agendas, which has been identified as a key source of the trouble aid brings to Africa (Glennie 2008).

There are also calls to finish aid. It has been defended that it is immoral to prolong aid when the results upon which aid's moral case is built (i.e. to help others) are missing (Mende 1973). Some even defend that African countries are poor precisely *because* of all the aid they have received, and add that ending aid would redirect accountability away from donors, towards recipient countries' citizens (Moyo 2009). In a similar vein, development strategies in the poorest countries should be about how to leave aid behind and end its dependence (Tandon 2008), with the central idea of reasserting an indigenous path out of poverty – especially using countries' diasporas (Phillips 2013).

1.2. Exploring aid

As recently as 2009, the lack of texts explaining how aid organizations work in practice was described as 'striking', especially given the enormous interest in the topic (De Haan 2009). Although there has been little emphasis on microeconomic explanations of why and how aid would work (or not), there are two notable exceptions. The first, Martens et al. (2002), analysed aid focusing on principal-agent theory. The second, Mikesell focused on the assessment of development projects and programs in relation to their objectives, and the alternative forms of aid available for achieving those objectives (Mikesell 2007).

For decades, the thinking of western development economists was heavily influenced by the Solow model and its emphasis on capital accumulation through investment. Under this framework, it was expected that countries would be able to escape the poverty trap that prevented them from taking off. Once started on their virtuous circle, growth would continue and aid would no longer be needed. The successes of Marshall Aid in post-war Europe could be replicated in the Third World. The weakness of this approach as a theoretical foundation for aid became clear once it was obvious that aid investments were not leading to growth and that

policies and 'soft issues' such as governance were critical (Krueger, Michalopoulos & Ruttan 1989).

Much of the aid debate has been driven by macroeconomic empirical evidence, usually in the form of regression-based research, a methodology that commenced in the early 1970s (Papanek 1973). That modus operandi has taken different forms to ascertain the influence of aid on (most often) economic growth (Rajan, Subramanian 2008), but also on human development indicators (Kosack 2003). The use of the regression-based methodology (or its abuse) has been criticized on technical grounds, a classic example being the 145 right-hand-side significant explanatory variables with 100 degrees of freedom (Durlauf, Johnson & Temple 2005).[3]

Another macroeconomic issue on which aid research has focused is Dutch disease. The potential concern is that large inflows of aid may induce a real appreciation of the recipient country's currency, thereby reducing its exports' competitiveness. Evidence of aid-based cases of Dutch disease is weak (Isard et al. 2006), although some authors have noted that aid affects a country's competitiveness adversely, lowering the relative growth of its export industries (Rajan, Subramanian 2011). This may partly explain the lack of robust evidence between aid and growth (ibid). In their examination of twenty-six countries in Sub-Saharan Africa, Fielding and Gibson (2013) noted a variety of macroeconomic responses, but did remark that the adverse effects of aid on exports would be mitigated if aid led to investments in the traded goods' sector (Fielding, Gibson 2013).

An interesting characteristic of the debate was the tendency to treat aid as homogeneous, neglecting the differences between its types. Such lack of attention, probably rooted in the unavailability of data characteristic of developing countries, persisted until relatively recently, even though some aid critics recognized long ago that there are different aid modalities (Bauer, Yamey 1982). The different types of aid singled out include: "emergency and humanitarian aid (likely to be negatively associated with growth, since aid is given when calamities happen); aid that affects growth only over a long period of time, if at all, such as aid to support democracy, the environment, health, or education (likely to have no relationship to growth in periods of four years); and aid that is directly aimed at achieving growth: building roads, ports, and electricity generators, or supporting agriculture" (Clemens, Radelet & Bhavnani 2004). These authors find a strong positive relationship between growth and the third type of aid, while the relationship with the other types is less evident. Nowadays, even the strongest critics of aid

[3] As cited by in Easterly (2007).

distinguish the types of aid (Moyo 2009).

Aid has also been analysed by comparing it with other financial flows. For instance, while aid is influenced by political variables, foreign direct investment (FDI) is more sensitive to economic incentives, and particularly to 'good policies' such as property rights in the receiving countries (Alesina, Dollar 2000). Besides capital accumulation, it is generally acknowledged that FDI promotes economic growth mainly by way of technology transfer, which explains why FDI only works with a minimum critical mass of human capital – since this limits the economy's capacity to absorb that technology (Borensztein, De Gregorio & Lee 1998). Thus, the effects of FDI come from higher productive efficiency: foreign firms have more 'knowledge' applied to production, owing to a combination of foreign advanced management skills with domestic labour and inputs (ibid).[4] The main advantages of FDI over aid are therefore twofold.[5] Foreign Direct Investments encourage economic growth and poverty relief, partly due to the incentives they provide for the transfer of 'know-how', partly because they are subject to the market test – this ensures they are carefully allocated and monitored (Klein, Harford 2005). As aid flows are not subject to these disciplines, they are not expected to be as effective. The comparison with other financial flows focused on their different qualities as follows (ibid, p.3):

Qualities[6]	Example
Benevolent, monitored, smart	Ideal development assistance
Indifferent, monitored, smart	Foreign direct investment
Benevolent, unmonitored, smart	Careless development assistance
Benevolent, monitored, dumb	Workers' remittances
Indifferent, monitored, dumb	Bond market finance
Benevolent, unmonitored, dumb	Populist emergency aid

[4] A different issue would be what has been called the FDI-natural resource curse, i.e. do natural resources crowd out FDI? In this regard, evidence shows that natural resources have an adverse effect on FDI and that the FDI-resource curse persists even after controlling for the quality of institutions and other important determinants of FDI (Asiedu 2013). However, this topic goes beyond the scope of this dissertation.

[5] This does not imply that FDI may not have negative effects. For instance, in Venezuela some authors have reported negative spillover effects from FDI on the productivity of domestically-owned plants (Aitken, Harrison 1999).

[6] The criteria are:

> a. 'How benevolent is the finance? The most benevolent finance would flow to the poorest people in the poorest countries exactly when they need it and would never need to be repaid.
> b. How well is the finance monitored? Perfectly monitored financial flows would go exactly where their owners want them to go. Imperfectly monitored flows might be spent on pet projects, stolen, or wasted.
> c. How much knowledge flows with the finance? Knowledge matters, whether provided as standalone advice or alongside financial flows. Much official aid is bundled with technical advice, but some private flows like foreign direct investment also come with advice and training.'

One of the problems of regression-based research into aid is that the mechanism through which it would work is not explained, and it cannot be seen as a "black box" if its pertinence is to be assessed (Bourguignon, Sundberg 2007). Three sequential steps are proposed: "a) External donors/IFIs to policy makers (the way aid is given), b) Policy makers to policies (governance and institutional capacity), and c) Policies to outcomes (knowledge of what works)" (ibid, p.3).

In this regard, since the 1990s there has been a move towards analysing the transmission channels through which aid would improve people's lives. A first step was to investigate whether national budget allocations in certain sectors were associated with better outcomes, an approach that provided mixed results. For instance, the effect of public spending for education and educational attainment is low, while for health outcomes the picture is more mixed (Gupta, Verhoeven & Tiongson 1999). In a different sector, higher spending on water and sewerage might not lead to a proportional increase in the quality of service delivery, as leakages –both physical and financial– are high (Wolf 2007b). More recently, economists have also analysed the determinants of public services, such as leaders' decision-making processes to provide public goods in resource-rich countries (Sarr, Wick 2010). Three aspects of sustainability have been identified as key for the success of service delivery programs: finance, leadership, and targeting of the most vulnerable populations (Mubangizi 2009). However, overall there has been little empirical research on the links between aid and service delivery. While Wolf (2007a) explores this area, her work focuses on the effects of aid volatility in low-income countries, where a large part of public expenditure for education, health, and water and sanitation is financed through aid (Wolf 2007a).

The governance dimension is central in the debate about aid effectiveness, and is usually used against aid. For instance, some economists have analysed aid effectiveness across different political models (elitist, egalitarian and laissez faire) to note that aid does not increase investment nor benefit the poor across political regimes (Boone 1996). According to this research, aid only increases unproductive consumption, as reflected by the size of Government (ibid).

One of the most insightful theoretical frameworks of aid and political economy is probably the Selectorate Theory of Political Survival (De Mesquita, Smith 2009). This is based on the premise that leaders grant favours to retain office. If the system is a democracy, the coalition for leaders to stay in office is large, and leaders need to provide public goods. However, in autocratic regimes the coalition is small and private goods are offered instead (ibid). In this setting, aid is an instrument which political leaders use to retain office (not to alleviate poverty). To the extent that policies in the leaders' interests favour the citizenry, policies to reduce

poverty can be implemented, but such instances are coincidental (ibid). Leaders of donor countries (big-coalition countries) give aid in exchange for policy concessions from recipient (small-coalition) countries (ibid). Thus, aid favours leaders of donor and recipient countries, and harms recipient-country (but not donor-country) citizens on two accounts: with bad policies and autocratic incumbent leaders who continue in power. A caveat is that, while this theory may apply to bilateral aid, it has little to say on multilateral aid (ibid).

Another attempt to discern why aid succeeds or fails has concentrated on institutional inefficiencies and implementation issues. It has been observed that there is a critical information feedback loop, whereby those who pay – taxpayers from donor countries – are not in touch with those who receive the services – beneficiaries in poor countries (Martens et al. 2002). Therefore, correction of errors in the selection and delivery of aid is very difficult. Adding the fact that those actions may already be badly designed (e.g. due to a lack of local knowledge to conceive optimal initiatives) the problem is twofold: on the donor side, foreign aid agencies usually have multiple principals (especially multilateral organizations) who may represent conflicting interests – both for the donor and for the beneficiary. And on the recipient side, embeddedness is a critical for success in the implementation of institutional reforms (understanding embeddedness as the fact that those national officers working with donors to implement reforms may be part of the problem themselves, as those reforms may go against their own interests). Indeed, those in office are not independent of the world and, thanks to asymmetrical information, may not push hard enough for the desired change, in what has been called the 'formal-versus-informal' reform conflict (Martens et al. 2002).

Using institutional analysis, Easterly (2002) exposes some key problems in the environment that created aid bureaucracies. He argues that this environment led those international development organizations to, "(a) define their output as money disbursed rather than service delivered, (b) produce many low-return observable outputs like glossy reports and "frameworks" and few high-return less observable activities like ex-post evaluation, (c) engage in obfuscation, spin control, and amnesia (like always describing aid efforts as 'new and improved') so that there is little learning from the past, and (d) put enormous demands on scarce administrative skills in poor countries" (Easterly 2002). This obfuscation may have political motivations, as donors only want to highlight the positive results of their aid and keep evaluation reports on their programs very close to their chests (Riddell 1987). Ironically, this provides ammunition to aid critics, who ask: if aid is doing so well, how come there is still poverty? (ibid).

Other aspects may be solved through more rigorous evaluations. Aid evaluation has always

been challenging due to the high number of factors involved in aid programs. Up until the 1970s, cost-benefit analyses were common. From them 1980s, new challenges to evaluate aid appeared as changes in aid took place – in particular, the trend away from project-based aid towards policy-based lending (Berlage, Stokke 1992). As a result, traditional approaches such as cost-benefit analysis became increasingly limited (ibid). To achieve better evaluations, and although all economists do not necessarily agree (see e.g. Ravallion 2011), in recent years there has been a significant emphasis on randomized evaluations as the most scientific method to assess aid programs (Banerjee 2007).[7]

Despite the issues that remain open in the debate, a number of facts about aid have been learnt over the years. With regard to growth, for example, foreign assistance seems to matter more to tackle large negative shocks (Guillaumont, Chauvet 2001), and aid and growth don't have a linear relation (Kourtellos, Tan & Zhang 2007). Aid shows decreasing returns (Dalgaard, Hansen 2001), which may even follow a Laffer style curve, i.e. turning negative beyond a certain threshold of around 40-50 per cent of GNP (Lensink, White 1999).

Regarding the determinants of aid, it seems evident that a vital factor determining aid flows (and their effectiveness) is how recipient governments use the aid they receive (Feeny 2007). In a model assuming bounded rationality and an interactive relationship between the two factors of donors' aid-giving behaviour (internal memory and environment), four main motives for aid were detailed: instrumental or self-centred, humanitarian or recipient needs-based, ideological, and incremental or inertia – i.e. where actual levels of aid allocations depend on previous levels (Imbeau 1989). The conclusion was that the instrumental reason is the best explanation once inertia has been accounted for (ibid). Thus, it seems clear that in addition to economic need, aid donors respond to political and strategic considerations such as colonial past and political alliances (Alesina, Dollar 2000). These motives can also change over time; for instance, the rising importance of Chinese aid in Africa (motivated by the availability of natural resources), may have contributed to a shift of US foreign aid to make it more recipient-needs' based (Amusa, Monkam & Viegi 2016).

Other authors have also examined the extent to which aid is allocated to reduce poverty. Sawada et al. (2008) find that in the late 1990s and the early 2000s, grant allocations from Canada, France, Japan, the Netherlands and the UK were consistent with the necessary conditions to reduce poverty (Sawada, Yamada & Kurosaki 2008). The overall results show allocation patterns consistent with poverty targeting, although there is a negative population

[7] Also known as randomized control trials (RCTs).

scale effect, reinforcing the view that "strategic motives exist" (ibid). Finally, the coordination among major donors towards global poverty reduction has recently improved (ibid).

It has also been argued that with a poverty-efficient allocation, aid would sustainably lift out of poverty around 19 million people per year, whereas with the actual allocation it lifts out an estimated 10 million (Collier, Dollar 2002). From that standpoint, the other goals of aid (e.g. support to donors' strategic interests) could be considered as a tax to poverty-reducing aid.

1.3. From theory to policy

Given what is known, how should foreign assistance be provided? Policy-makers do not always follow economic theory principles (as aid may be given for other geostrategic political motives), and translating knowledge into policy-making remains a challenging issue. With inconsistencies in the body of knowledge it is not easy to offer consistent policy advice; e.g. while there is no agreement about whether aid leads to growth, it is also argued that aid volatility is negatively associated with economic growth in the long run (Markandya 2010), and that donor proliferation linked to free-riding leads to a sub-optimality of aid flows (Rahman, Sawada 2010).

What seems clear, looking at aid flows over time, is that conditionality has decreased (Harford, Klein 2005a)and country selectivity has increased (Dollar, Levin 2006) — effects that may have been associated with one another. It has been argued that the reason for increased country selectivity is the lack of credible punishments for breaching conditionality clauses (Djankov, Garcia-Montalvo & Reynal-Querol 2006). Increased selectivity meant seeking recipients with better policies (Dollar, Levin 2006) and stricter screening of recipient countries by donors. For instance, in 2004 the USA established the Millennium Challenge Corporation (MCC), which a country has to undergo performance assessments on 17 policy indicators before it can become eligible to receive assistance.[8] In the multilateral arena, in 2005 the World Bank started elaborating its Country Policy and Institutional Assessments (CPIA), which rate countries against 16 criteria from four clusters: i) economic management, ii) structural policies, iii) policies for social inclusion and equity, and iv) public sector management and institutions (World Bank 2011b). These initiatives for higher selectivity were probably a consequence of evidence that more corrupt governments had not been receiving less aid – if anything the opposite (Alesina, Weder 2002). The emergence of such evidence supported the thesis that aid

[8] The MCC is a U.S. foreign aid agency whose most distinctive feature is 'competitive selection': before a country can receive MCC assistance through the Millennium Challenge Account (MCA), its performance is examined on 21 independent indicators (Source: https://www.mcc.gov/who-we-fund/indicators).

helps dictators, and had strong effects on some donors (De Mesquita, Smith 2009).

Aid can be classified according to several criteria, e.g. food aid, etc. A key typology relates to the way of delivering it. From World War II till the late 1970s, the main modality to deliver assistance in poor countries was project-based aid, at the core of what has been called the "Western" model (Hayter 1971). The Western model is characterized by funding from donors extended on a project basis and managed by expatriate professionals (Tisch, Wallace 1994), who typically can be in the country from a few months to about 3-4 years. This has been criticized because it can lead to cultural imperialism, as Western advertising, media or consumer goods reach all everywhere in the world (ibid). Though project-based aid is still important at present, the period when project-based aid reigned was characterized by a combination of growing world demand, foreign aid and stable commodity prices that favoured a worldwide decline in poverty and an improvement in basic measures of human welfare (Mohan et al. 2000). During this time, there was 'international adjustment', and the burden was shared by donors and developing countries (ibid). In the 1970s, events such as the end of the gold standards in the US or the oil price crises favoured a paradigm shift towards neoclassical/market-oriented policies (ibid). The shift led to structural adjustment programs in the early 1980s, where the burden of adjustment fell disproportionally on vulnerable segments of the population (Mohan 2000; Tisch, Wallace 1994). Structural adjustment programs were characterized by lending (notably by the World Bank/IMF) conditional on countries' undertaking the policy reforms required.[9] When aid is lent, the amounts tend to be considerably larger than when aid is granted (i.e. given). Heavy lending for structural adjustment programs was at the root of great criticism against aid; pumping substantial amounts of money in poor countries with weak governance systems can result in corruption spikes where what was lent was lost (Payer 1991). Besides corruption, towards the late 1990s it became clear that structural adjustment was costly: it was widely criticized for its effects on the poor, countries' debt kept mounting, and the expected results were hardly being achieved. Debates about how to help countries ease their debt burden started (e.g. with Highly Indebted Poor Countries Initiative, HIPC[10]). Thus, from the early 2000s grants increased in importance –vs loans (Harford, Hadjimichael & Klein 2004b). Both grants and loans became increasingly aimed at middle-income countries and at recipients with good policies –vs. low-income economies and those

[9] Also known as policy-based lending.

[10] In 1996, the World Bank and the International Monetary Fund launched the HIPC Initiative to create a framework for all creditors, including multilateral creditors, to provide debt relief to the world's poorest and most heavily indebted countries, and thereby reduce the constraint on economic growth and poverty reduction.

with bad policies (Harford, Klein & Tilma 2004).

Budget Support (BS) also grew from the early 2000s (Eifert, Gelb 2005), a move to support their fiscal consolidation from the revenue side also motivated by debt sustainability concerns, as well as to promote more ownership in recipient countries. Later, some evidence has shown that BS is correlated with progress in the Human Development Index and the Millennium Development Goals (Beynon, Dusu 2010). However, BS is no magic bullet either, a number of authors arguing that it may contribute to moral hazard by expanding recipients' national budgets and avoiding necessary reforms (Brautigam, Knack 2004). Thus, if more aid does lead to deteriorations in governance, BS may lead to moral hazard in the form of lower tax-to-GDP ratios, or reduced efforts to mobilize national resources (Feeny 2007).

Turning further into policy, the most central initiative to promote aid results was the 2005 Paris Declaration on Aid Effectiveness (PD). The PD is based on five principles (OECD, 2012):

1. *Ownership*: Developing countries set their own strategies for poverty reduction, improve their institutions, and tackle corruption.
2. *Alignment*: Donor countries align with, and use, local systems.
3. *Harmonization*: Donor countries coordinate, simplify procedures, and share information to avoid duplication.
4. *Results*: Developing countries and donors shift to, and measure, results.
5. *Mutual accountability*: Donors and partners are accountable for development results.

It was argued that the PD would make a difference because it was intended to monitor progress on accountability (OECD 2006). However, the PD proved to be no panacea and was complemented by the Accra Agenda for Action (AAA) in 2008, the aim of which was to strengthen and deepen implementation of the PD (OECD, 2012). The AAA pushed some PD principles into concrete actions, especially in the areas of ownership, inclusive partnerships, and delivering results (OECD, 2012). One of the most noteworthy recommendations of the AAA was that the predictability of aid should be increased. The issue of predictability was a reaction to recipients' demands and involved two aspects. The first one was to give at least a medium-run horizon (typically 3 to 5 years), so that the recipient country could better plan ahead with the help of policy tools, such as Medium-Term Expenditure Frameworks (MTEF).[11]

The second aspect demanded by recipients was that donors meet their pledges, as often commitments are incompletely materialized. Indeed compliance with commitments to deliver

[11] An MTEF is a planning and budget formulation process that Governments can use to establish credible projections of public revenue collection (usually within 3-5 years), and to allocate those resources based on strategic priorities.

more aid has received mediocre ratings (G8 Research Group 2007), although donor countries performed well when it came to debt cancellation (G8 Research Group 2015). The delivery of the 0.7 per cent target of ODA relative to donor's Gross National Income (GNI) has also been a challenge which few donors have achieved (OECD 2002). Since Sweden became the first country to meet it in 1974, Scandinavian countries such as Denmark, Finland or Norway have had the best performance in that regard, although other countries such as the Netherlands or Luxembourg have also performed relatively well (OECD 2002).

Although incomplete aid delivery may be an issue, many recipient countries often lack the capacity to absorb the aid they receive (even though it is not all the aid they were promised). Isard et al. (2006, p.12) insist that these absorptive capacity constraints "are largely microeconomic phenomena and should be analysed and addressed as such" (Isard et al. 2006).

1.4. Other practical issues

As noted above, the overall challenge in the aid discussion is that there isn't a very clear idea about whether it works, and/or under what conditions it does so. It has been asserted that, "the winners write economic history" (Easterly 2002). This incomplete understanding is rooted, at least partially, in the data deficiencies which characterize developing countries. The paucity of good quality data has had several effects on the aid literature, including some selection bias. The nature of these effects is conceptually similar: insufficient hard evidence impedes an understanding of the intricate channels through which aid may have a positive impact on the final beneficiaries. However, although the distinctions are more illustrative than clear-cut, there are degrees of ignorance with different consequences. First, extrapolating from developed countries, economists may sometimes defend a specific viewpoint without the rigorous data analysis warranted, which can lead to poorly substantiated statements about the pertinence of aid (see e.g. Friedman 1995).

The lack of data may also impede us from seeing the broader picture. If aid can be considered as a "market", aid assessments are mostly based on the supply of aid, whether primary (donor's principal—often taxpayers), or secondary (aid agencies), but rarely on the demand of aid (beneficiaries).[12] When the demand of aid is analysed, it is usually at the level of recipient countries' governments, and rarely at the level of the ultimate beneficiaries (citizens – ideally the poor). Such lack of attention to the final beneficiaries arises because household surveys hardly collect data on development projects. Therefore, the emphasis is

[12] Authors are increasingly adopting the view that aid is a market, see e.g. Harford, Klein (2005b).

often placed on inputs, frameworks, plans, technical assistance or training instead of results (Martens et al. 2002). Additionally, since the clear mechanisms through which the final beneficiaries would benefit are not well defined, it is not difficult to see aid as a 'black box' (Bourguignon, Sundberg 2007). As noted earlier, to address such deficiencies there have been calls for more monitoring and evaluation (Martens et al. 2002), as well as for better evaluations (Banerjee 2007).

Even where data is available on all sides of the aid market, its informational value vis-à-vis the intended analysis may be limited. A clear example of this is the failure of OECD data on aid to distinguish between types of aid (i.e. disaggregating aid flows by sector only started in 2002). A second example of data shallowness hampering research relates to aid fungibility. It is well known that aid is fungible, however, the aid literature has rarely taken this characteristic into account – probably a result of difficulties in measuring how decisions are made and how shadow savings would be used (e.g. if a donor condones debt to a poor country). After decades of development aid, the most influential work on the issue was done in the late 1990s (Devarajan, Rajkumar & Swaroop 1999).

Despite these caveats, it seems clear that the traditional aid-growth regressions have been exhausted. Research on development aid has begun refocusing from macro to micro relations. This new approach may extend to include a geographical perspective and/or the nature of the relations considered. Regarding the geographical perspective, analyses in the past were typically performed across countries. Individual national studies can be of real value, however. For instance, a case study from Uganda found that only 13 percent of aid reached its intended objective (Reinikka, Svensson 2004). Despite its potential to enrich the debate on aid effectiveness, research at national level has only become popular in recent years (De, 2015). In terms of the nature of the relations considered, the new research approach tends to concentrate more on such micro issues as donors' incentives (Mattesini, Isopi 2008), or whether aid is associated with specific subsector results, e.g. by investigating the extent to which aid aimed at private sector development responds to constraints identified by private firms as problems (Ferro, Wilson 2011). This new focus may be due to increasing doubts about the value of aid, or to growing pressure by taxpayers to know they are getting value for their money.

There may be trade-offs to such direct, sub-sector level approaches to the assessment of aid effectiveness. Narrow relationship analyses may miss spill over effects or synergies, and assessing a development portfolio by evaluating its components individually may be incorrect. Ravallion makes the point succinctly, "the bundling of (often multi-sectorial) components in one portfolio is often justified by claimed interaction effects. But evaluating each bit separately

and adding up the results will not (in general) give us an unbiased estimate of the portfolio's impact" (Ravallion 2011).

1.5. Contribution of this thesis

In line with recent works, this dissertation is empirical in nature and focuses only on one country (Niger). The choice is grounded in the objective of providing useful policy advice to improve the country's situation. Niger is one of the poorest countries of the world, yet very little has been written on its aid. Previous works have mostly focused on the results of aid at a macro level: whether it is associated to growth (Nafiou 2009), and how much more aid would be required to achieve some defined growth targets (Farah, Sacerdoti & Salinas 2009). At a micro level the country's aid has been greatly under-researched, the few exceptions being qualitative studies (Sambo 2009) and field project descriptions (Rossi 2006).

An interesting generalization about the literature reviewed may be that aid supporters tend to emphasize results (whether it saves lives, reduces poverty, etc.), while its detractors tend to highlight the mechanisms or incentives it provides (although they may still acknowledge some of aid's positive results, particularly on public health, see e.g. Moyo 2009). Notable examples to criticize aid relate to moral hazard (e.g. as beneficiaries know that donors will be there for them, they make less effort to undertake much-needed reforms, mobilize internal resources, etc.) or adverse selection (e.g. corrupt governments are more likely to receive aid, which helps their leaders to stay in power).

The three main contributions of this dissertation relate to incentives, results and mechanisms of work, and address gaps identified in the literature both from a global perspective and in the context of Niger. Considering lending for policy-based reforms, the first relates to incentives in the donor-recipient relationship. The interaction of Niger with its donors is analysed with a focus on the existence of moral hazard, to assess whether aid is associated with reforms. This takes the form of a historical case study about the dynamics of the relationship between Niger and the IMF.

The second contribution of this thesis focuses on a result, poverty reduction, and its link with aid. Keeping the ultimate demand of aid (the poor) at the centre of attention, an econometric analysis of household survey data is undertaken to assess whether aid is associated with poverty reduction. [13] Hence, the key modality of aid in this analysis is the traditional

[13] Poverty is usually measured from an income or a multidimensional perspective. Using an income approach, poverty can be defined in absolute or relative terms. In absolute terms, the World Bank defines extreme poverty as living on less than US$1.90 per day (Purchasing Power Parity), and moderate poverty as less than $3.10 a day.

project-based aid portrayed in the Western model.

Finally, the provision of public goods is also explored as a mechanism through which aid may alleviate the consequences of poverty, i.e. regardless of whether income poverty is reduced or not, aid may at least be useful to local communities by improving their living conditions. Also within the traditional project-based aid, this analysis sheds light on Bourguignon and Sundberg's 'black box', and intends to be holistic by comparing all the suppliers of development projects (e.g. aid, Government, etc.). Perhaps more importantly, it also provides hints on how to deliver aid if the objective was to maximize the utility households derive from development projects. To my knowledge, so far this perspective has been largely missing in the literature on aid.

Relative poverty is the condition in which people lack the minimum income needed to maintain the average standard of living in their country. The difference between absolute and relative income poverty can be substantial. For instance, in advanced economies absolute poverty is virtually non-existent but relative poverty can be significant in some cases. Multidimensional poverty is usually measured as people's experience of deprivation in areas such as poor health, lack of education, inadequate living standard, lack of income, etc. While there are some references to income poverty, the notion of poverty utilized in the analyses of this dissertation is closer to the concept of multidimensional poverty.

Chapter 2. The Setting: Niger

"I grew up being poor in Lesotho, but when I came to Niger I had the awful feeling that if there was a place God had forgotten, this was it. The weather, the dust... poverty around greenery is not as bad"
(Khalikane 2005)

2.1. Introduction

This chapter describes Niger with regard to three groups of factors likely to influence its development: environment, economy and institutions. This structure responds to three broad groups of development theories: those rooted in environmental conditions, those emphasizing economic features and those highlighting institutions.[14]

In the first group, perhaps the best-known exponent is Jared Diamond, who explains world development patterns since 13,000 B.C. (Diamond et al. 2005). According to Diamond, the first communities in the Middle East's Fertile Crescent were blessed with key natural endowments that led to high productivity farming (ibid). The ability to ensure food security with fewer resources facilitated labour specialization patterns, which in turn led to technological progress, human capital accumulation and the development of more complex political systems (ibid). After high-yield agricultural and farming techniques were developed, being located with a large landmass in the same latitude favoured a quick expansion of crops and animals that gave a vital advantage to Eurasian and Northern African inhabitants (ibid). In turn, higher population densities and close contact with farming animals meant increased exposure to diseases, which over time led to a higher resistance of the immunological systems

[14] This rationale is only to have a structure in the chapter. Other criteria could have been used. For instance, based on international relations, dependency theory states that resources flow from a "periphery" of poor underdeveloped states to a "core" of wealthy states. This theory had two versions: a radical one that claimed that the centre (advanced countries) grew at the expense of poor countries; and a milder version which maintained that under capitalism both rich and poor could grow but would not benefit equally (Velasco 2002). An alternative option could be the neo-Weberian state perspective, which emphasizes paths for public management reform (Pollitt, Bouckaert 2004) but is difficult to define (Lynn 2008). A third option could be historical (Stavrianos 1981), including how the legacy of late colonialism affected the political context in contemporary Africa (Mamdani 1996). However, given the objective of the chapter, i.e. to introduce key factors that can affect developmental performance in one country (Niger), the current structure is selected. In so doing I do not intend to endorse or disregard any specific theory, or even list them comprehensively. For a more complete list of development theories, see Willis (2011).

of people from that part of the world. Later, when Europeans entered in contact with new-world communities, this factor would prove to be a great advantage for Europeans (ibid).

The pattern experienced in the Fertile Crescent would not have been possible in Niger. Powerful kingdoms did thrive in the Sahel in the past, their existence being greatly facilitated by trade corridors (e.g. in Niger, Agadez has long been the hub of a trade road between West and North Africa). However, the other ingredients noted by Diamond were absent, especially a generous environment that led to high productivity farming. As section 2.2 shows, food security remains a serious challenge even today.

Diamond's theory is useful to explain overall patterns of world development and historical phenomena such as colonialism, e.g. why European countries progressed faster than Papua New Guinea. However, it hardly explains narrower differences, e.g. why Germany is wealthier than France. Economics has provided explanations. Although the emphasis differs across theories, the most prominent highlight the role of innovation, savings and investment. In this vein, the main economic features of Niger are described in section 2.3.

Finally, soft matter factors such as culture, religion, values or property rights have also been provided to explain differences in development. Although some of the theories linking institutions and economic performance may date back as far as the early 1900s (e.g. Max Weber's The Protestant Ethic and the Spirit of Capitalism), since the 1990s there has been a renaissance of the view that institutions are the fabric leading to economic development, thanks to some remarkable works such as North (1990) or Acemoglu, Simon Johnson & Robinson (2001).[15] Niger's available data on institutions are presented in section 2.4.

2.2. Environment

Niger is a vast landlocked country in the Sahara-Sahel region of West Africa, located between Mali, Algeria, Libya, Chad, Nigeria, Benin and Burkina Faso (Figure 2.1). With a surface of 1,267,000 square kilometres the country is bigger than France, Germany and the United Kingdom combined. The bulk of the country's territory is part of the Sahara Desert, although the Southern areas are in the Sahel –where most of the population lives.

The country's climate is exceptionally hot. The average daily minimum and maximum temperatures in the capital are 22.4°C and 36.2°C, respectively (United Nations 2006).

[15] This does not imply, however, that scholars have reached total consensus. For example, the work by Acemoglu et al. (2001) has been convincingly criticized by other economists (Glaeser et al. 2004), as well as historians (Austin 2008).

Environmental conditions are harsh and only 1% of the land forested, and this area is decreasing with increased desertification. In 2013, only 12.6% of Niger's total land was arable (World Bank 2016) and food security is a recurrent concern that is serious even by Sub Saharan African (SSA) standards. The average rainfall in the capital, Niamey, between 2009 and 2013 was 531.3 mm per year (INS Niger 2014). Rainfall is very uneven, with both droughts and floods occurring. The average number of rainy days during the 1990s was 52.6 per year (INS Niger 2014).[16] Agriculture uses 95.4% of all the water consumed in the country, while industry uses 0.5% and domestic usage accounts for 4.1%, respectively (FAO 2011). The country's agricultural sector is mainly rain-fed, which makes it very vulnerable to droughts.

Figure 2.1. Map of Niger

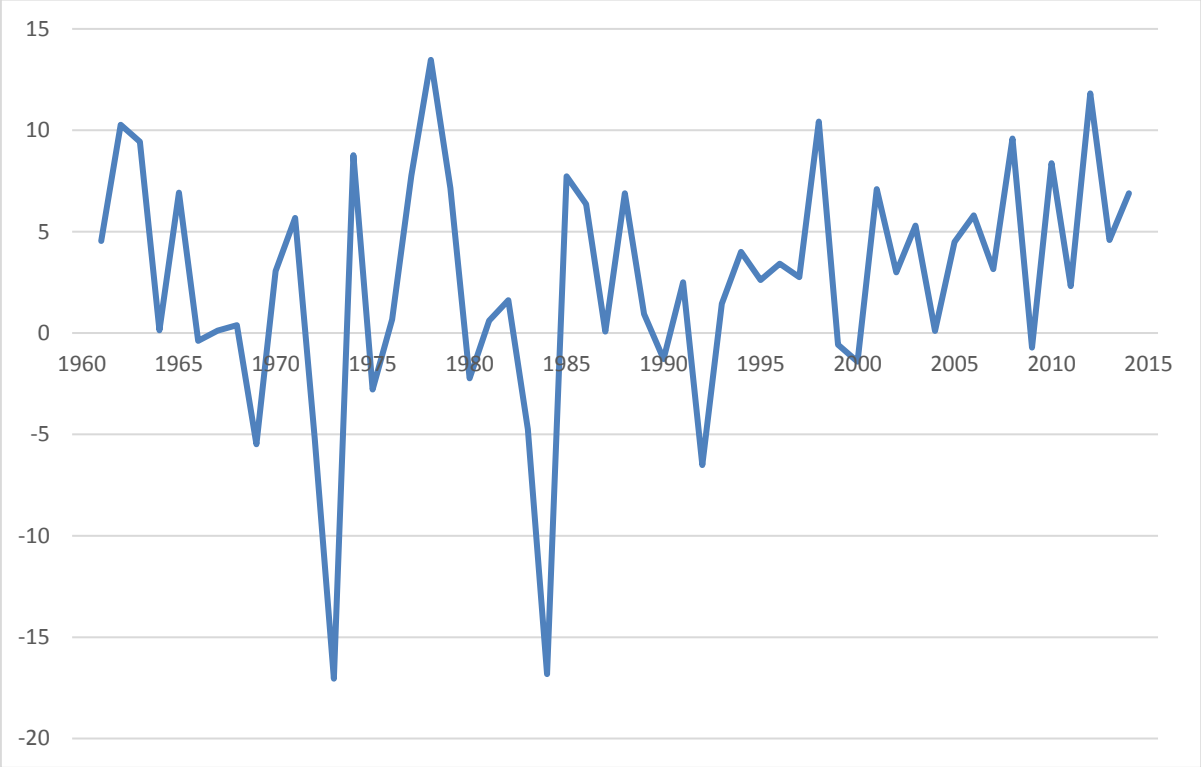
2.3. *Economy*

Niger is a member of the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (WAEMU), sharing a common currency (the CFA franc or FCFA) and a Central Bank (the Central Bank of West African States) with six other countries.

[16] For a comparison, the average annual rainfall and number of rain days in Cape Town (South Africa), is 475 mm and 101 days, respectively (Source: http://www.cape-town.climatemps.com/precipitation.php)

The country has exhibited elusive and volatile growth since its independence (Figure 2.2), although its GDP expanded remarkably between 2000 and 2014, when it grew at an annual average of 4.7% in real terms (World Bank 2016b). With a per capita income estimated at 427.4 USD in 2014 (vs 1,813.8 USD in SSA), the country is one of the poorest nations in the world (ibid). Using purchasing power parity, 81.8% and 50.3% of the population lived on less than 3.10 USD and 1.90 USD a day in 2011, respectively (ibid). Savings are scanty: from 1981 to 2015, annual gross domestic savings averaged 7.4% of GDP, while the average figure in SSA developing countries was 18.4% (ibid).

Figure 2.2. Niger's annual GDP growth since 1960 (%)



Source: World Bank's World Development Indicators 2016

Niger's Gross Domestic Product (GDP) is based predominantly on services (43.6%) and agriculture (36.7%), with less value added in the industrial sector (19.5%) (ibid).[17] In the services sector the most noteworthy activities are banking and financial services, but the country's financial sector is nonetheless little developed. For instance, in 2009 there were only 11 recognized credit institutions and the banking penetration was estimated at 2.4 accounts per

[17] The value of agricultural output that is self-consumed or that is not exchanged for money, i.e. subsistence agriculture is not included.

100 people (UEMOA, 2009), the lowest figures in the ECOWAS community.[18] In 2014 the domestic credit provided by the banking sector was a meagre 12.3% of GDP (World Bank 2016b), while in SSA's developing countries it was 62% of GDP (ibid). Some reasons for the smallness of this contribution are the country's lack of credit information or its low saving rates, as well as long distances and low population density[19] (Pedrosa-Garcia, Do 2011).[20]

Food insecurity is a grave concern. Agriculture is mostly subsistence and labour intensive – an indicator of which is that in 1998, there were only 130 tractors in the entire country (World Bank 2016b). In 2012 Niger ranked 91st in the global food security index, and deteriorated to the 99th position in 2015 (EIU 2015). Major crops and products are millet, sorghum, peanuts, onions, rice, cattle, sheep, goats and camels, which have adapted to the country's conditions.

Mining is the most important activity in the industrial sector, and uranium is the main natural resource although gold is also extracted and there are prospects for the exploitation of oil. The importance of natural resources is rising; in 2013, they contributed to 12.3% of GDP, which is projected to double in 2020 (IMF 2015). Government revenue from natural resources is expected to increase by 2 percent of GDP in 2020 (IMF 2015). Other industrial activities in Niger are cement, brick, soap, textiles and livestock slaughter.

Niger is ranked the 160th country least business friendly in the world in 2016 – out of 189 (World Bank 2016a). As such, Niger's investment climate is not very conducive to private sector development. Some indicators are poor even in the context of SSA. For instance, insolvency proceedings take 5 years on average, while on average in SSA they need 3 years (ibid). Nevertheless, the country has seen some improvement in recent years, and now some indicators are above SSA standards, notably in the number of procedures to start a business or get electricity (ibid). In 2009, the five major constraints identified by firms were: competition from the informal sector, access to finance, political instability, corruption and high tax rates (World Bank, IFC 2010).

[18] Defined as people who are 15 years old or older and hold an account at a registered financial institution. This figure is calculated by dividing the number of accounts (based on ECOWAS' Banking Commission official data for 2009), by the country's population in the relevant age band (according to World Bank demographic data). The calculation is available on www.afribf.com/archives/2010/12/25/19962697.html as of May 24th, 2012. Admittedly, such figure may overestimate the banking penetration since it assumes one account per holder. However, since the figure is given to show that the financial sector in Niger is very little developed, the existence of such bias would reinforce the point noted.

[19] Although in Niger long distances and low population density hamper credit provided by the financial system, this need not be interpreted as environmental determinism, because it is not the case in others such as Botswana.

[20] Based on extensive consultations, the influence of Islamic rules on interest as a factor precluding the development of the country's financial sector (Niger is predominantly Muslim) is highly questioned.

Niger's poor infrastructure hampers competitiveness. In terms of physical capital, the country has significant deficiencies, e.g. the road network of about 19,000 kilometres represents 1 Km of road per 100 square kilometres of land area (World Bank 2013). Furthermore, much of this is undeveloped or poorly maintained: with only 20.7% of all roads paved (ibid), most of the road network requires upgrading. Other communication indicators are in poor state as well. For instance, the number of telephone lines was 0.57 per 100 people in 2014, while the number of cellular subscribers was 44.4 per 100 people (World Bank 2016b).

The share of government expenditure on education increased from 16.9% in 2006, to 21.7% in 2014 (UNESCO 2016), which favoured some improvements in education. For instance, the net primary school enrolment rate in 2014 was 61% in 2014, from 42.5% in 2006 (World Bank 2016b). However, investments in human capital have not seen the progress necessary to catch up with the dramatically low starting points, and the situation remains grave. In 2015, only 19.1% of all people aged 15 and above could read and write (UNESCO 2016). Accordingly, the workforce still has very low education levels. In 2009-2010, only 541 students graduated from the University of Niamey (INS Niger 2014). Information technologies are not entrenched either; in 2014, there were a mere 1.95 internet users per 100 people (World Bank 2016b).

The low labour productivity is further explained by poor public health. Despite a HIV prevalence rate of only 0.5 cases per 100 people, in 2014 life expectancy was only 61.5 years – similar to SSA's 58.6 years (World Bank 2016b). Several factors contribute to the precarious public health situation. Most of the agricultural sector is based on subsistence farming, which added to the country's water dependence, makes food security a constant challenge and explains why famines are so recurrent. Furthermore, flooding during the rainy season, together with the lack of water and sanitation infrastructures, tend to aggravate diseases such as malaria, which is commonplace. Accordingly, indicators of under-five, infant and maternal mortality are amongst the highest in Africa (World Bank 2011a). Niger is in the heart of the meningitis belt which stretches from Senegal to Djibouti (IFRC 2008). Under such conditions, families tend to prefer many children and fertility rates are very high, reaching 7.6 births per woman (INS Niger 2014), which led to an astonishing population growth rate of 3.9% per annum between 2001 and 2012 – the highest in the world (ibid). The population in 2012 was estimated at 17.1 million, of which 83% lived in rural areas (ibid).

In these conditions, people are very vulnerable and the State provides little protection, although spending in social sectors has been increasing in recent years and is in line with that

in comparable countries (IMF 2015).[21] Employment is scarce, as the ratio employment-to-population for adults in 2014 was 61.4% (World Bank 2016b). For those who have it, work is often informal and unpredictable in time: only 5.5% of all those employed in 2012 were salaried workers (INS Niger 2013). Working conditions are rough: 84.8% of all employment in 2005 was considered vulnerable (World Bank 2016b), and 85.4% of all those employed declared to be self-employed (ibid). Most of the population (56.9%) was employed in the agricultural sector (ibid), with subsistence farming and herding being the main occupations. The services sector employed 31.1% of the population (ibid) and only 11.1% of the population worked in industrial activities (ibid), despite it providing the most internal resources for the country (thanks to mining).

Public sector accounts for a rather small share of GDP. In 2014 the general government's final consumption expenditure represented 13.5% of GDP (World Bank 2016b). Such meagre weight in the country's economy is favoured by little capacity to mobilize, and subsequently spend, internal resources: tax revenue represented 15.5% of GDP in 2014 (INS Niger 2016). Fiscal revenue has been heavily dependent on uranium exports for decades, which has long encouraged economists to propose reforms of the tax system to extend taxation into the informal sector (Barlow, Snyder 1993). The country's large shadow economy contributes to this situation, as formal enterprises bear a heavier burden; 65.2% of firms in Niger were not registered in 2012, a rate higher than in comparable countries (INS Niger 2013).

In terms of the external sector, Niger is a member of the World Trade Organization since 1996, and has accordingly been pursuing trade liberalization. The tariff rate applied on a weighted mean of all products decreased from 13.7% in 2001 to 9.1% in 2010, and has stabilized since then (World Bank 2016b). Furthermore, net inflows of foreign direct investment (FDI) increased from 1.1% of GDP in 2006 to 16.7% of GDP in 2011, although they shrank thereafter due to the political instability, and since 2013 have stabilized around 9% (ibid). Such an impressive increase was facilitated by Chinese and French investments for oil and uranium in some parts of the country (IMF 2015). FDI net outflows, however, have never exceeded 1.5% of GDP (World Bank 2016b), a record attained in 1986 (during the uranium boom of the mid-1980's). FDI net outflows in 2014 were 0.26% of GDP (ibid).

Trade liberalization has exacerbated the country's negative current account balance, especially since 2005 (World Bank 2016b). The export value index in 2014 (with base 100 in

[21] Including HIPC resources; without them, the public spending on social safety nets represent 0.85% of the national budget and 0.19% of GDP.

2000) was 530, while the import value index (also with base 100 in 2000) attained 569 (ibid). In 2014, exports and imports represented 17.8% and 36.7% of GDP, respectively (ibid). Exports are concentrated in a few products. The top 5 export products in 2015 accounted for 83.3% of all exports (Trade Map 2016). In 2015, those 5 export commodities were uranium ore, oil, precious stones, motor vehicles for the transport of goods and animal fats (ibid). The main export markets were France, USA, Nigeria, Burkina Faso and Mali (ibid). On the other hand, the top 5 imports in 2015 were aircraft parts, machinery, cars, rice and electrical equipment (ibid). The main import markets were France, China, USA, India and Nigeria (ibid).

2.4. Institutions

A decade ago Niger's institutions were described as 'informal-fragmented' – indicating a situation in which the State is not very effective and has little presence in economic life (Meisel, Ould Aoudia 2007). Solidarity plays an active role, because it represents a form of security that partly compensates for the State's deficiencies. Political, economic and social rights are not guaranteed, but dynamic citizens can benefit from specific opportunities (ibid). Little has changed since 2007, and the importance of social networks is vital for basic aspects of economic life, such as job opportunities.

After gaining independence from France, Niger experienced decades of political instability, although the 1990s were the worst period. In total, the country has seen three successful military coups (plus two attempted, three plotted and one alleged plot), seven constitutions (1960, 1989, 1992, 1996, 1999, 2009 and 2010) and many major crises that lead to a serious slowing down of the State's operations (details in annex table 2.1).

Politically, the country is structured as a semi-presidential republic with a President and a Prime Minister. In terms of administrative governance, the country is considered very centralized. The first elections at subnational level were only held in 1999, while in 2002 decentralization laws were adopted –their implementation is still not complete– and all subdivisions redefined (de Sardan 2004). Mamadou Tandja was elected in 1999 as President of the Republic and re-elected in 2004. In 2009, Tandja introduced a new constitution to be able to stay in office, but he was overthrown in 2010 by a military coup. Major Salou Djibo was named head of the Supreme Council for the Restoration of Democracy, while the international community called for the reestablishment of constitutional order. New elections were held in 2011, out of which Mahamadou Issoufou became President; he was re-elected in March 2016 and is still in office.

Adding up to its long-standing political turmoil, two foci of instability have recently arisen. First, a Touareg rebellion emerged in February 2007, the Nigerien Movement for Justice (NMJ), with the main demands of a more even sharing of natural resources revenue and making progress in the decentralization process – initially agreed in 1996. The NMJ attacked several military targets in northern Niger throughout 2007 and 2008, but successful government offensives in 2009 limited the rebels' operational capabilities. There have been no armed attacks since June 2008. Secondly, civil insecurity and violence have been on the rise since 2008, linked to Islamist terrorist groups –most notably al Qaeda and Boko Haram- and continue to be active at present (BBC 2016).

In terms of democratic quality, only 50% of Nigeriens in 2012 had confidence in the honesty of elections (Gallup 2012). This may not come as a surprise. In 2015 Niger's democratic system was ranked in the category of 'Authoritarian Regimes', 121st out of 167 countries (The Economist 2015) – although slightly improving from 2010 when it was 128th out of 167 countries (The Economist 2010). Citizens seem to trust the country's media: 70% of Niger's population believe in their quality and integrity, one of the highest levels in SSA. The country's governance ratings are weak, though. For instance, Niger's State Fragility Index in 2014 had the same rating as it had in 1996 (Centre for Systemic Peace 2014). Figure 2.3 in the annex shows the 6 dimensions included in the Worldwide Governance Indicators, and in most of the indicators Niger is situated in the lowest percentiles globally. The evolution since 1996 can be appreciated in the charts. Three groups can be distinguished. Voice and accountability started extremely low in 1996 and has improved over the years, although decreasing from 2004 onwards. On the other hand, political stability (the highest ranked dimension at the baseline) has shown a clearly deteriorating trend. The other 4 dimensions (government effectiveness, regulatory quality, rule of law and control of corruption) have exhibited slightly positive trends, most of them reaching their peak somewhere around 2010. Control of corruption is the only dimension that has slightly improved since 2010.

The data described so far relate to formal institutions. Informal institutions are difficult to measure (or even define), but have been identified in the literature as potentially affecting economic performance through two main channels: social divisions and people's values.[22] The

[22] While the importance of institutions is widely agreed upon by economists, their definition itself is subject of a large body of literature, with significant disagreements – especially on informal institutions. A key figure in the literature, Douglass North defines them as the informal rules derived from culture that regulate societal behaviour, and proposes to include informal constraints, conventions and codes of conduct (North 1990). Other authors defend that the term is so blurry that the dichotomy formal-informal should not be used, and propose written vs unwritten (Hodgson, Calatrava 2006). Given this challenge, not everything relating to societal codes of conduct

first channel may lead to internal conflict. Among others, social divisions could be ethnic or religious, and may support interest-group polarization and rent-seeking. This would undermine the consensus for public goods, thereby leading to policies that are not conducive to growth (Easterly, Levine 1997). From the ethnic viewpoint, Niger is quite varied and therefore would be eligible for social divisions. The ethnic structure of its population is as follows: Arab (0.3%), Djerma Sonrai (21.2%), Gourmantché (0.3%), Haoussa (53%), Kanouri Manga (4.4%), Peulh (9.9%), Touareg (10.4%), Toubou (0.4%) and others (0.2%) (INS 2011). An example of social division based on ethnic differences could be the Touaregs' armed rebellion in Northern Niger, although the reasons of that rebellion are very complex and intertwined (Rosenbaum 2007). Based on informal discussions with many Nigeriens between 2008 and 2010, I adhere to the view that ethnic fragmentation is unlikely to lead to social division in Niger.

One argument for social fragmentation is that it could have been derived from the mistrust in the recruitment of slaves (Nunn 2008). Based on this argument, countries that exported more slaves are more likely to have remained underdeveloped: the internal warfare, raiding, and kidnapping would have resulted in state collapse and ethnic fractionalization. Niger exported an estimated 19,912 people as slaves between 1400 and 1900, which is a very low number relative to many other countries (Nunn 2008). Arguably, these figures would lend little support to the argument of slavery-inherited fragmentation of ethnic groups.

The second channel through which informal institutions could influence economic performance is people's values, often linked to religion (Weber 1958). For instance, specific religious beliefs and/or church attendance may influence types of behaviour that are more (or less) productive (Barro, McCleary 2003). In this regard, 99% of the Nigerien population is Sunni Muslim (INS 2010), which is likely to preclude social conflicts due to religion. While recognizing the importance of Islam in the country, the Government of Niger has traditionally adopted a quite secular approach.

2.5. Conclusion

Niger has serious developmental challenges. Environmental conditions are rough and meeting basic needs such as food or water is challenging for a large portion of the population. Clearly this setting would have made it very difficult, in the past, for Nigeriens to develop before those in more benign conditions.

in Niger could be described. Hence, I focus on the key aspects relating to social conduct that have been identified in the literature as potential obstacles to economic performance, and for which there are data available in Niger.

Niger may qualify as being in a 'poverty trap'. High poverty and demographic growth limit savings; deficient infrastructures, unskilled human resources, corruption and little access to capital burden private sector development and investment, which in turn contributes to little employment and precarious working conditions. The country's economy is based on basic products and natural resources. The main sector is agriculture, which is vulnerable to climatic variations. Economic relations are mostly informal, which makes it difficult for the State to have a deep involvement in the economy. As it is difficult to mobilize internal resources, the country has little margin for public spending. There are hopes for other resources in the future but so far, the country depends mostly on uranium for fiscal revenue, which exposes it to volatility in the price of that mineral.

Political instability has been a noteworthy feature of the country for decades, and despite recent modest improvements in some governance dimensions the quality of institutions remains weak, e.g. some areas of the country do not meet basic conditions of safety and security due to terrorist groups. To make up for the lack of basic services provided by the State, people depend on their networks, which strengthens civil society. Despite high ethnic diversity, social fragmentation seems unlikely.

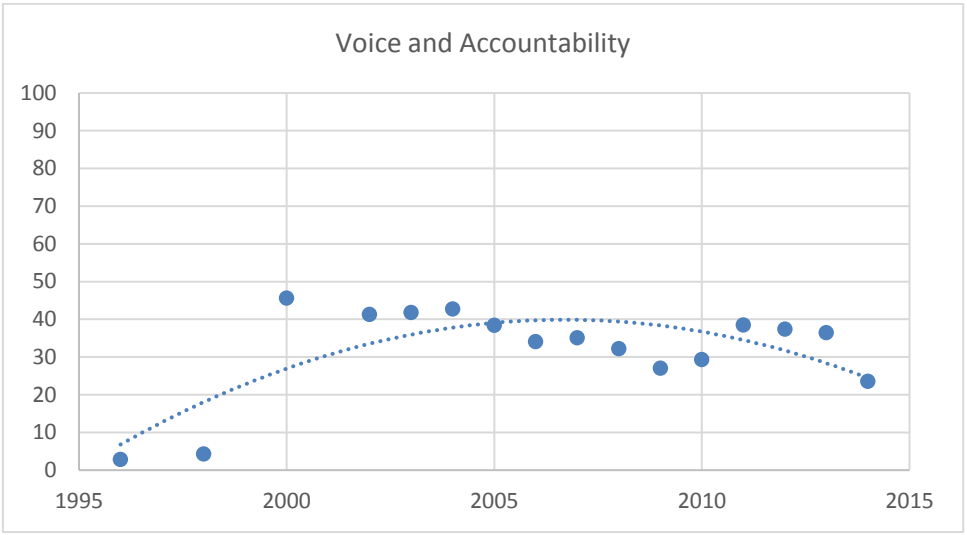
2.6. Annexes

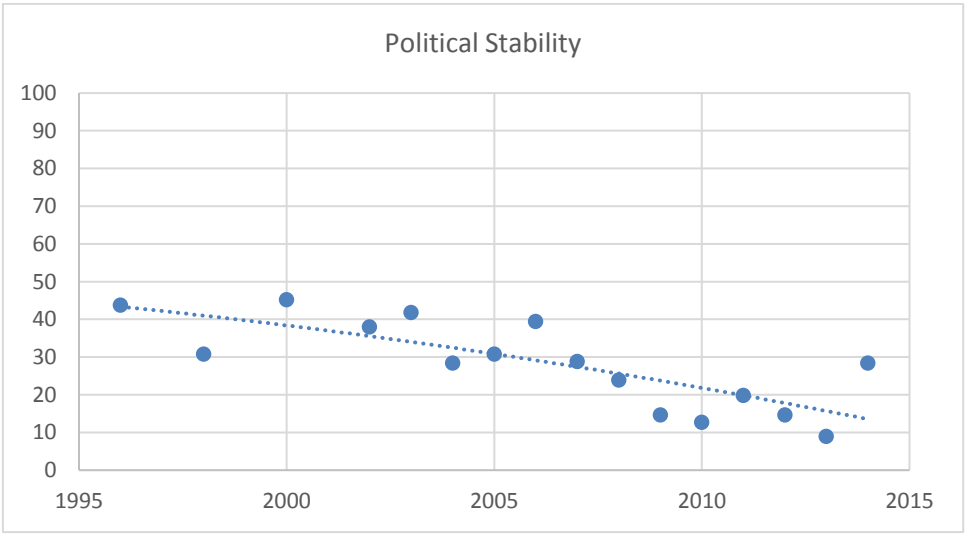
Table 2.1. Main socio-political events since its independence

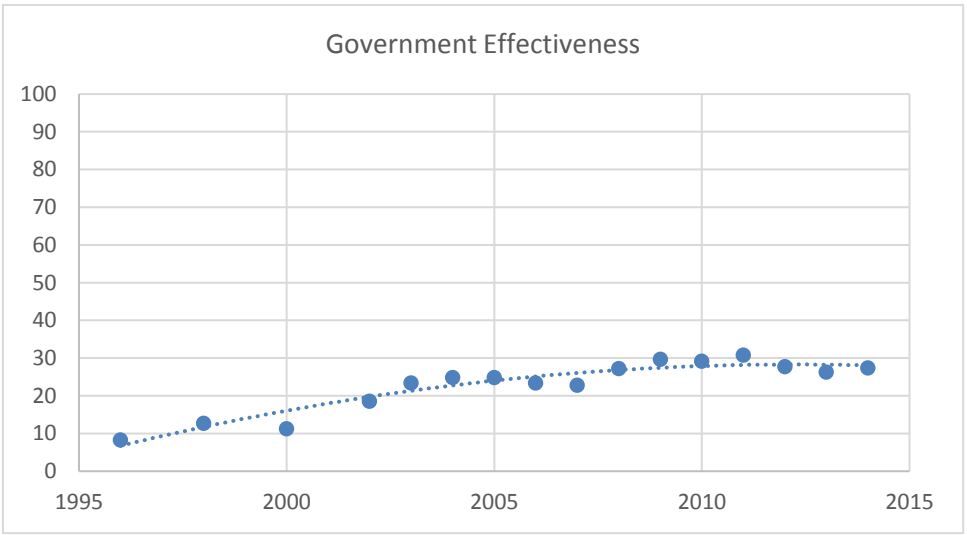
Year	Event
1960	Niger's independence from France.
	Hamani Diori is elected President of the Republic by the National Assembly.
1965	Hamani Diori is re-elected President of the Republic by universal suffrage.
1974	Coup d'état (successful) by General Seyni Kountché.
1975	Coup d'état (plot) by Majors Souna Sido, Dilbo Bakary and Maitourane Gadjio
1976	Coup d'état (attempt) by Majeur Basere Moussa and Captains Sidi Mohamed and Ahmed Mouddour
1983	Coup d'état (attempt) by Lieutenant Mahamane Sidikou, Lieutenant-Colonel Amadou Oumarou and Captain Seybou Mahamane Ousseini
1987	After General Kountché's death due to delicate health, General Ali Saibou is designated as head of the Supreme Military Council (CMS) to carry out the functions of Chief of State.
1989	Referendum and adoption of a new Constitution.
1992	Referendum and adoption of a new Constitution.
1993	Mahamane Ousmane is elected President of the Republic.
	Mahamadou Issoufou is appointed as Prime Minister.
1994	The incumbent Prime Minister Mahamadou Issoufou resigns.
1995	New elections take place and Hama Hamadou becomes Prime Minister.
1996	Coup d'état (successful) by Colonel Ibrahim Barré Mainassara.
	A new Constitution is adopted by referendum in 1996.
	After controversial presidential elections in which Colonel Mainassara participated as an independent candidate, a period of serious socio-political and legal instability follows.
1998	Coup d'état (alleged plot) by Hama Amadou, Issoufou Assoumane and Mohamed Bazoum
1999	First local elections in the country's history take place, to later be contested and annulled.
	Mainassara's regime comes to an end and he is assassinated through another coup. Major Daouda Malam Wanké becomes Chief of State and head of the National Reconciliation Council (CRN).
	A new Constitution is approved in Referendum.
	Mamadou Tandja is elected as President of the Republic. Hama Amadou is appointed as Prime Minister.
1998	Decentralization laws are adopted.
2004	Mamadou Tandja is re-elected as President.
2009	Against the Constitutional Court's opposite ruling, Tandja dissolves the National Assembly and calls for a Referendum to change the Constitution and be able to remain in office.
	A new major political crisis ensues, creating great division and tension between political leaders and civil society in general.
2010	Coup d'état (successful) by Lieutenant General Salou Djibo, who becomes Chairman of the Supreme Council for the Restoration of Democracy.
2010	Referendum and adoption of a new Constitution.
2010	Coup d'état (Plot) by Colonels Abdoulaye Badie, Abdou Sidikou and two others
2011	New elections take place. Mahamadou Issoufou is elected as President of the Republic in April. A planned assassination of Issoufou is uncovered in July, and a group of senior military officers are arrested.
2016	Mahamadou Issoufou is re-elected as President in March, in a second tour against Hama Amadou, who was detained during the electoral campaign. The opposition calls for a boycott to the election result.

Source: Sambo (2009) combined with Polity IV database (www.systemicpeace.org)

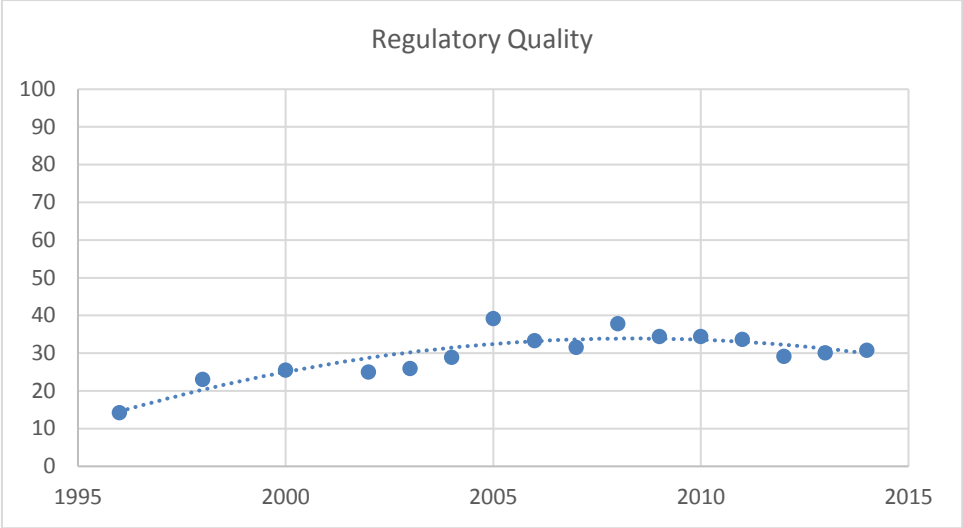
Figure 2.3. Evolution of Governance Dimensions in Niger[23]

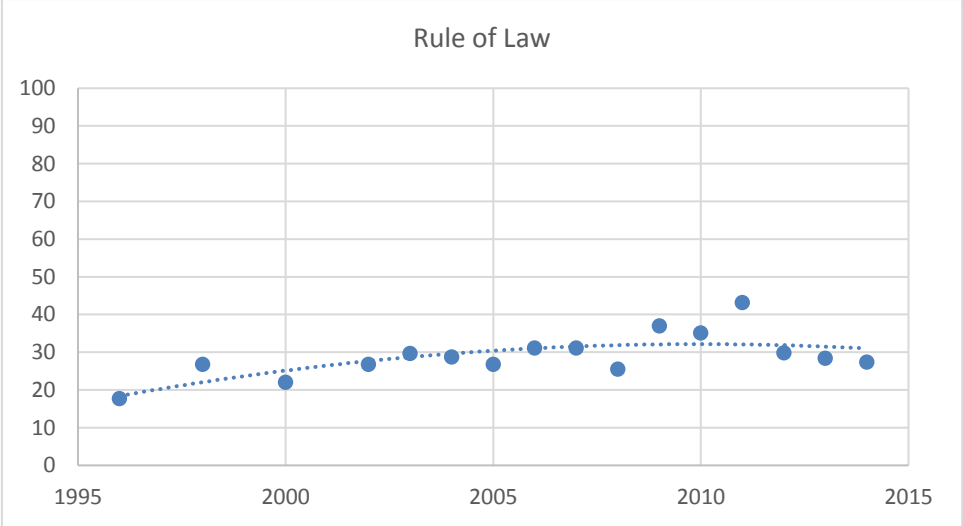


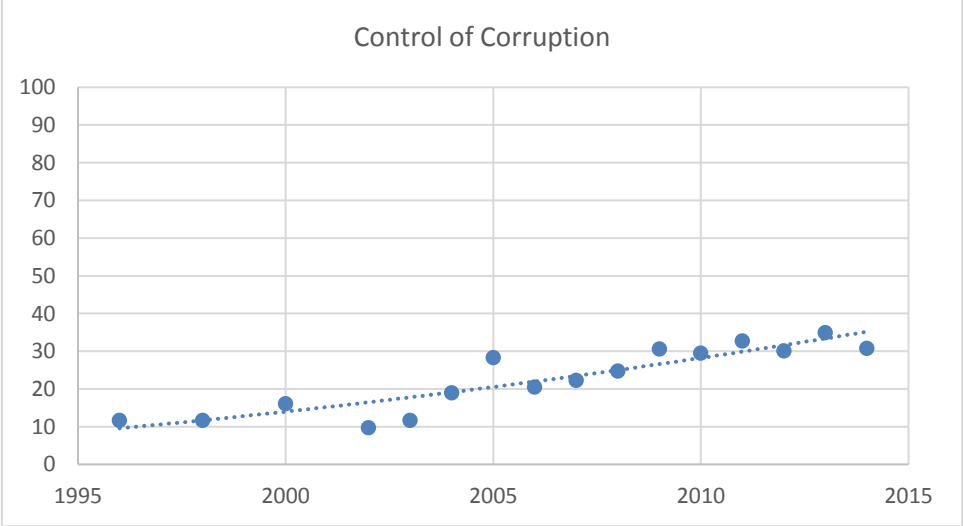




[23] In percentile terms relative to the other countries in the world.







Source: World Bank's Worldwide Governance Indicators (Kaufmann, Kraay & Mastruzzi 2015)

Chapter 3. Niger's Aid Market

"It is a sad reflection on the aid establishment that knowing where the money goes is still so difficult, and that the picture available from partial knowledge remains so disturbing."

(Easterly, Pfutze 2008)

3.1. Introduction

Aid can be viewed as a market (Harford, Klein 2005b), having both supply (donors) and demand (beneficiary countries).[24] This chapter aims to provide a macro understanding of Niger's aid market, before the thesis delves into its microeconomic aspects (in next chapters).

3.2. Overview of the market

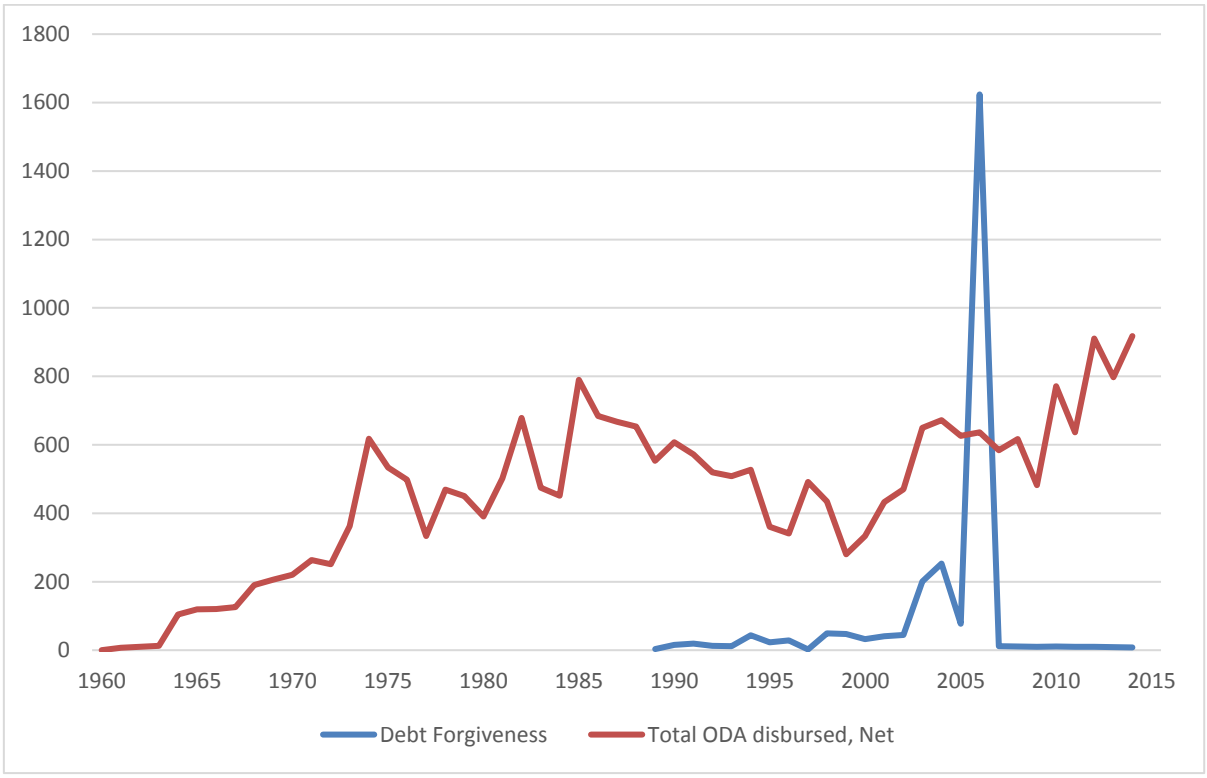
From 1960 to 2014 Niger received a total of net Official Development Assistance (ODA) disbursements of 24,922.5 million in 2014 constant USD, which is equivalent to 453.1 million per year (OECD Stat 2016).[25] Overall, ODA in Niger has had an upward trend since the country's independence (Figure 3.1), but three periods can be clearly distinguished: an increase till it peaked in 1985, the decrease thereafter during the country's troubled 1990s, and a

[24] Some authors argue that aid can have a dose of 'impure altruism', because the donor derives utility from the very fact of giving – also known as the warm glow (Andreoni 1990). Based on this rationale, to the extent that the donor gives aid out of self-interest, the exchange would lose importance. Other authors such as Marcel Mauss emphasize, based on anthropological analyses, the difference between market and gift (Mauss 2002). Nonetheless, Mauss does acknowledge that gifts supply individuals with personal incentives for collaborating in the pattern of exchanges, which supports the idea of exchange (ibid). Despite these views, the idea of aid as a market is increasingly being accepted. After Harford and Klein (2005b), more authors have used it. The market for aid has also been referred to as market for policy advice (Custer et al. 2015) or market of ideas for policy change (Parks, Rice & Custer 2015).

[25] As defined by the OECD, ODA are those flows provided by official agencies under the following two criteria: i) they are administered with the promotion of the economic development and welfare of developing countries as their main objective, and ii) they are concessional in character and convey a grant element of at least 25 per cent (OECD Stat 2016).

recovery since 1999 which culminated in a new peak in 2014, when it reached an all-time record with 917.8 Million in 2014 constant USD (ibid).

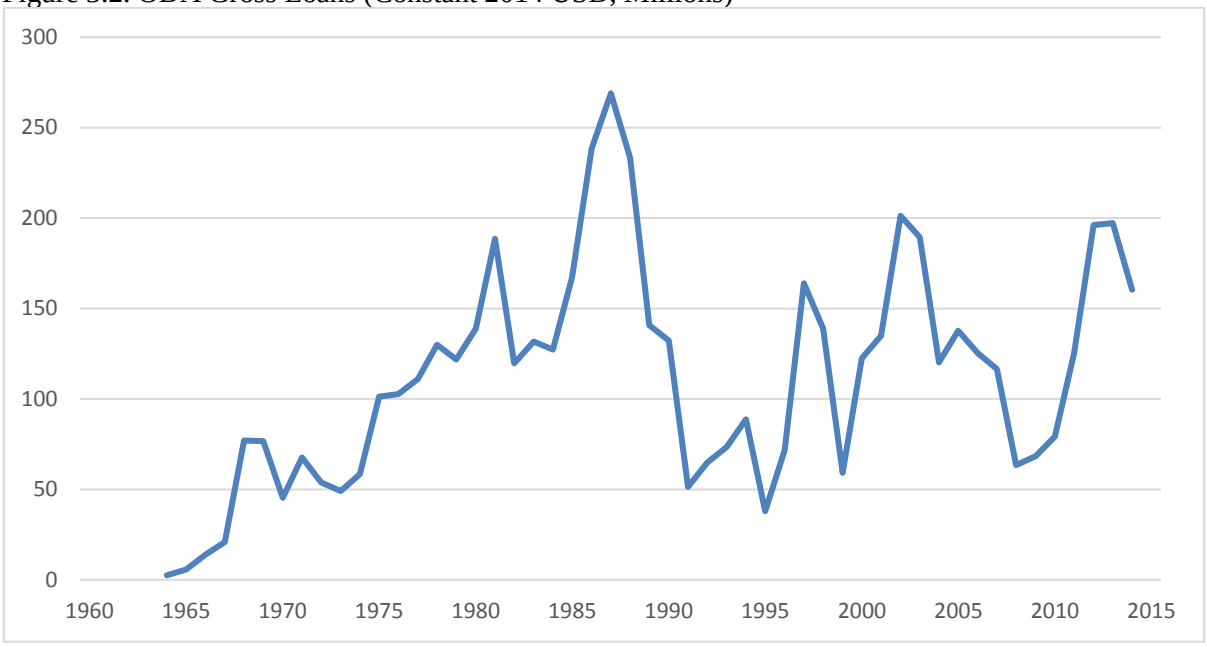
Figure 3.1. Niger's ODA (2014 constant USD)



Source: OECD Stat (2016)

Debt relief started to be part of the aid received from 1989 onwards, reaching noteworthy levels between 2002 and –especially– 2005. During those four years there was a large scaling up of debt relief initiatives such as the Highly Indebted Poor Countries (HIPC) program, of which Niger benefited because its debt had reached unsustainable levels (IMF External Relations Department 2004). Debt relief was the consequence of debt accumulation after decades receiving aid. This debt accumulation over time is visible looking at the evolution of gross loans, which became most prominent during the 1980s (Figure 3.2) – when uranium prices boomed.

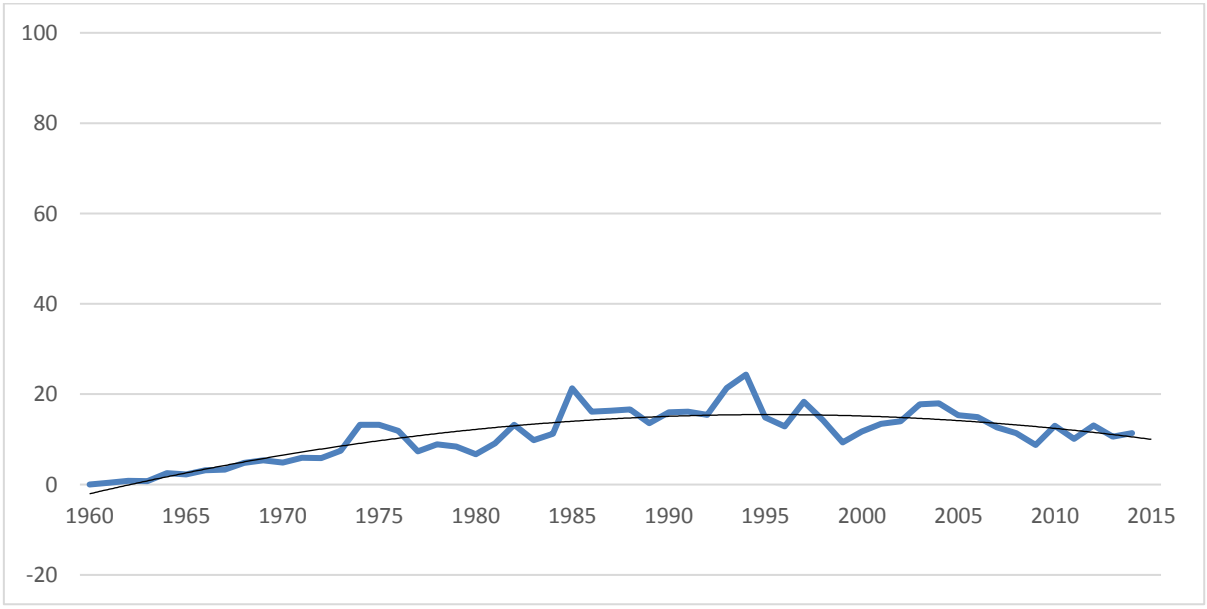
Figure 3.2. ODA Gross Loans (Constant 2014 USD, Millions)



Source: Own calculation based on OECD Stat (2016)

Considering ODA volumes relative to the country's economy, aid grew until 1994 and has thereafter had a slightly decreasing trend (Figure 3.3). For most of the period considered, aid has been substantial and hovered between 10-20%. However, it never attained the levels (40-50%) which, according to Lensink and White (1999), would lead to negative returns. At present, the level of aid relative to Niger's GNI is similar to that in the mid-1970s.[26]

Figure 3.3. Net ODA received, as a percentage of GNI

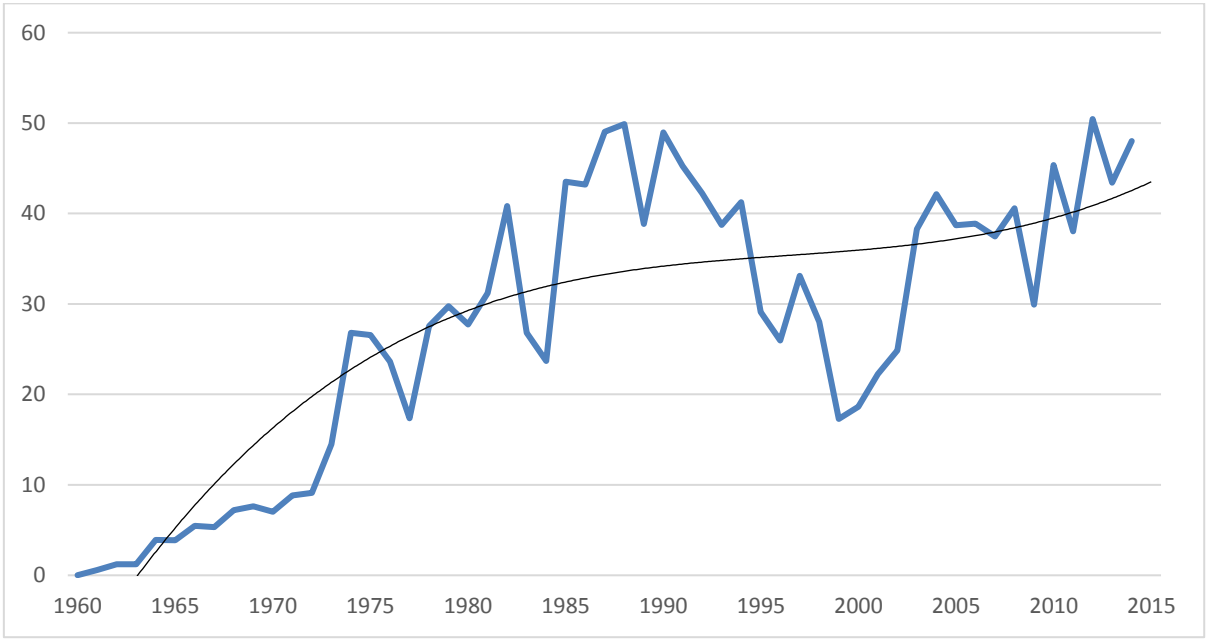


Source: OECD Stat (2016)

[26] For the entire Sub-Saharan Africa in 2014, net ODA received was 2.4 percent of GNI.

In per capita terms, the picture is roughly similar (Figure 3.4). ODA rose rapidly until the mid-1980s, to decrease thereafter – particularly during the 1990s, a decade of substantial turmoil in Niger. With the political stability of the 2000s, aid quickly recovered, but decreased again in 2009-2010 due to renewed political instability. From 2011 onwards, however, it has gained remarkable momentum. At present, levels of ODA per capita are equivalent to those in the late-1980s.

Figure 3.4. Total ODA net disbursed per person (2014 constant USD)

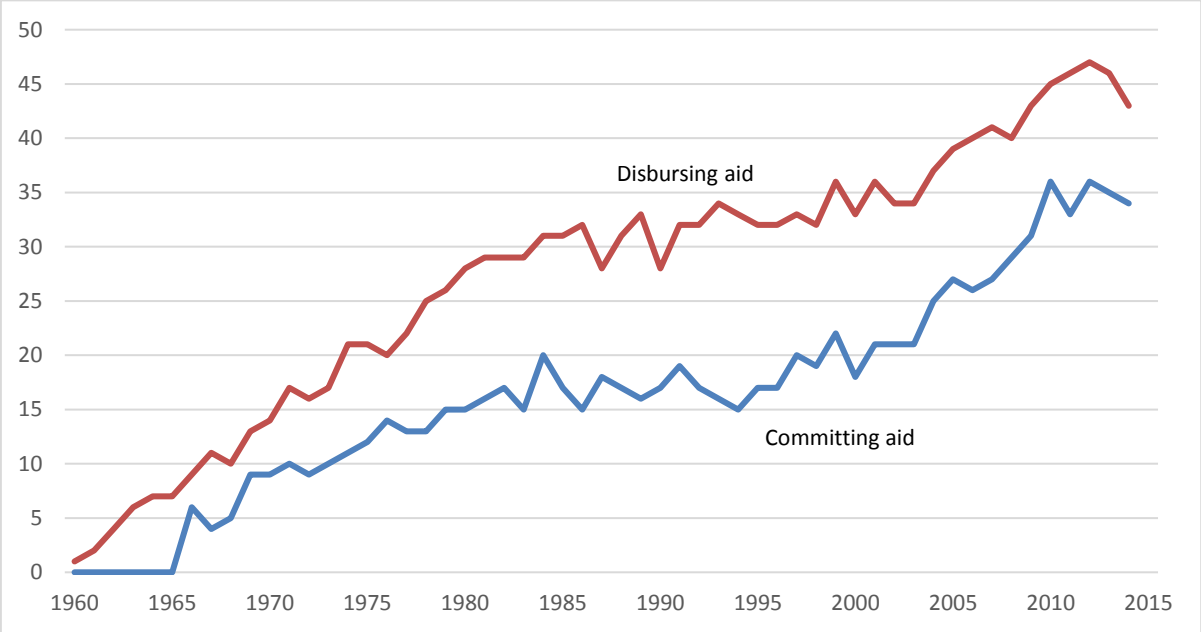


Source: OECD Stat (2016)

The number of donors that disbursed ODA increased from only one at independence in 1960 to 43 in 2014, while those who committed aid increased from zero in 1960 to 34 in 2014 (Figure 3.5). The number of donors committing ODA to Niger is consistently lower than those who disburse it, which means that some donors who do not commit aid do disburse it later on. The pattern may seem counterintuitive, as it may be expected that donors plan ahead and if anything, of those who commit some may fail to meet their promises. Failure to deliver commitments may indeed occur, but the phenomenon can also be interpreted as flexibility by donor countries to adapt to the recipient's situation, which is useful in situations of recurrent natural disasters and droughts. Another option may relate to donors' flexibility to supply aid for other reasons. This would be consistent with the fact that during Niger's 2009-2010 crisis, commitments decreased (it would be politically unpopular to pledge aid to a country ruled by

a military junta after a coup) but disbursements did not (Figure 3.5). Donors that did not disburse aid in 2014 include the Czech Republic, Finland, Greece and the Netherlands.

Figure 3.5. Number of donors



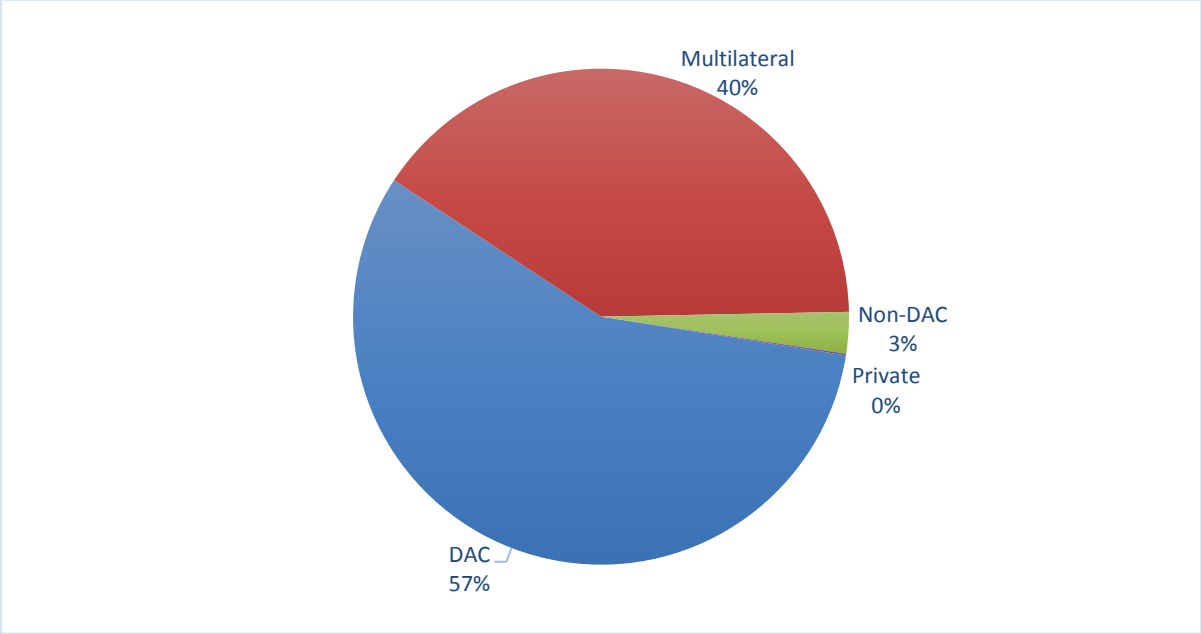
Source: OECD Stat (2016)

The OECD/DAC considers four types of donors: DAC[27], multilateral[28], non-DAC[29] and private.[30] DAC countries and multilateral organizations provided 97% of all the aid that Niger received from 1960 to 2014, with the rest being non-DAC donors – private aid is negligible (Figure 3.6).[31] The pattern is consistent over time (Figure 3.7). Since 1960, non-DAC countries only represented a relatively significant share of Niger's aid between 1981 and 1984, when they surpassed multilateral donors. That short period coincided with the early-mid 1980s' uranium boom, and the increase is explained by Kuwait. After the mid-1980s, non-DAC donors became insignificant compared to the other types. DAC donors became the main source of

[27] Development Assistance Committee. DAC is composed of Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Luxembourg, The Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and United States.
[28] AfDB, AfDF, AFESD, AsDB Special Fund, BADEA, CarDB, EBRD, EU Institutions, GAVI, GEF, Global Fund, IAEA, IBRD, IDA, IDB Special Fund, IFAD, IMF (Concessional Trust Funds), Islamic Dev. Bank, Montreal Protocol, Nordic Dev. Fund, OFID, UNAIDS, UNDP, UNECE, UNFPA, UNHCR, UNICEF, UNPBF, UNRWA, UNTA, WFP.
[29] Chinese Taipei, Czech Republic, Estonia, Hungary, Iceland, Israel, Kuwait, Poland, Saudi Arabia, Slovak Republic, Slovenia, Thailand, Turkey, United Arab Emirates, Other donor countries.
[30] Bill & Melinda Gates Foundation.
[31] Data available from the OECD/DAC show that that non-DAC donors are less likely to report their data flows to the OECD even in recent years, which may involve some non-response bias.

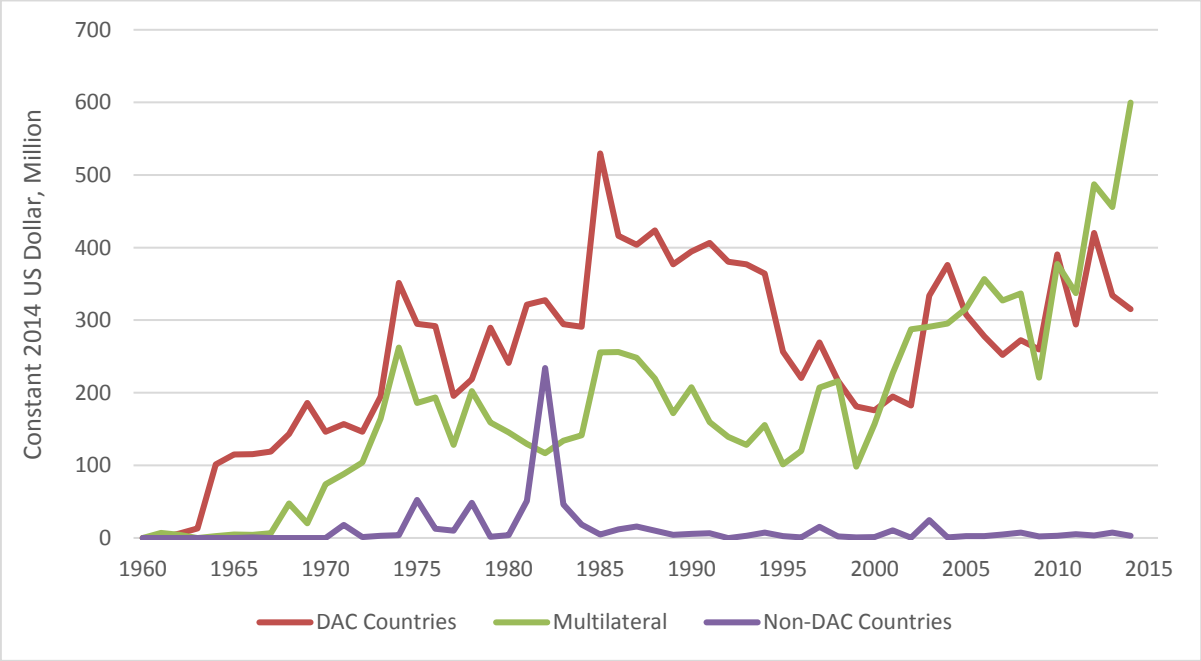
ODA until the end of the 1990s, but converged with multilateral donors in the 2000s (in 2013 and 2014 they diverged again).

Figure 3.6. Total share of ODA by donor type, for the period 1960-2014



Source: OECD Stat (2016)

Figure 3.7. Evolution of Niger's ODA disbursed aid by type of donor



Source: OECD Stat (2016)

Aid disbursements by sector are shown in the annex following OECD's classification (Table 3.4). Debt relief (section 600) has represented a very significant share of ODA's use (22.1% of all aid), although sector-allocable aid (section 450) consumed the greatest portion (48.9%). Commodity aid (section 500, which includes food aid) received 15.2% of all funds and humanitarian aid (section 700), 12.1%.

Within sector-allocable aid, the main use has been social infrastructure and services (section 100, with 29.7%), with health, government & civil society, and education receiving the highest shares of social aid. Within health and education, basic services have been the main beneficiaries, while in government & civil society, public finance management received significant resources. The second area receiving aid has been production (section 300, with 7.3%), where most of the support went to agriculture. Mining, a strategic sector led by private sector companies in partnership with government, also received support – although considerably less than agriculture. Economic infrastructure (section 200) has been the third most important area (6.1%), overwhelmingly focused on transport and storage, and specifically on roads: 90.6% of all transport and storage aid went into roads. The fourth most important sector was multi-sectoral and cross-cutting (section 400, with 5.7%), which includes such objectives as environment or gender equality.

Within commodity aid, general budget support was the main use (10% of all aid), while the other important purpose was food aid (5.1% of all aid). Humanitarian aid was used primarily for emergency responses, with little shares being destined to reconstruction relief and disaster prevention. Based on table 3.4, the high-level sector distribution of ODA disbursed from 2002 to 2014 is shown in annex Figure 3.12.

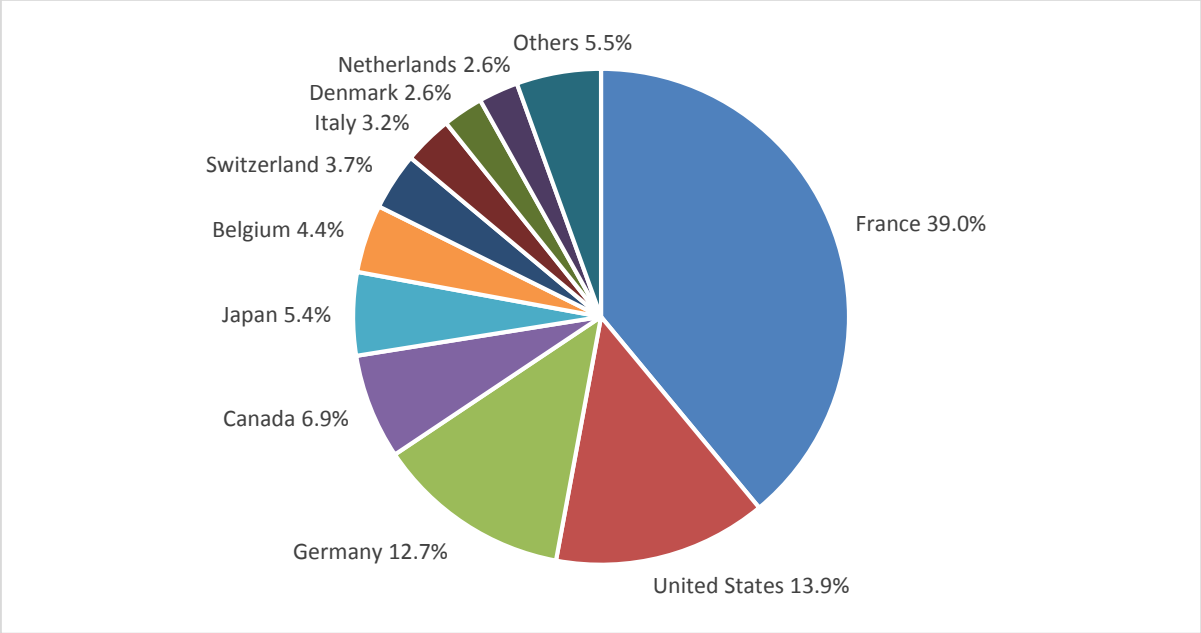
The annual evolution of aid's sector allocation since 2002 shows the huge effort on debt relief (Figure 3.13). Figure 3.14 shows the same graph without debt-relief. Social infrastructure has had a slightly positive trend over the years, especially from 2011 onward, which is explained by Mahamadou Issoufou's 'Renaissance programme' (Cabinet du Premier Ministre 2014). Within social infrastructure, basic aspects of health, education, and water and sanitation have shown a positive trend, while others such as post-secondary education remain insignificant (Figure 3.15). In economic infrastructure, most of the uses of aid have shown volatile trends (Figure 3.16), although since 2006 transport and storage (mostly road works) have become important. The evolution of aid towards productive sectors has mostly been driven by agriculture (Figure 3.17). This trend started with the 2004-05 famine, and was boosted by Niger's access to the Millennium Challenge Corporation in 2011 (Millennium Challenge Corporation 2014), and the 'Renaissance Programme' (Cabinet du Premier Ministre

2014). Conversely, other productive sectors such as forestry, fishing or tourism receive virtually no aid (Figure 3.17). Finally, aid non-allocable to sectors is marked by the growth of humanitarian purposes (especially emergency response and food security), which start with the famine in 2004-05 (Figure 3.18).

3.3. Donors

In 2014 aid in Niger was disbursed by 43 donors, so the analysis will focus on the ten main donors. In aggregate terms since 1960, the main DAC donors for Niger are France, the USA, Germany, Canada and Japan, which account for 77.9% of all bilateral ODA (Figure 3.8). The main multilateral donors were the European Union, IDA (World Bank, WB), the African Development Bank Fund, the UNDP and the World Food Programme (WFP), which account for 84.6% of all multilateral aid (Figure 3.9).[32]

Figure 3.8. DAC donors' share of cumulative disbursements (1960-2014)



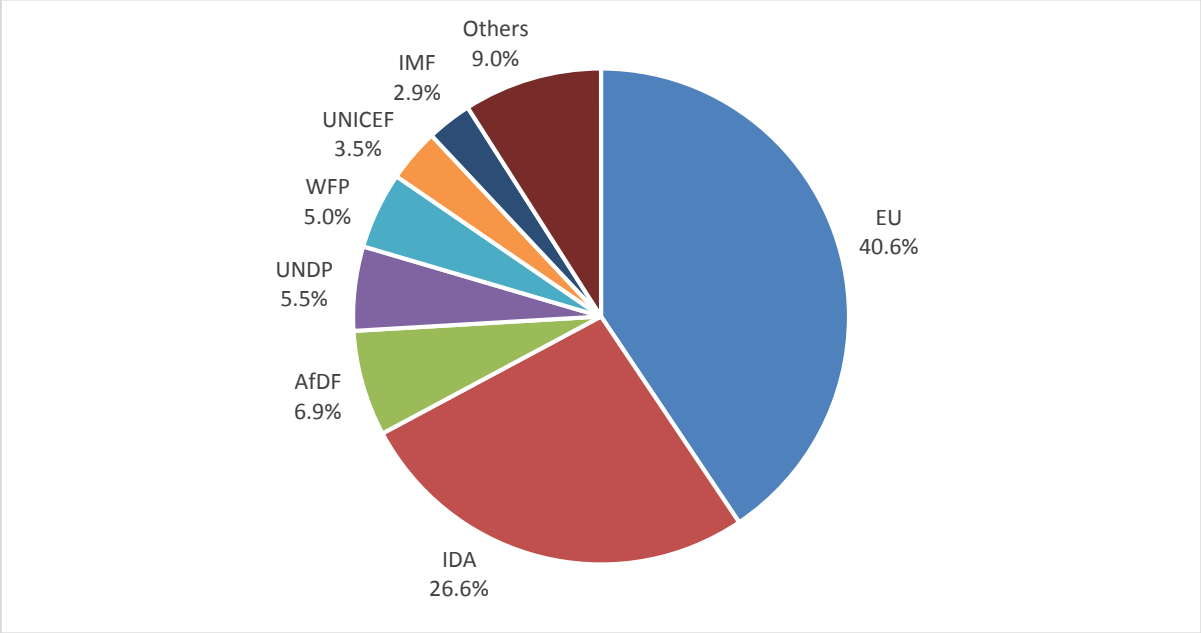
Source: OECD/DAC

The pattern has been fairly consistent over decades: the most important donor has been France, although French disbursements were relatively volatile compared to the other donors' (Figure 3.21). The USA and Germany matched France's aid levels in some years during the mid-1980's

[32] The ten donors selected remain relevant in Niger at present, although their ranking has slightly changed. Figure 3.19 in the Annex shows the same graph for bilateral donors since 2010 to 2014, while Figure 3.20 does so for multilateral donors. As these changes in the ranking could be due to the recent conjuncture, the choice remains to analyse the ten donors noted.

uranium boom. From the early 1990s, when turmoil in the country started and bilateral aid decreased, most donors' disbursements began to decline. The great exception was France, which continued supplying substantial aid (although it also reduced it). France was also the country that made the greatest –unparalleled– effort during the 2004-2005 famine, although since 2010 it has been surpassed by the USA. Both countries may have geostrategic considerations, as they import considerable amounts of uranium ore from Niger (Trade Map 2016).

Figure 3.9. Multilateral donors' share of cumulative disbursements (1960-2014)



Source: OECD/DAC

In the multilateral arena, the European Union has always been the most important donor, followed –and sometimes surpassed– by the World Bank (Figure 3.22). During the 1980s the UN agencies increased their funding, but the 1990s brought a general decrease in donors' disbursements due to the country's turmoil. As the country regained political and institutional stability in the 2000s, however, some donors increased their funding again. The 2010 crisis led to aid reductions again, but regaining democratic stability paved the way to new unprecedented levels of multilateral aid.

Donors have different *modi operandi*. In terms of the distribution channel used, two profiles can be identified (Table 3.1): the first delivers aid mainly through the public sector, allocating marginal amounts to civil society and through multilateral organizations (most donors operate in this way).

Table 3.1. Channels used to deliver aid by donors[33]

	Canada	France	Germany	Japan	USA	EU
Public Sector	3.5%	89.2%	78.6%	60.2%	3.2%	69.4%
NGOs & Civil Society	16.3%	4.8%	15.3%	2.1%	41.6%	14.7%
Public-Private Partnerships (PPP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Multilateral Organisations	63.9%	5.7%	5.5%	36.7%	53.8%	14.6%
Other	16.2%	0.4%	0.5%	1.0%	1.4%	1.3%

Source: Creditor Reporting System, OECD Stat (2016)

The second type, characterised by Canada and the USA, does not rely so heavily on Niger's public sector and distributes aid much more evenly across channels. They use civil society more heavily and channel a higher share of their aid through multilateral organizations. Despite these differences, none of the donors used Public-Private Partnerships (Table 3.1).

Table 3.5 in the annex shows the importance of donors in each of the sectors in which they operate. In most sectors, the majority of the aid is provided by 2-4 donors. The main ten donors account for a very high share in most of the sectors. The exceptions are 'Administrative cost of donors', 'Assistance to refugees in donor countries'[34] and 'Unallocated / Unspecified'. As donors self-select to report their aid, it is plausible that donors are less likely to report their aid on these less 'glamorous' sectors.[35]

Table 3.5 can be summarized by the mean and standard deviation of donor's importance across sectors (Table 3.2). The mean is an indicator of a donor's relative contribution, while higher standard deviation would be associated to more concentrated efforts, i.e. in some sectors the donor would be very important but in others insignificant.

Table 3.2. Donor disbursements' importance across sectors (Summary of Annex table 3.5)

	Mean	Standard Deviation
Canada	1.3%	1.5%
France	13.1%	10.7%
Germany	3.1%	3.8%
Japan	2.0%	1.8%
USA	5.8%	9.9%
AfDF	5.3%	5.1%
EU	16.5%	16.3%
IDA	14.0%	17.4%
UNDP	0.7%	1.0%
WFP	0.9%	2.3%

Source: Own calculation based on Table 3.5 in the annex

[33] Calculated by donor on different timeframes based on OECD data: Germany and the EU (2006-2014), Japan and USA (2006-2014), Canada (2009-2014) and France (2010-2014).

[34] With very few refugees fleeing Niger this sector is driven by very few funds reported, and the exception is explained by a Norwegian initiative of 2 Million USD in 2002 which represents about 47.3% of all the aid received by Niger between 2002 and 2014 for that purpose.

[35] Missing observations are more likely in these sectors.

Based on these indicators the EU, the World Bank and France are the most important donors in Niger, and their efforts are very focused in a few number of sectors. At the other extreme, the UNDP, WFP and Canada are the least important of the ten main donors, and they tend to spread their efforts in many sectors – WFP is the most focused, given its mandate on food. The other donors are somewhere in between.

To shed light on donors' efficiency, data are available on how much of the aid committed by donors was disbursed, which is often referred to as the 'implementation' or 'delivery' rate. Three measures are considered (Table 3.3): the ratio of disbursements to commitments in aggregate terms for the entire period, the average annual implementation rate, and the correlation coefficient between commitments and disbursements of aid. They allow us to know if donors have delivered all the aid they committed, if they have done so on a regular basis, and if movements in their commitments were associated with movements in their disbursements.

Table 3.3. Selected indicators of ODA Delivery, by donor and donor groupings (1960 – 2014)

	Total Aggregate Delivery	Annual Delivery rate		Correlation commitments – net disbursements	
		Average	Std. Dev.	Coefficient	Obs.
All Donors, Total	119.4%	173.2%	3.44	0.816***	49
DAC Countries, Total	101.8%	151.6%	3.27	0.795***	49
Multilateral, Total	149.8%	196.4%	1.30	0.555***	46
Non-DAC Countries	259.4%	4,392.9%	117.33	0.164	24
Canada	95.6%	305.8%	6.15	0.104	49
France	115.9%	120.1%	0.35	0.779***	48
Germany	89.2%	163.4%	1.96	0.681***	49
Japan	99.8%	178.4%	3.41	0.331**	40
USA	96.0%	115.6%	0.59	0.836***	48
AfDF	2,009.5%	74.2%	0.00	-	-
EU	95.4%	199.0%	2.19	0.306**	46
IDA	493.9%	1445.0%	19.67	0.195	11
UNDP	569.4%	97.5%	0.03	0.975***	11

* Statistically significant at 10%, ** at 5% and *** at 1% level

Source: Own calculations based on OECD/DAC data

The results show donors delivering more aid than they had previously committed. While there is great disparity in the results, the most consistent donors are France and the USA. On the other hand, the African Development Bank, the World Bank and Canada are less likely to materialize their commitments in a smooth manner.

By type of donor there are also differences. Multilateral donors have the smallest variance, which suggests that they are the most 'reliable' vis-à-vis Niger. DAC donors are the second, while non-DAC donors are clearly the most volatile. These findings may be rooted in the

institutional structure in which donors operate: multilateral donors may have a 'last resort' character. However, DAC donors only report to their national governments so they may be more flexible, i.e. better able to concentrate disbursements in some time periods. Non-DAC donors' aid is much less predictable, and they may disburse much more than committed. Non-DAC countries are less likely to be full democracies[36], so it may plausible to assume that they are less accountable to large taxpayers' bases. Hence, their reasons for providing aid to Niger could more easily include non-developmental reasons, e.g. availability of natural resources.

3.4. Non-governmental organizations

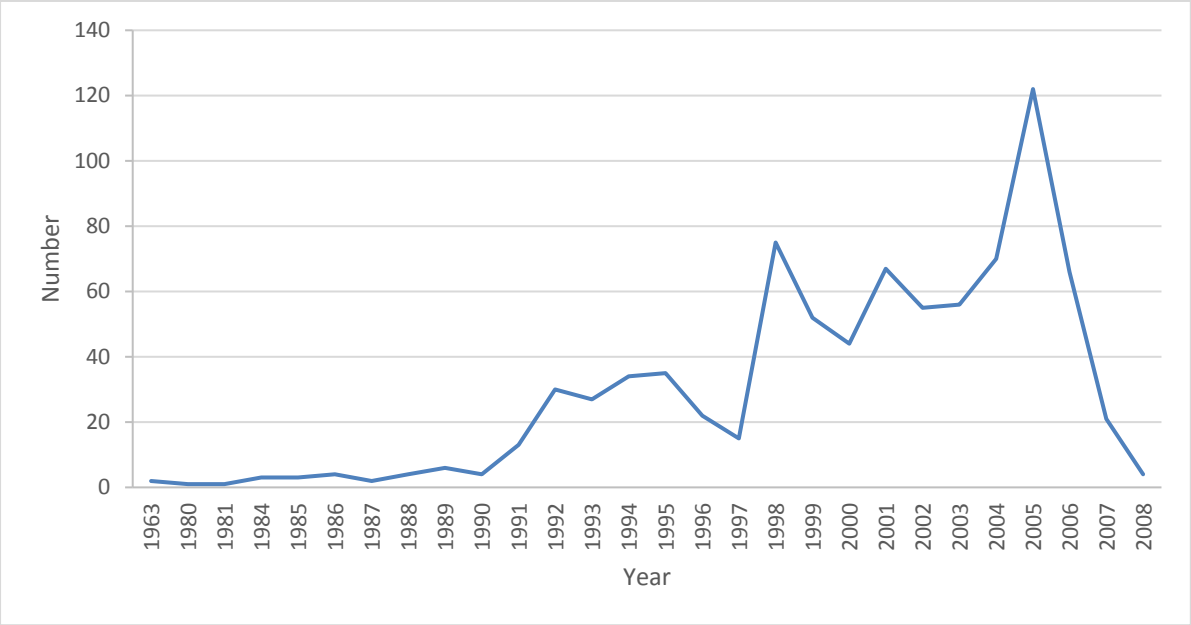
This section provides a description of the main characteristics of NGOs in Niger, with a focus –when data are available– on international NGOs. Although NGOs are believed to mobilize substantial resources, there is no exact information on how much funding they channel. The functions of supporting and monitoring NGOs lie with the *Direction des ONG et des Associations de Développement* (DONGAD), based in the *Ministère du Plan et de l'Aménagement du Territoire*. However, the capacity to track external financing going to civil society and NGOs is weak (African Development Bank 2011). An estimate can be obtained by considering how much ODA is channelled through NGOs and civil society, although this is likely an underestimation of the funds they distribute (national resource mobilization would not be taken into account). Keeping in mind such potential bias, from 2004 to 2014, 14.1% of all aid was committed and 10.3% disbursed through NGOs and civil society, equivalent to 900.3 and 952.8 million USD, respectively (OECD Stat 2016). The pattern is opposite to that of overall aid spending, which indicates difficulties in spending the aid committed. Only 0.7 % of all aid was committed to support NGOs and civil society, although 0.72% was disbursed.

In 2009 there were 871 NGOs in the country, of which 766 were national and 105 from other countries (DONGAD 2009). Most of them were created during the late 1990s and early 2000s, although the peak of NGO creations was attained during the 2004-05 famine (Figure 3.10). Consequently, the average age in 2009 was 7.9 years (DONGAD 2009). The mean age for international NGOs was 8.1 years old, while that of national NGOs was 7.9 years (ibid). The difference in means is not statistically significant (t=0.2387, p-value=0.8118).

[36] The percentage distribution of democracy categories for non-DAC countries is as follows: 'full democracy' (14.3%), 'flawed democracy' (57.1%), 'hybrid regime' (7.1%) and 'authoritarian regime' (21.4%) (The Economist 2010). On the other hand, 87% of DAC economies were categorized as 'full democracy', while the remaining 13% were 'flawed democracies' (Ibid).

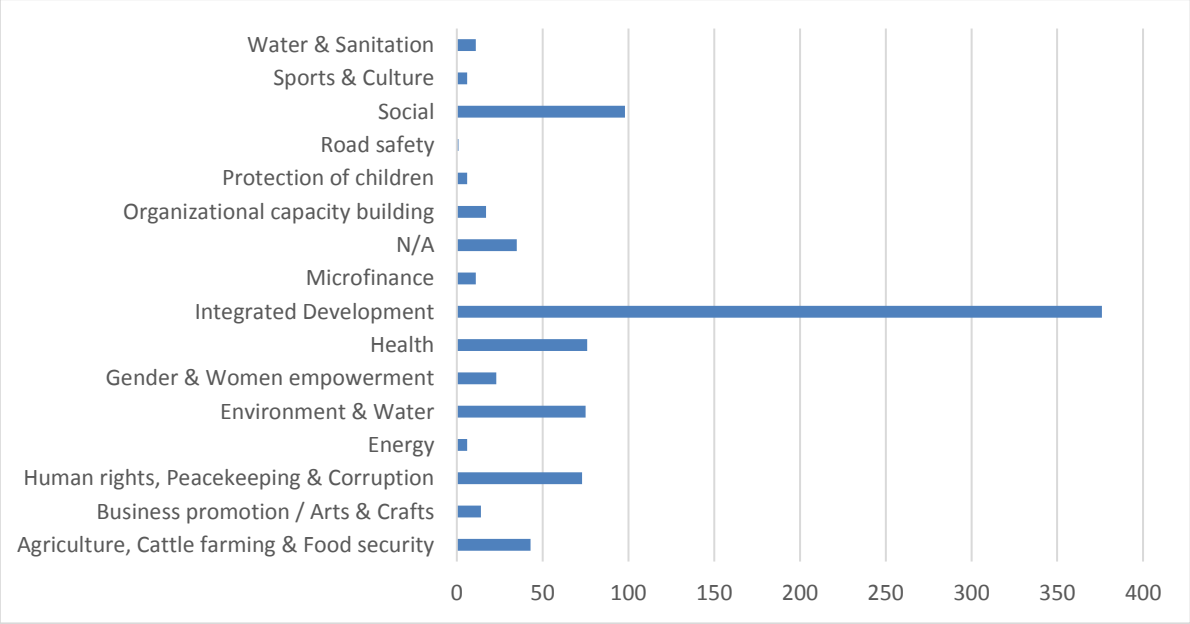
Most NGOs work in integrated development activities which means that they work in many sectors (Figure 3.11). According to field interviews, such a multidisciplinary approach gives them great flexibility to raise funds from several sources.

Figure 3.10. Number of NGOs created in Niger, by year



Source: DONGAD (2009)

Figure 3.11. Number of NGOs in Niger by sector



Source: DONGAD (2009)

With regards to NGOs' professional skills, available data in the annex shows the average number of staff working in Niger's NGOs, by broad professional category and NGOs' country

of origin (Table 3.6). There is an obvious difference between Niger's, which depend vastly on volunteers, and international NGOs. In terms of their geographical structure, a clear majority of all NGOs had sub-regional offices (DONGAD 2009). For Niger's NGOs this figure is 98%, which suggests that the profile of Niger's NGOs is decentralized and as noted, based on volunteering.[37]

3.5. National authorities

Since its independence Niger has been keen on development planning, which translated in regular development plans ranging from three to ten years (Table 3.7). Until the early 1980s, the main axes of Niger's development plans were growth in the primary sector, higher-added value products through industrialization and human capital accumulation, which would be achieved through higher savings (Sambo 2009). Those plans failed in their implementation, however, and from 1983 onwards the country started to adopt the IMF-WB Structural Adjustment Programmes, thus losing sovereignty in the development planning process (ibid). Designed in the 1980s and dismantled due to the crises of the 1990s, Niger's aid management system was revived in the 2000s thanks to the country's regained stability (Sambo 2009). Three major development plans were designed in that decade: two poverty reduction strategies and a rural development strategy.

In 2005 the aid management system was confirmed through the establishment of the following structures (République du Niger 2013):

At national level:

[37] The overall global rise of the aid sector has led to more competition to raise funds, an effect arguably stronger in the non-profit sector. Strategies to mobilize resources have been redesigned and professionalized by non-profit marketing experts to consistently involve donors in the philanthropic world, i.e. apart from donations given during devastating tragedies (McLeish 2007). Given the low level of professionalization in Niger's NGOs and considering their competition from advanced countries (Table 3.6), there seems to be large room for improvement.

- A National Steering Committee, chaired by the Prime Minister;
- A National Committee Government-Donors, chaired by the Minister of Economy and Finance (MEF);
- A National Committee of Dialogue and Coordination, chaired by the Minister of Community development;
- Sectoral structures coordinated by focal points designated in those ministries composing each sector;
- The Permanent Secretariat of the Poverty Reduction Strategy (PRS), under the direction of a coordinator nominated by the Prime Minister.

At regional level:

- A Regional Committee of Dialogue and Coordination, chaired by the Governors;
- Sub-regional Committees of Dialogue and Coordination, chaired by the *Prefets*.

This institutional framework was designed to respond to a high need of coordination, as there are many donors and resource mobilization is often seen by government as insufficient (Sambo 2009). However, too many structures at the MEF participate in the aid management process, which complicates coordination. The structure of the MEF is shown in Figure 3.23. The central entities at the MEF are (Sambo 2009):

- The *Commissariat Chargé de l'Economie* (CCE) is the main focal point of donors to negotiate access to development funds, covering ODA and Budget Support. It has three directions, two of which are actively involved in the management of foreign aid (Figure 3.24). The *Direction General de l'Economie* (DGE) prepares the macroeconomic framework and is in charge of managing the Budget Support programs of the IMF, EU and France. The *Direction Générale des Etudes et la Prévision* (DGEP) is in charge of preparing the financial and monetary indicators required by donors. This department forecasts budget requirements and manages Budget Support from the AfDB. The CCE lacks the human resources required to respond to donors' requests, e.g. several directions that were expected according to Decree 2005/116 are still not operational.
- The *Commissariat Chargé du Développement* (CCD) manages sectoral programs and projects, and is also in charge of the design and formulation of development initiatives (Figure 3.25). It is composed of three *Directions Générales*:
    - The *Direction Générale des Programmes Sectoriels* (DGPS) has two main functions: to support the sector ministries in the formulation of sector

development strategies, and to manage all sector projects from design to evaluation.

  - The *Direction Générale du Financement* (DGF). The DGF has 3 directions, out of which only two are operational: the *Direction of Multilateral Financing*, the *Direction of Bilateral Financing* and the *Direction du Financement Interne*. The third one is the *Service des Etudes et de Synthèse*. Those three directions cover four types of financing are possible: external non-refundable, loans, HIPC and Treasury (national financing).
  - La *Direction Générale de l'Evaluation des Programmes de Développement* (DGEPD) is in charge of analysing the impact of development policies and strengthening monitoring/evaluation capacity of public officials. As the CCE, this structure has a huge need in terms of quantity and quality of human resources.
  - The *Cellule de Coordination de l'Aide* (CCA) also has a serious lack of means to undertake its coordination role. To support the CCA, the UNDP provided an aid management platform tailored to Niger and installed at the MEF in 2010 (Development Gateway 2011). Despite it costing 2.5 million USD, the software has not been fully functional due to lack of regular updating of the data (African Development Bank 2011).

- The *Direction Générale du Budget* (DGB). The DGB has six *Directions*: the *Direction du Budget* (DB), the *Direction de l'Ordonnancement* (DO), the *Direction de la Comptabilité Publique* (DCP), the *Direction de la Dette Publique* (DDP), and the *Direction de la Solde* (DS).
- The *Trésor* is active raising resources in the West African money market through the ECOWAS Central Bank, especially issuing short-term Treasury bonds. It is composed of the following *Directions*: The *Direction de la Comptabilité* (DC), the *Direction de la Dépense* (DD), the *Direction des Recettes* (DR), the *Direction des Comptables Secondaires* (DCS), the *Direction des Correspondants du Trésor* (DCT) and the *Direction des Etudes* (DE).
- The *Direction Générale des Marchés Publics* (DGMP), a new structure that was created in 2005 to ensure transparency over the country's procurement processes. By 2009 it was still not operational.

- The *Direction Générale du Contrôle Financier* (DGF), which used to be under the DGB (now is under the Premier Minister's office) and supports the DGB in its function of controlling the budget's execution.
- The *Institut National de la Statistique* (INS), which was created to collect and publish statistical data from all the sectors in the economy.

Informal discussions held from 2008 to 2010 with representatives from Government and the donor community, revealed that in the aid management process there are two types of frictions: a) within the MEF, and b) between the MEF and sector ministries. The first arises because there are too many different departments participating in the management of aid, all with serious limitations in terms of human capital (number of staff and their skills) and of equipment, which leads to serious inefficiencies. The second type of frictions arises because given their scarce resources, sector ministries compete for being the focal point of new programs vis-à-vis donors (i.e. managing their aid). Such competition is explained by blurry mandate distinctions between sector ministries, which a high number of ministries aggravates. In the current government there are 35 ministries (Table 3.8). Such high number of aid actors competing for aid is likely to hamper coordination of efforts.

The capacity to manage aid and implement policies conducive to growth is weak. Based on field visits and interviews, these deficiencies are visible in a range of issues such as poor management practices, run-down facilities or inadequate equipment. Some donors undertake regular assessments of Niger's institutional capacity. Table 3.9 shows the ratings of Niger on the World Banks' Country Policy and Institutional Assessments (CPIA). The World Bank's CPIA assesses the quality of a country's policy and institutional framework, meaning "how conducive that framework is to fostering poverty reduction, sustainable growth, and the effective use of development assistance" (World Bank 2012). According to the CPIA, in 2015 Niger had rating of 3.5 on a scale from 1 to 6, which has remained almost constant since 2005 - when it was 3.3. Of the four groups of components measured, Niger's macroeconomic management (largely led by WAEMU's Central Bank) is the domain where the country has a highest grade. On the other hand, indicators relating to public sector management and institutions (which deal with aid) is the lowest-rated.

In 2011 Niger underwent a Public Expenditure Management and Accountability Review (PEMFAR). Its resulting five key messages were (World Bank 2011c):

- "Strong political commitment at the highest level and adequate technical assistance are key prerequisites for effective public-sector reform. Limited implementation of the

PEMFAR I recommendations reflects an ineffective political support for implementing sensitive policy reforms."

- "Strengthening domestic revenue management and transparency is crucial as the country prepares to mobilize important oil and mining revenues."
- "Budget credibility and execution need to be improved as well as public investment management."
- "Integrity and accountability of public financial management remain a challenge."
- "Serious weaknesses affect the transparency and efficiency of the public procurement system."

Despite the significant weaknesses, compared to the rest of SSA Niger is above average, and the World Bank view is similar to that of other donors. According to the AfDB's CPIA, in 2015 Niger ranked 14th out of 38 countries – the first one was Rwanda (4.85) and the last one Somalia (1.09). Figure 3.26 shows the evolution of Niger's CPIA compared to similar countries.

3.6. Conclusion

The level of aid Niger receives is not high. Despite constant growth in the number of donors, aid as a share of GNP has never attained those levels at which economists such as Lensink and White predict negative returns. In 2010, the levels of aid per capita were comparable to those in the 1960s. Very significant shares of aid are destined to basic services.

The number of donors who disburse aid to Niger is higher than those committing it, which may be due to flexibility or other political economy reasons. While most donors rely on government systems to deliver their aid, Canada and the USA give higher importance to civil society. Some donors intervene in many sectors and have little weight in most of them (e.g. UNDP, Canada), while others have a narrower focus (e.g. EU, World Bank). In terms of disbursing their commitments, the most reliable donors are France and the USA.

Considering a different segment of the aid supply, it is difficult to know how much aid NGOs channel. Niger's NGOs are young, atomistic and able to work in many sectors. This structure favours flexibility to mobilize resources, although it might come at the cost of professionalism. In terms of professional skills, there is a great divide between international and national NGOs. International NGOs have higher ratios employees-to-volunteers, which is likely associated to financial stability and higher professionalism.

Although in line with other SSA countries, Nigerien authorities have little capacity to transform aid into results due to the weakness in their national institutions. The country's policy

and institutional ratings have not improved since 2005. Governmental structures in charge of managing aid are overwhelmed by the number of initiatives and actors in the country, which makes the very collection of data extremely difficult. There is also a multitude of overlapping national actors trying to channel donors' aid, which added to the high number of donors disbursing it, suggests the costs of coordinating aid are high.

3.7. Annexes

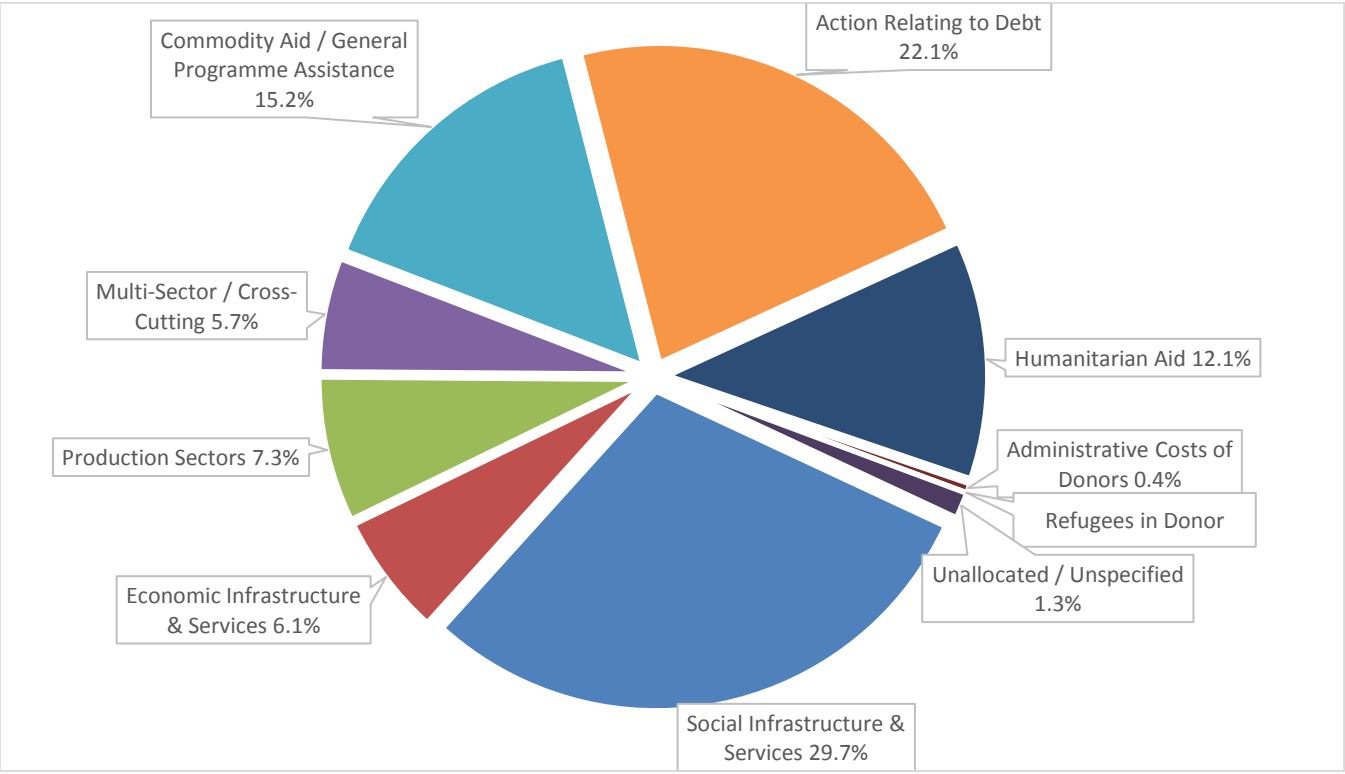
Table 3.4. Sectoral decomposition of aid disbursed[38]

	Total from 2002 to2014 (in 2014 constant USD)	Share of
450: Total Sector Allocable	5,018.9	48.9%
100: I. Social Infrastructure & Services, Total	3,053.8	29.7%
110: I.1. Education, Total	551.1	5.4%
111: I.1.a. Education, Level Unspecified, Total	161.9	1.6%
112: I.1.b. Basic Education, Total	238.0	2.3%
113: I.1.c. Secondary Education, Total	52.0	0.5%
114: I.1.d. Post-Secondary Education, Total	99.2	1.0%
120: I.2. Health, Total	747.3	7.3%
121: I.2.a. Health, General, Total	210.9	2.1%
122: I.2.b. Basic Health, Total	536.4	5.2%
130: I.3. Population Policies/Programs & Reproductive Health,	249.9	2.4%
140: I.4. Water Supply & Sanitation, Total	488.2	4.8%
14020: Water supply and sanitation - large systems	108.1	1.1%
14030: Basic drinking water supply and basic sanitation	207.6	2.0%
150: I.5. Government & Civil Society, Total	775.0	7.6%
151: I.5.a. Government & Civil Society-general, Total	687.9	6.7%
15110: Public sector policy and administrative management	200.0	1.9%
15111: Public finance management	218.4	2.1%
152: I.5.b. Conflict, Peace & Security, Total	87.1	0.8%
160: I.6. Other Social Infrastructure & Services, Total	242.2	2.4%
200: II. Economic Infrastructure & Services, Total	627.8	6.1%
210: II.1. Transport & Storage, Total	458.9	4.5%
220: II.2. Communications, Total	13.8	0.1%
230: II.3. Energy, Total	30.5	0.3%
240: II.4. Banking & Financial Services, Total	65.3	0.6%
250: II.5. Business & Other Services, Total	59.3	0.6%
300: III. Production Sectors, Total	749.9	7.3%
310: III.1. Agriculture, Forestry, Fishing, Total	650.8	6.3%
311: III.1.a. Agriculture, Total	645.8	6.3%
312: III.1.b. Forestry, Total	2.4	0.0%
313: III.1.c. Fishing, Total	2.6	0.0%
320: III.2. Industry, Mining, Construction, Total	92.0	0.9%
321: III.2.a. Industry, Total	31.9	0.3%
322: III.2.b. Mineral Resources & Mining, Total	59.5	0.6%
323: III.2.c. Construction, Total	0.6	0.0%
331: III.3.a. Trade Policies & Regulations, Total	6.3	0.1%
332: III.3.b. Tourism, Total	0.8	0.0%
400: IV. Multi-Sector / Cross-Cutting, Total	587.4	5.7%
410: IV.1. General Environment Protection, Total	101.5	1.0%
430: IV.2. Other Multisector, Total	485.9	4.7%
500: VI. Commodity Aid / General Programme Assistance,	1,557.2	15.2%
510: VI.1. General Budget Support, Total	1,026.6	10.0%
51010: General budget support-related aid	1,026.6	10.0%
520: VI.2. Developmental Food Aid/Food Security Assistance,	527.1	5.1%
52010: Food aid/Food security programs	527.1	5.1%
600: VII. Action Relating to Debt, Total	2,272.4	22.1%
60020: Debt forgiveness	1,923.9	18.7%
60030: Relief of multilateral debt	346.5	3.4%
700: VIII. Humanitarian Aid, Total	1,239.8	12.1%
720: VIII.1. Emergency Response, Total	1,188.1	11.6%
730: VIII.2. Reconstruction Relief & Rehabilitation, Total	17.0	0.2%
740: VIII.3. Disaster Prevention & Preparedness, Total	34.7	0.3%
910: Administrative Costs of Donors, Total	42.3	0.4%
930: Refugees in Donor Countries, Total	4.2	0.0%
998: IX. Unallocated / Unspecified, Total	130.3	1.3%
1000: Total All Sectors	**10,265.1**	**100.0%**

Source: Creditor Reporting System, OECD Stat (2016)

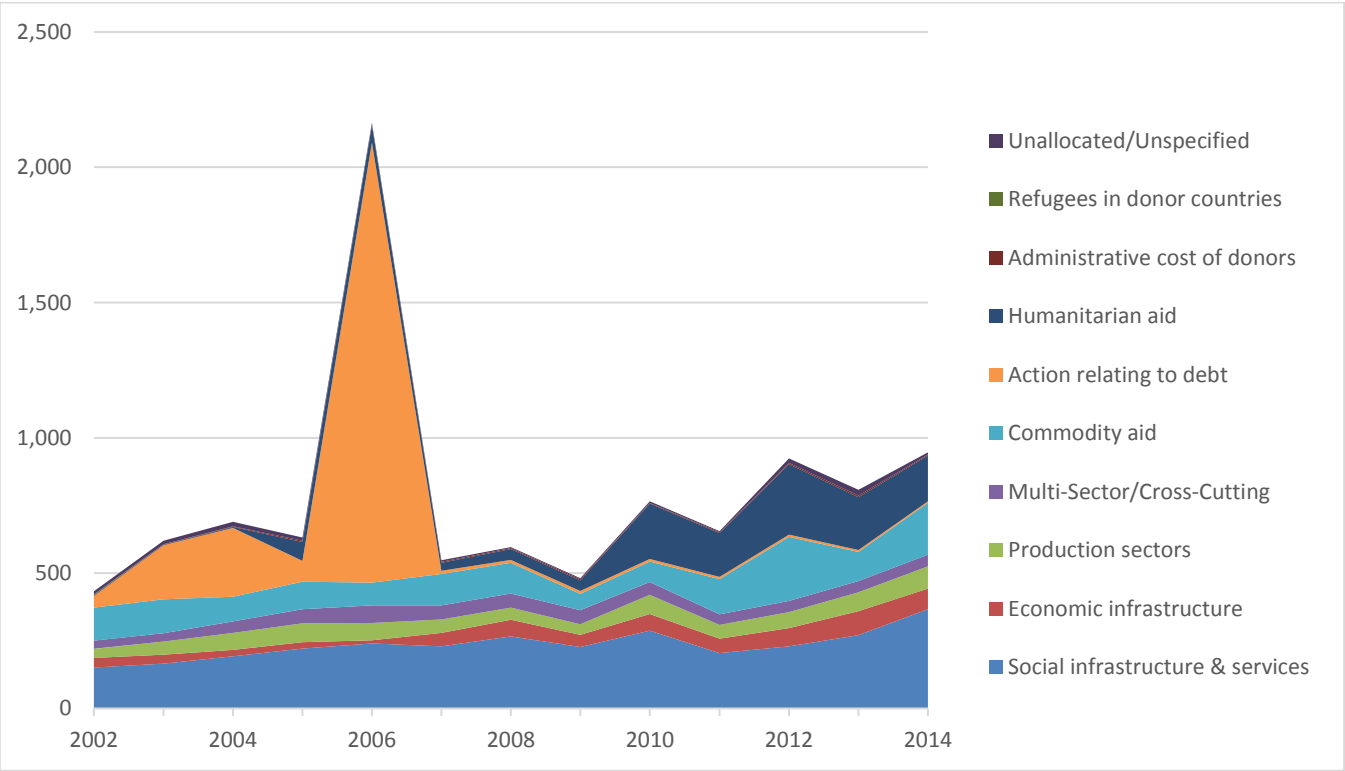
[38] At the fourth level of disaggregation, only categories with a noteworthy contribution are included.

Figure 3.12. Sectoral decomposition of ODA disbursed in the period 2002-2014



Source: Creditor Reporting System, OECD Stat (2016)

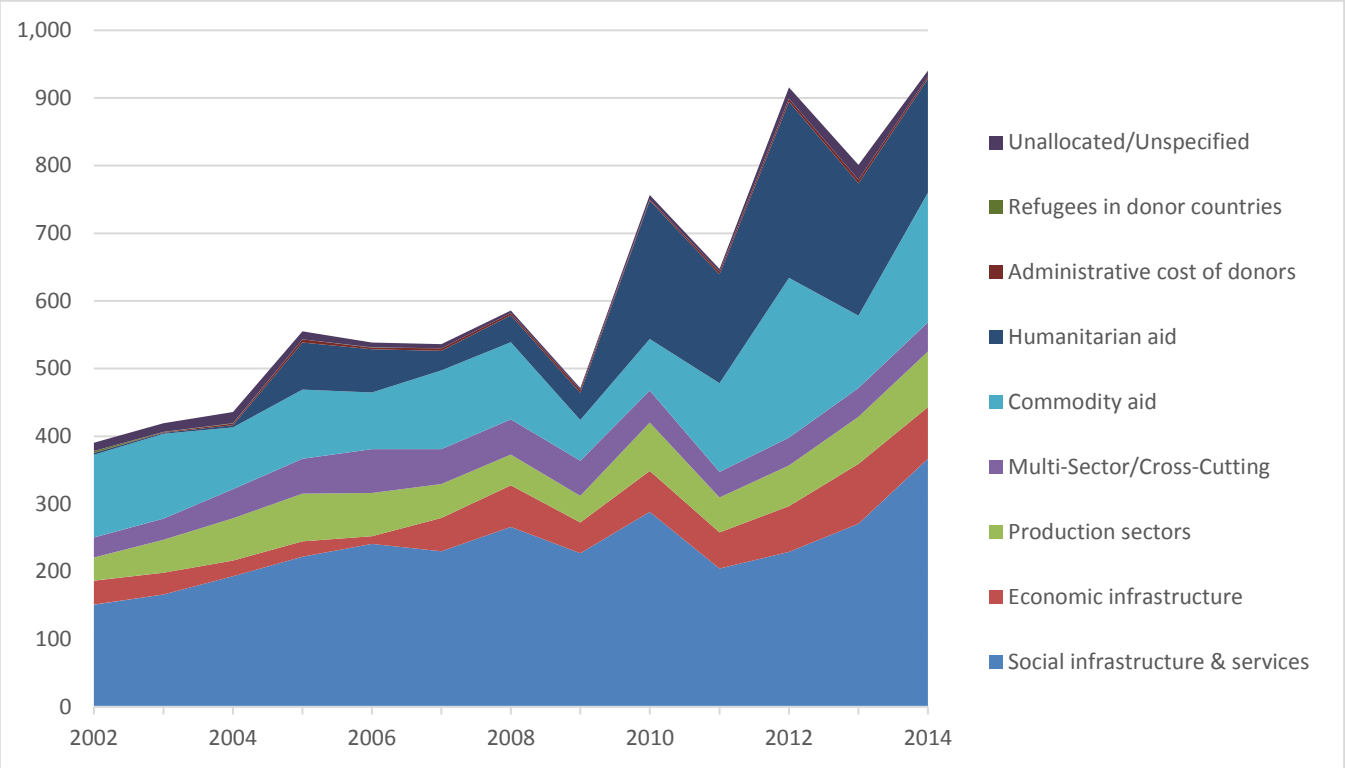
Figure 3.13. Evolution of ODA composition 2002–2014 (2014 constant USD million)[39]



Source: Creditor Reporting System, OECD Stat (2016)

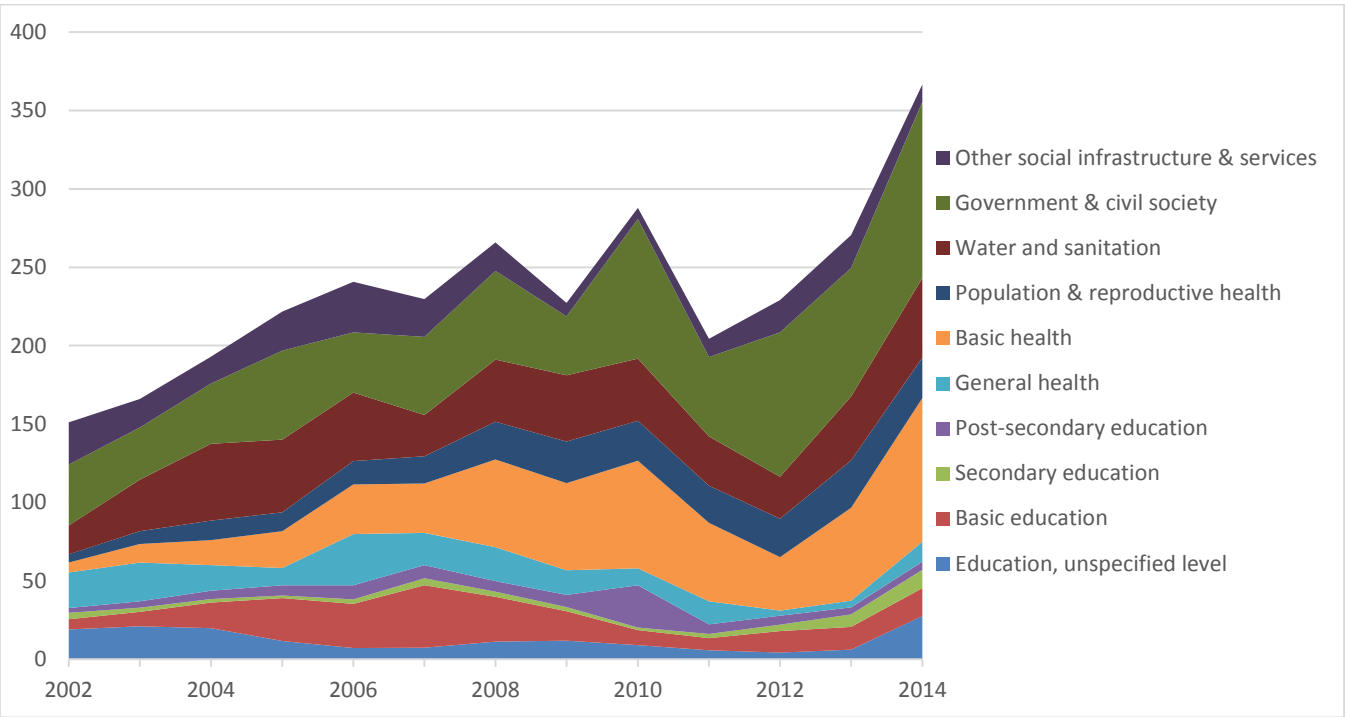
[39] The disaggregation of Niger's ODA by sector is only available since 2002.

Figure 3.14. ODA composition 2002–2014 without actions related to debt (2014 constant USD million)



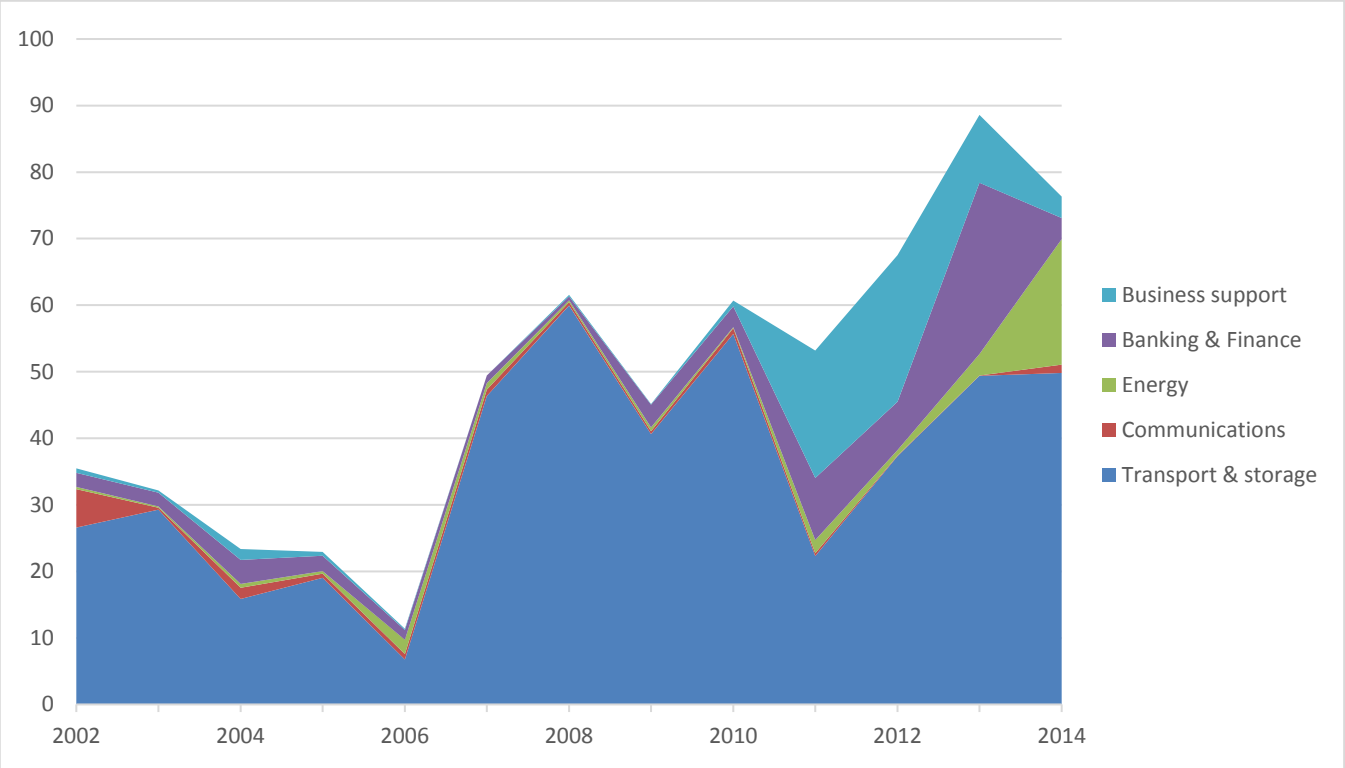
Source: Creditor Reporting System, OECD Stat (2016)

Figure 3.15. ODA composition 2002–2014 in Social Infrastructure (2014 constant USD million)



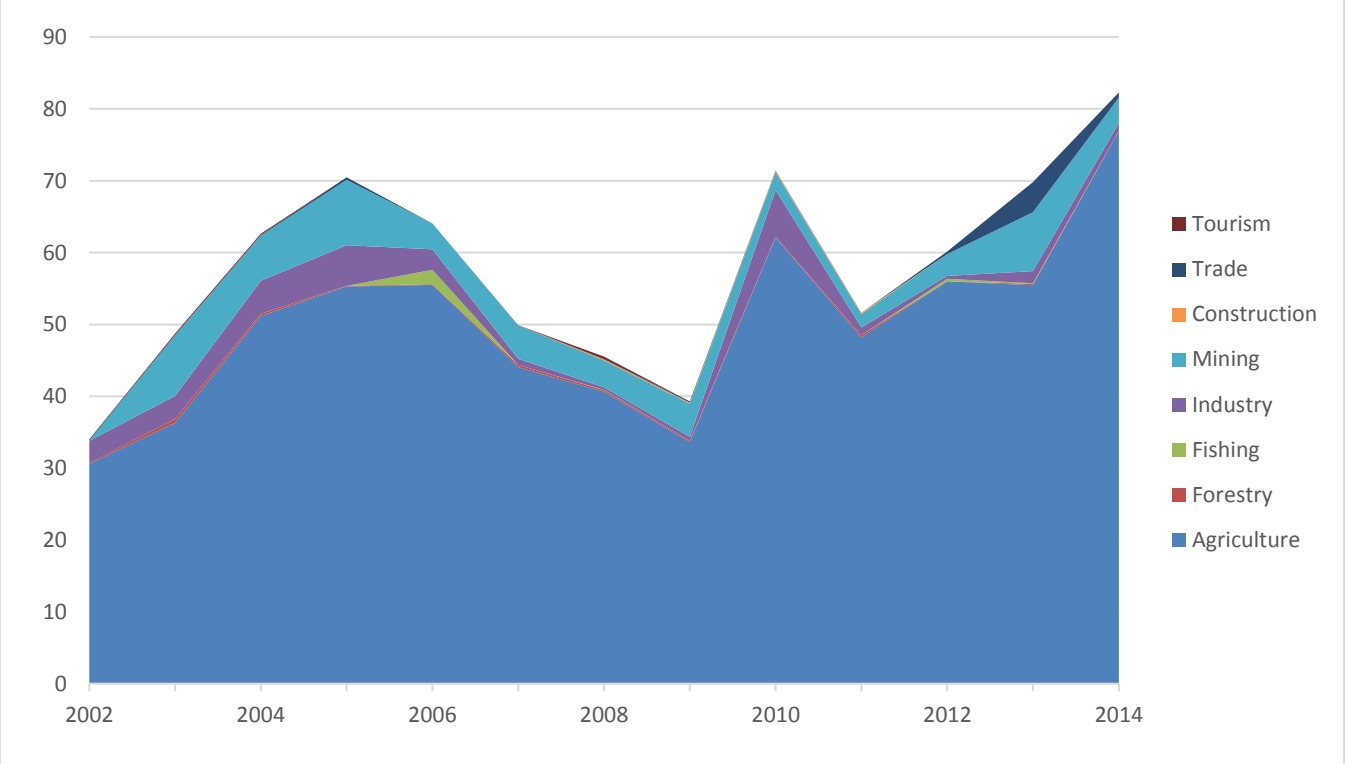
Source: Creditor Reporting System, OECD Stat (2016)

Figure 3.16. ODA composition 2002–2014 in Economic Infrastructure (2014 constant USD million)



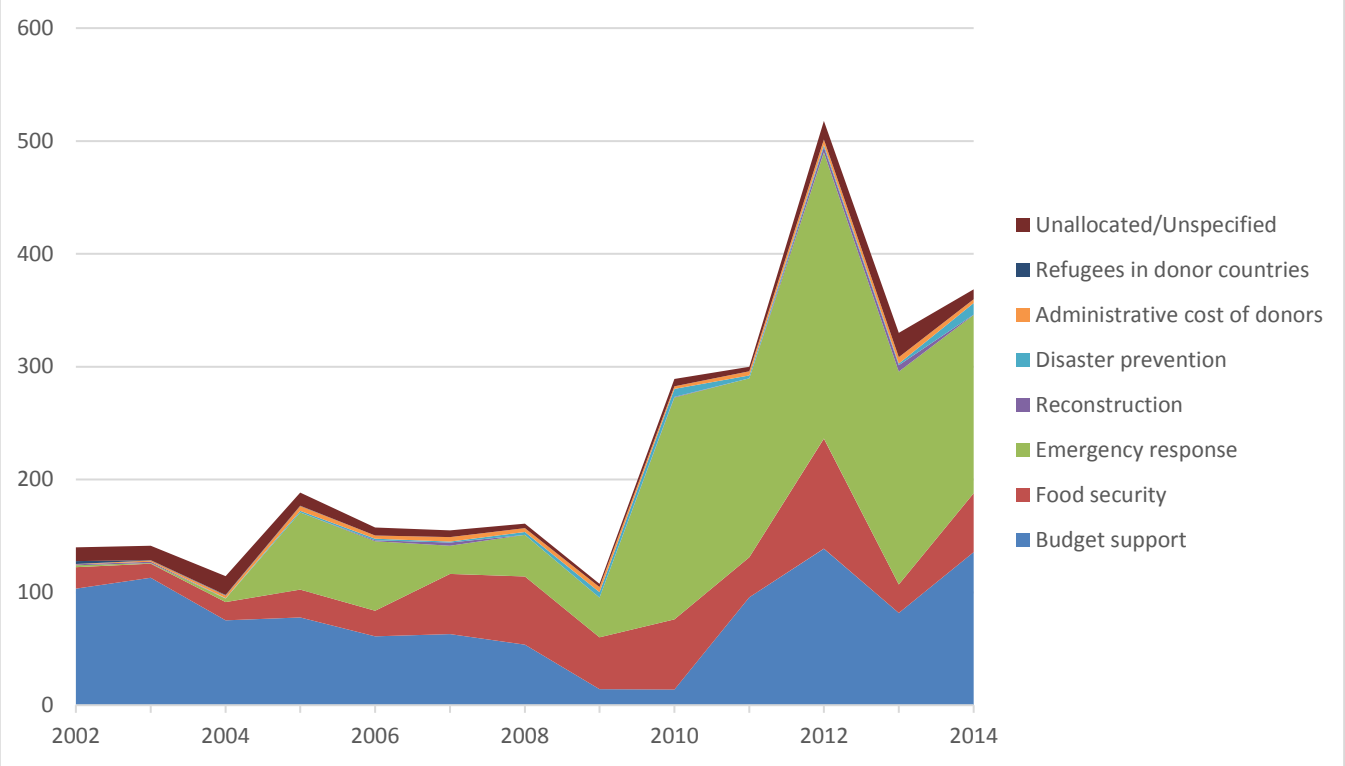
Source: Creditor Reporting System, OECD Stat (2016)

Figure 3.17. Evolution of ODA composition 2002–2014 in Production Sectors (2014 constant USD million)



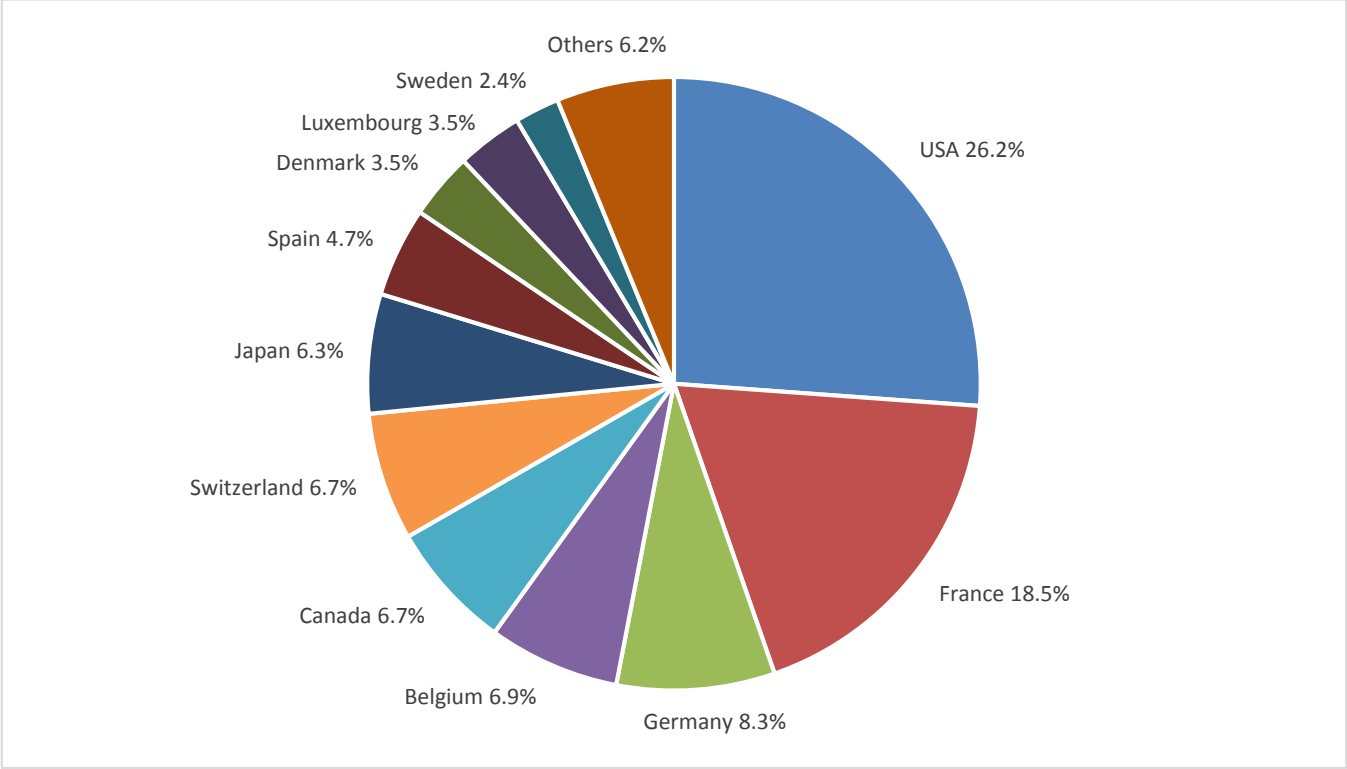
Source: Creditor Reporting System, OECD Stat (2016)

Figure 3.18. Evolution of ODA composition 2002–2014 in Non-Allocable (2014 constant USD million)



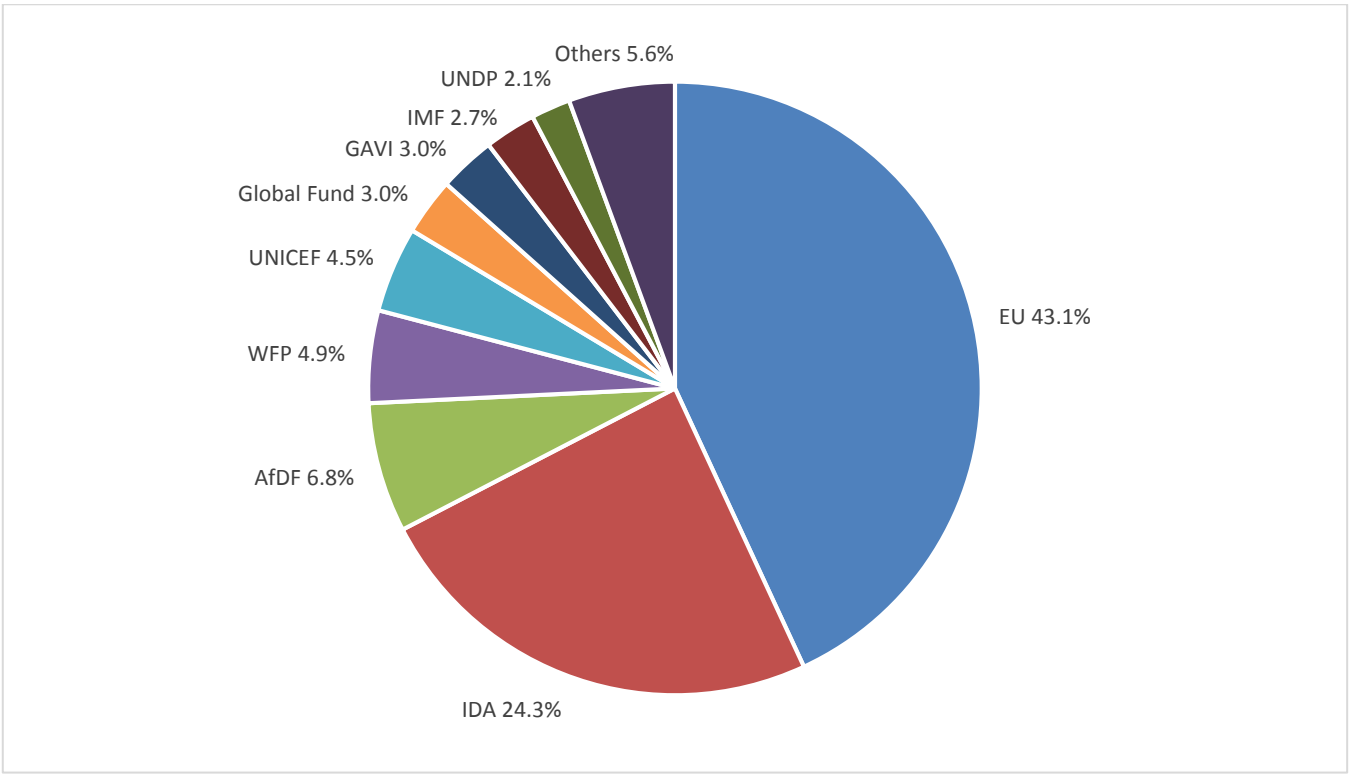
Source: Creditor Reporting System, OECD Stat (2016)

Figure 3.19. DAC donors' share of cumulative disbursements (2010-2014)



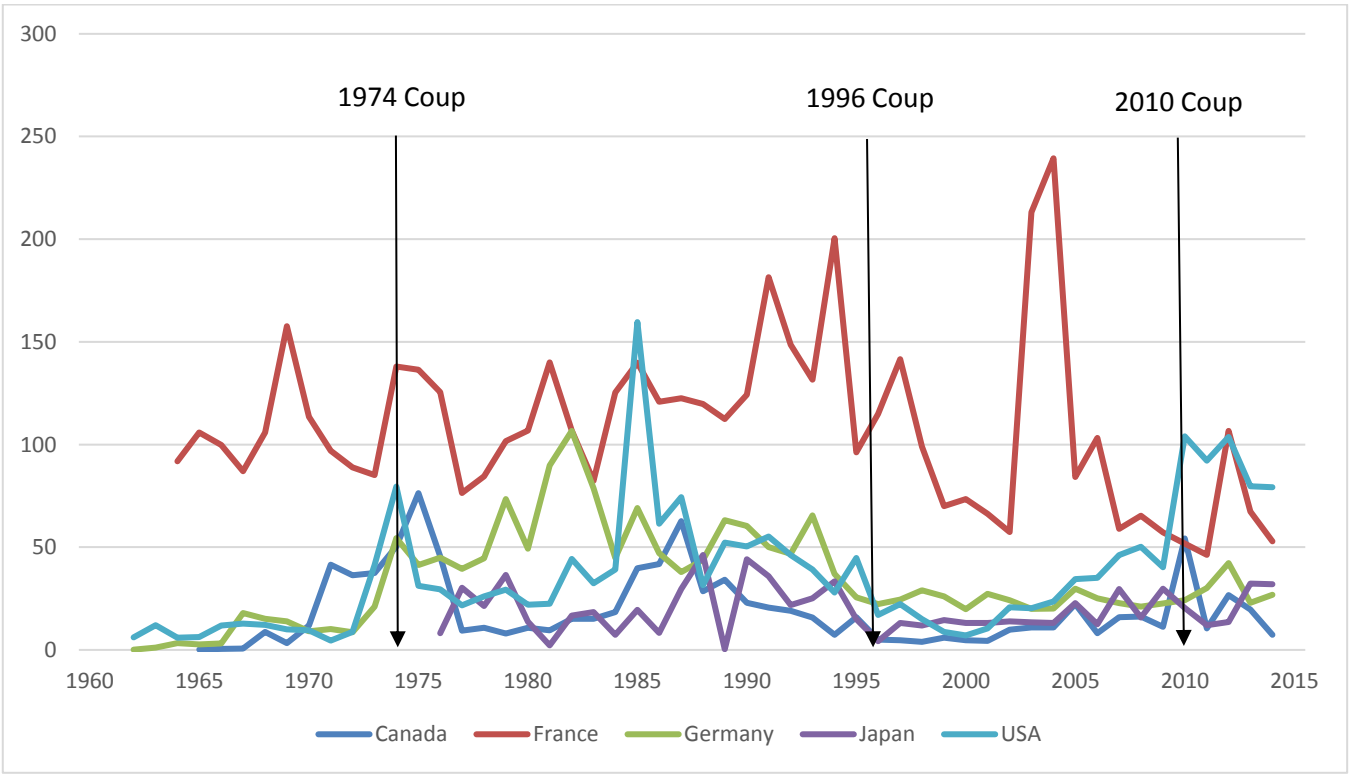
Source: OECD Stat (2016)

Figure 3.20. Multilateral donors' share of cumulative disbursements (2010-2014)



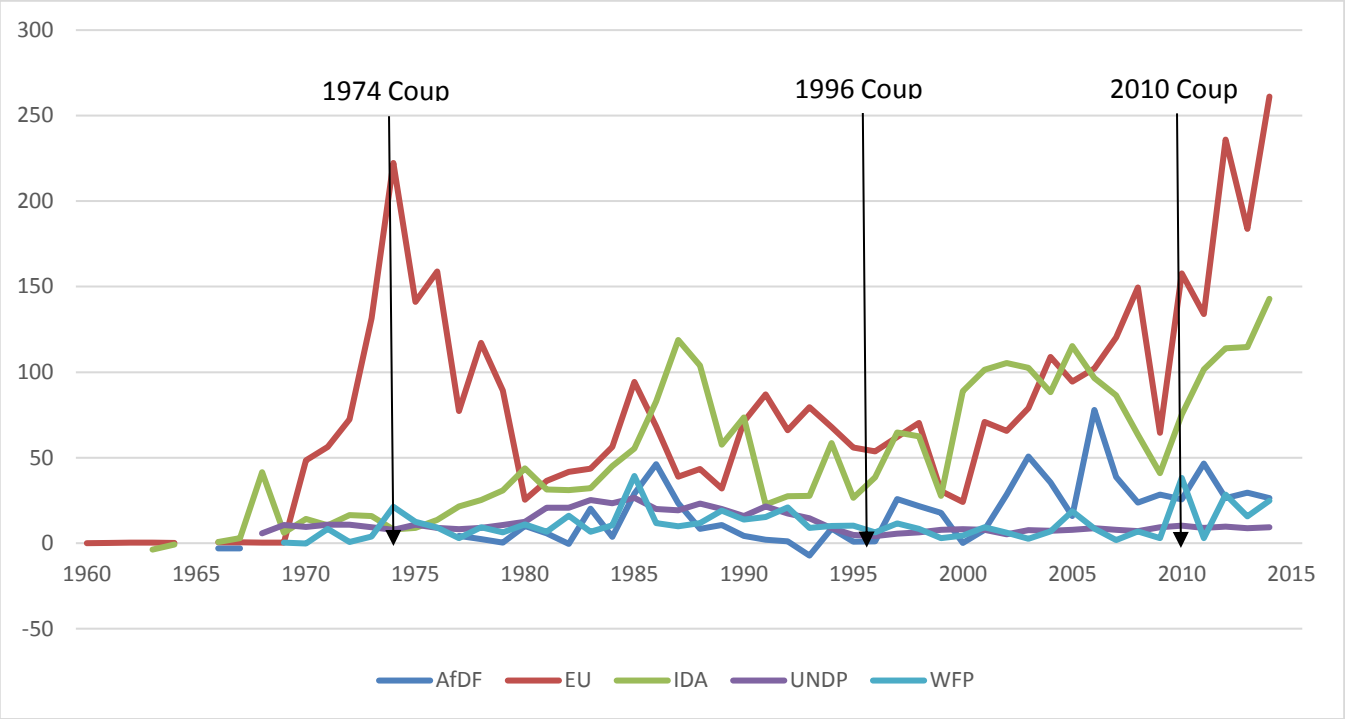
Source: OECD Stat (2016)

Figure 3.21. Evolution of ODA disbursement of main DAC donors



Source: Creditor Reporting System, OECD Stat (2016)

Figure 3.22. Evolution of ODA disbursement of main multilateral donors



Source: Creditor Reporting System, OECD Stat (2016)

Table 3.5. Donors' share of cumulative disbursements by sector category, during the period 2002-2014

	Donor	Share
Social Infrastructure & Services	Canada	3.5%
	France	11.3%
	Germany	5.0%
	Japan	3.9%
	USA	2.2%
	AfDF	3.6%
	EU	11.2%
	IDA	27.1%
	UNDP	2.3%
	WFP	0.3%
	10 Donors combined	70.4%
Economic Infrastructure & Services	Canada	0.1%
	France	6.3%
	Germany	0.1%
	Japan	0.2%
	USA	0.3%
	AfDF	5.1%
	EU	51.0%
	IDA	26.3%
	UNDP	0.4%
	WFP	0.0%
	10 Donors combined	89.8%
Production Sectors	Canada	3.4%
	France	6.2%
	Germany	3.2%
	Japan	4.7%
	USA	2.1%
	AfDF	10.4%
	EU	15.7%
	IDA	28.0%
	UNDP	0.0%
	WFP	0.0%
	10 Donors combined	73.8%
Multi-Sector / Cross-Cutting	Canada	1.8%
	France	16.7%
	Germany	13.6%
	Japan	0.5%
	USA	4.6%
	AfDF	6.0%

	EU	9.1%
	IDA	4.1%
	UNDP	3.0%
	WFP	0.0%
	10 Donors combined	59.3%
Commodity Aid	Canada	0.2%
	France	14.5%
	Germany	1.7%
	Japan	3.0%
	USA	12.2%
	AfDF	9.8%
	EU	39.2%
	IDA	1.5%
	UNDP	0.0%
	WFP	1.0%
	10 Donors combined	83.1%
Action Relating to Debt	Canada	0.0%
	France	21.3%
	Germany	0.0%
	Japan	1.1%
	USA	0.4%
	AfDF	15.9%
	EU	0.0%
	IDA	52.4%
	UNDP	0.0%
	WFP	0.0%
	10 Donors combined	91.1%
Humanitarian Aid	Canada	3.6%
	France	1.9%
	Germany	3.5%
	Japan	3.3%
	USA	33.7%
	AfDF	0.0%
	EU	22.9%
	IDA	0.2%
	UNDP	0.5%
	WFP	7.7%
	10 Donors combined	77.4%
Administrative Costs of Donors	Canada	0.0%
	France	39.2%
	Germany	0.0%
	Japan	0.0%
	USA	0.0%
	AfDF	0.0%
	EU	0.0%
	IDA	0.0%
	UNDP	0.0%
	WFP	0.0%
	10 Donors combined	39.2%
Refugees in Donor Countries	Canada	0.0%
	France	0.6%
	Germany	2.4%
	Japan	0.0%
	USA	0.0%
	AfDF	0.0%
	EU	0.0%
	IDA	0.0%
	UNDP	0.0%
	WFP	0.0%
	10 Donors combined	3.0%
Unallocated / Unspecified	Canada	0.2%
	France	12.8%
	Germany	1.6%
	Japan	3.6%
	USA	2.2%
	AfDF	1.7%
	EU	16.2%
	IDA	0.0%
	UNDP	1.2%
	WFP	0.0%
	10 Donors combined	39.5%

Source: Own elaboration based on OECD's Creditor Reporting System (2016)

Table 3.6. NGO's average staff by employment status and NGOs' country of origin

Country	Salaried	Interns	Volunteers
Germany	17.5	1.5	25.5
Saudi Arabia	23.5	3.0	0.0
Austria	76.0	0.0	0.0
Belgium	7.3	0.8	1.0
Canada	7.0	1.5	6.0
Egypt	6.0	0.0	0.0
Spain	31.5	0.0	0.0
France	13.9	0.4	4.1
United Kingdom	36.0	0.0	96.5
Holland	29.0	0.0	0.0
International	26.0	0.5	6.5
Ireland	153.0	0.0	0.0
Italy	3.0	0.0	0.0
Kuwait	96.0	0.0	0.0
Libya	9.0	0.0	0.0
Niger	5.0	1.1	55.8
Qatar	14.0	3.0	0.0
Switzerland	5.8	1.5	3.7
Senegal	7.0	0.0	0.0
USA	37.9	0.6	188.9

Source: DONGAD (2009)

Table 3.7. Main development Programs and Accords

Date	Program
1961 – 1963	*Plan Triennal Intérimaire de Développement*
1965 – 1974	*Perspectives Décennales de Développement*
1976 – 1978	*Plan Triennal de Développement*
1979 – 1983	*Plan Quinquennal de Développement*
1983 -	Structural Adjustment Facility (with IMF and World Bank)
1987 – 1991	*Plan de Développement Economique et Social*
1994	Confirmation Agreement with the IMF
1996	*Accord triennal* 1996-1998
1997	En appui au programme triennal :
2000	*Programme financier d'urgence* du Gouvernement de la 5ème république
2000	*Accord triennal* (2000-2003) Poverty Reduction and Growth Facility with IMF
2002	*Stratégie de Réduction de la Pauvreté* (SRP) 2002-2005
2003	*Stratégie de Développement Rural* (SDR) 2002-2005
2007	*Stratégie de Développement Accéléré et de Réduction de la Pauvreté* (SDRP) 2008–2012
2012	*Plan de Développement Economique et Social 2012-2015*

Source: Sambo (2009) and own elaboration

Figure 3.23. Organogram of the Ministry of Economy and Finance (*Décret N° 2005-116 du 17 Mai 2005*). Source: Sambo (2009)

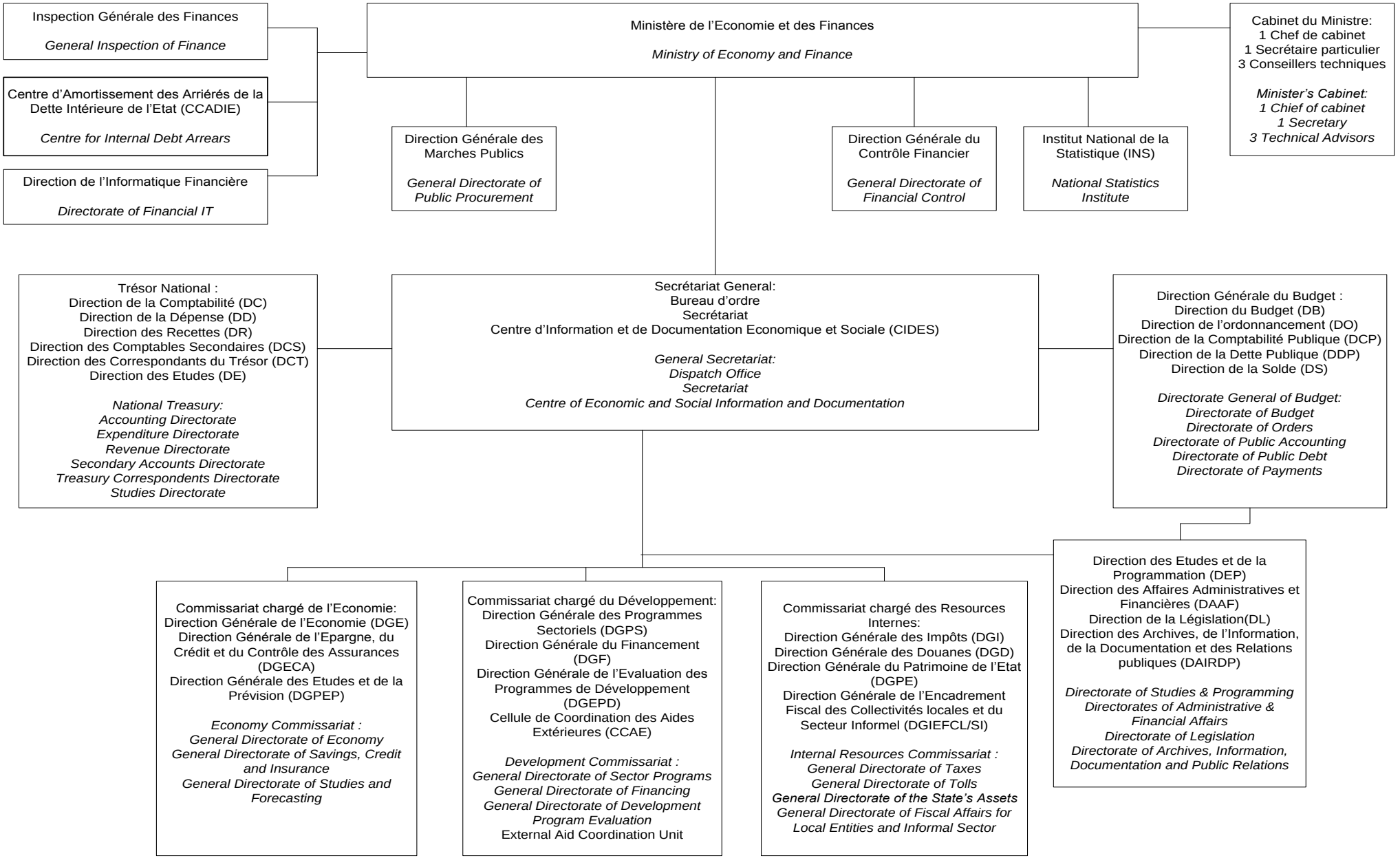


Figure 3.24. Organogram of the Economy Commissariat. Source: Sambo (2009)

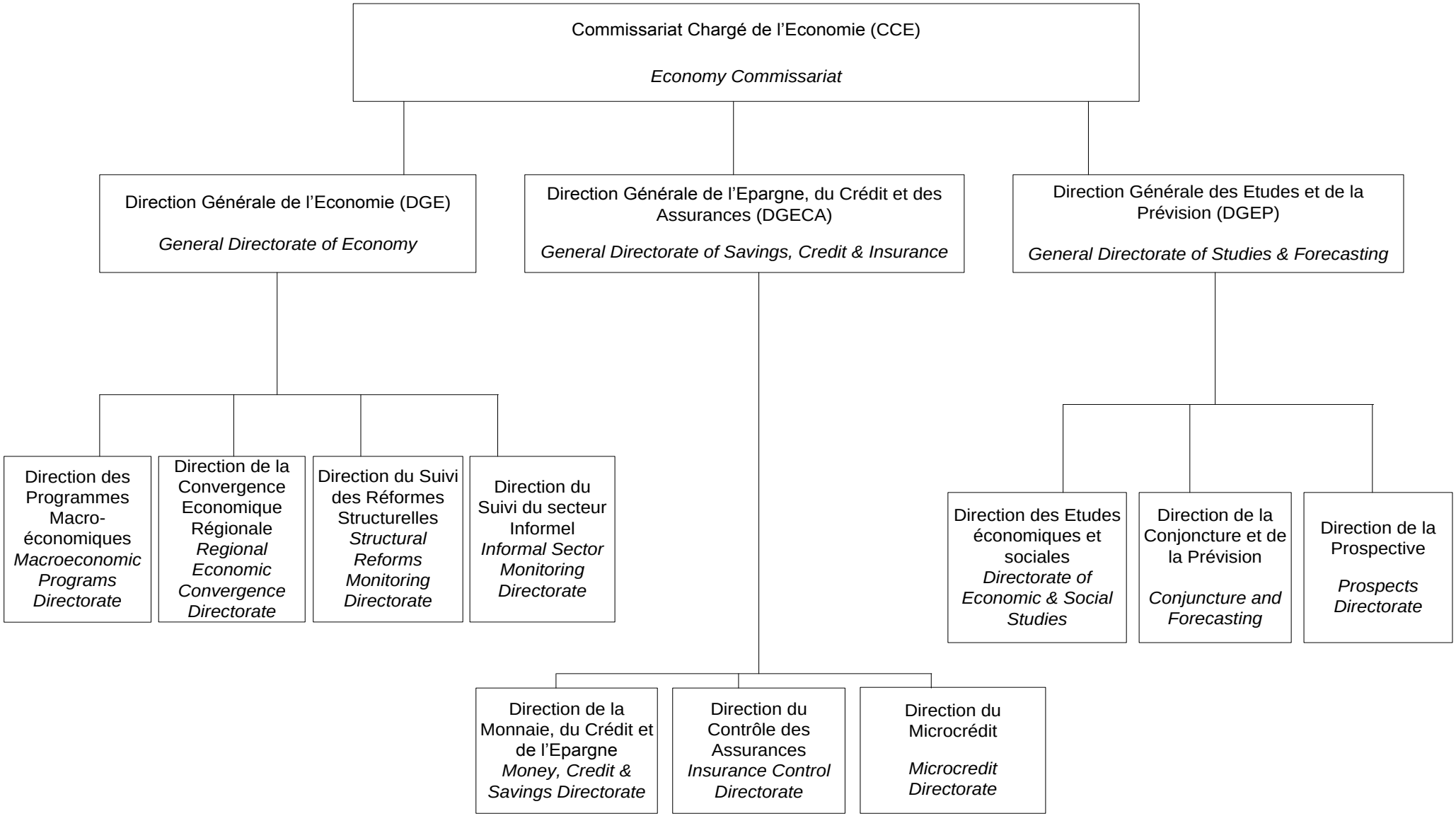


Figure 3.25. Organogram of the Development Commissariat. Source: Sambo (2009)

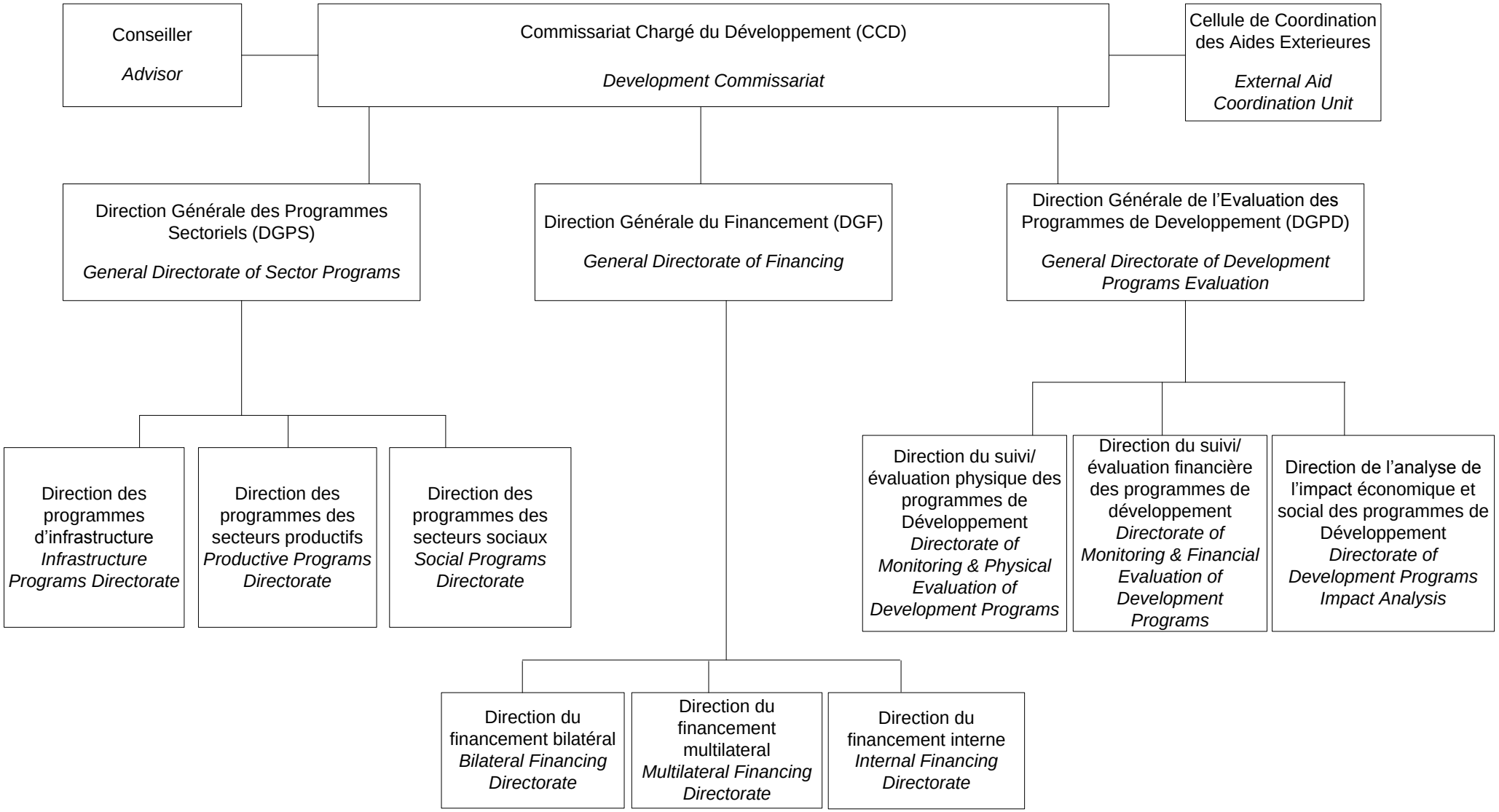


Table 3.8. List of Ministries in Niger's current Government

1	Ministère des Affaires Etrangères, de la Coopération, de l'Intégration Africaine et des Nigériens à l'Extérieur
2	Ministère du Plan
3	Ministère de l'Agriculture
4	Ministère des Mines et du Développement Industriel
5	Ministère du Commerce et de la Promotion du Secteur Privé
6	Ministère de l'Energie et du Pétrole
7	Ministère de l'Urbanisme et du Logement
8	Ministère de l'Intérieur, de la Sécurité publique, de la Décentralisation et des Affaires Coutumières et Religieuses
9	Ministère de la Justice, Garde des Sceaux, Porte-parole du Gouvernement
10	Ministère de l'Hydraulique et de l'Assainissement
11	Ministère des Transports
12	Ministère de la Défense Nationale
13	Ministère de l'Enseignement Supérieur, de la Recherche et de l'Innovation
14	Ministère des Finances
15	Ministère de la Population, de la Promotion de la Femme, de la Protection de l'Enfant
16	Ministère de l'Enseignement Primaire, l'Alphabétisation, la Promotion des Langues Nationales, et l'Education Civique
17	Ministère de l'Elevage
18	Ministère de la Santé Publique
19	Ministère de la Fonction Publique et de la Réforme Administrative
20	Ministère des Enseignements Professionnels et Techniques
21	Ministère des Enseignements Secondaires
22	Ministère de l'Environnement, de la Salubrité Urbaine et du Développement Durable
23	Ministère de l'Equipement
24	Ministère des Postes, des Télécommunications et de l'Économie Numérique
25	Ministère de l'Aménagement du Territoire e du Développement Communautaire
26	Ministère de la Jeunesse et des Sports
27	Ministère du Tourisme et de l'artisanat
28	Ministère de l'Emploi, du Travail et de la Sécurité Sociale
29	Ministère de la Culture, des Arts et des Loisirs
30	Ministère de la Communication et des Relations avec les Institutions
31	Ministère Délégué au Développement Industriel
32	Ministère Délégué au Budget
33	Ministère Délégué à l'Intégration Africaine
34	Ministère Délégué à la Décentralisation et aux Affaires Coutumières et Religieuses
35	Ministère Délégué chargé de l'Aménagement du Territoire et de Développement Communautaire

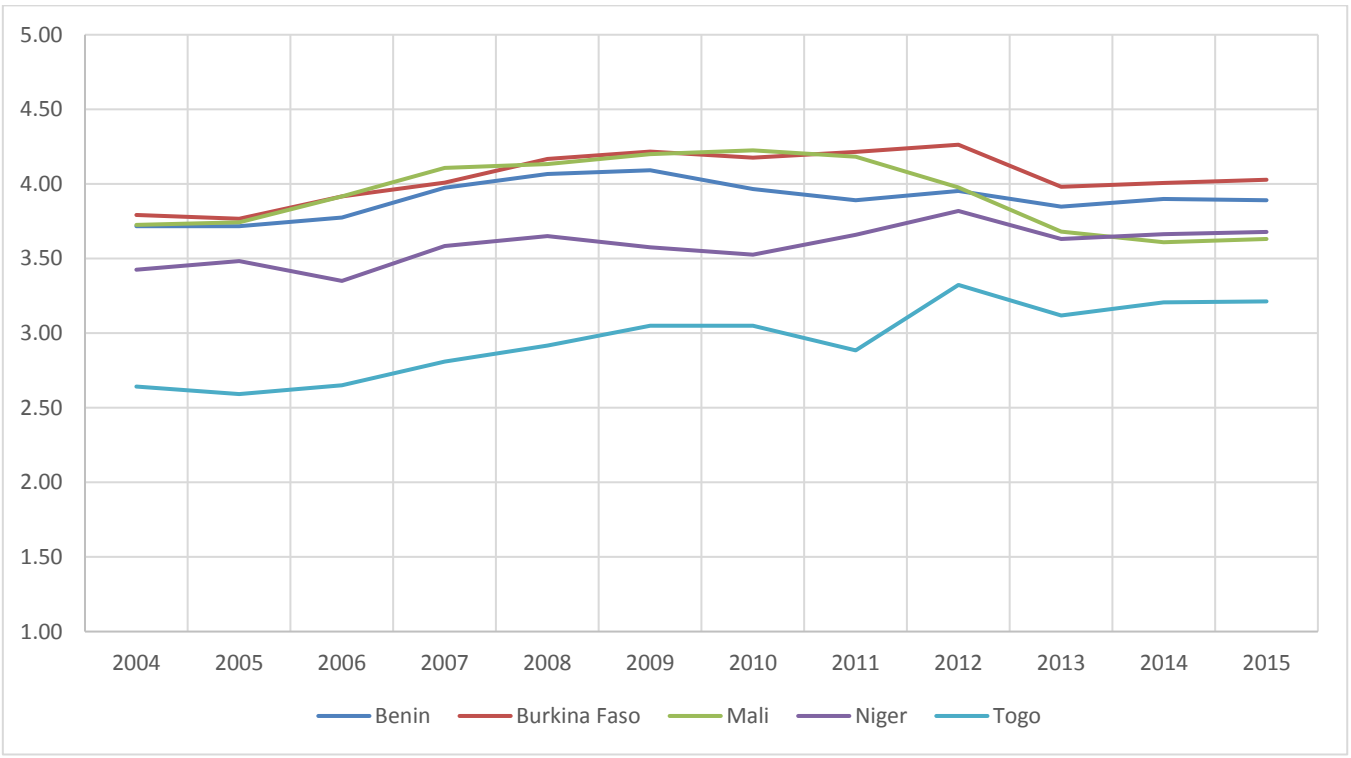
Source: Government of Niger's website (2016): http://www.gouv.ne/index.php/les-ministeres/liste-des-ministeres

Table 3.9. World Bank's Country Policy and Institutional Assessments for Niger (CPIA) 2005-2015 (1=low, 6=high)

Domain	Indicator	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
A. Economic Management	Monetary & exchange rate policy	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	Fiscal Policy	3.0	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	3.5	3.5
	Debt Policy	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0
	Average	3.3	3.7	3.7	3.7	3.8	3.8	3.8	4.0	4.0	3.8	3.8
B. Structural Policies	Trade	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0	4.0	4.0	4.0
	Financial Sector	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Business Regulatory Environ.	3.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.5
	Average	3.5	3.3	3.3	3.3	3.3	3.3	3.2	3.3	3.3	3.3	3.5
C. Policies for Social Inclusion/Equity	Gender Equality	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	Equity of Public Resource Use	3.5	3.5	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0
	Building Human Resources	3.0	3.0	3.0	3.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Social Protection & Labour	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Policy & Institutions for Environmental Sustainability	3.0	3.0	3.0	3.0	3.0	3.5	4.0	4.0	3.5	3.5	3.5
	Average	3.0	3.0	3.0	3.0	3.1	3.2	3.4	3.4	3.3	3.3	3.3
D. Public Sector Management & Institutions	Property Rights & Rule-based Governance	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Quality of Budgeting & Financial Management	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Efficiency of Revenue Mobilization	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Quality of Public Administration	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	Transparency, Accountability & Corruption in Public Sector	3.0	3.0	3.0	3.0	2.5	3.0	3.0	3.0	3.0	3.0	3.0
	Average	3.2	3.2	3.2	3.2	3.1	3.2	3.2	3.2	3.2	3.2	3.2
	IDA resource allocation index	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.5	3.5	3.4	3.5

Source: World Bank CPIA Database 2016

Figure 3.26. Evolution of Niger's CPIA ratings by the African Development Bank



Source: AfDB (2016)

Chapter 4. Aid and Moral Hazard

"We don't compete for money or profit; we compete for relevance and our very existence: in the current context of budget cuts we cannot guarantee that in 10 years ESCWA will continue to exist, so we need to show that we are useful"
(Al Dardari 2014)

4.1. Introduction

In a principal-agent framework, moral hazard can follow if an agent's behaviour changes as a result of shifts in incentives after a contract has been signed with the principal. A common example relates to insurance: when an insurance company insures a person in exchange for a premium, that person has a reduced incentive to guard against risk (because now s/he is protected from the consequences of risky behaviour), and may therefore behave in a riskier-than-usual way. The risk of moral hazard rises the less information the principal has on the actions of the agent, e.g. if an employer cannot verify how hard the employees work, slacking can become more common.

In the realm of aid, moral hazard can arise in the form of the 'Samaritan's dilemma': aid reduces the recipients' incentives to change their current behaviour. For instance, moral hazard may affect the efforts that a beneficiary country makes to mobilize national resources: if aid is supplied, the beneficiary country may reduce the effort put into tax collection (Brautigam 2000).

The Samaritan's dilemma affects the donor-beneficiary relationship. The following is an illustration in the African (Kenyan) context: "For years, relations between the government of President Daniel Arap Moi and those who gave it aid resembled a complicated dance in which the Kenyans promised reform, the donors lent money, the Kenyans would break the promises, the dance paused, the donors threatened and the government would make new promises. The dance would then resume." (The Economist 2000).

To avoid moral hazard, the donor often specifies certain conditions (conditionalities), with which the country must comply. Although such requirements vary, they are typically linked to the undertaking of some key reforms.[40] For the country to have a real incentive to implement

[40] Tying aid is another type of conditionality, and restricts the ways in which aid can be spent by the beneficiary country. As a form protectionism, the most criticized form of tying aid required that it be spent purchasing products or contracting private sector companies from the donor state (Jepma 1991). Since the Paris Declaration

those reforms, however, the conditionalities must be credible, i.e. the recipient should have reason to believe that, if the reforms are not carried out, there will be consequences in the delivery of the aid agreed. If the conditionalities are not credible, i.e. there is a belief that the aid will continue to flow regardless, then (assuming the conditionalities were appropriate in the first place) the aid resources will be wasted to some extent.

The existence of moral hazard in the interaction between beneficiary and donor is key in assessing whether aid leads to policy changes (e.g. a structural reform).[41] This is recognized in the aid literature, where the risk of moral hazard determines whether aid should be offered unconditionally or conditionally (Isopi, Mattesini 2009). Other works have also delved on the relationship between donors' incentives and corruption, ownership or sustainability (Gibson et al. 2005).

The objective of this chapter is to assess whether, in Niger's relationship with the IMF, aid has led to reforms. To answer it, two complementary aspects are explored: the existence of moral hazard on the recipient's part, and the donors' reactions to it. To my knowledge no such examination has been done for Niger despite its importance: clear evidence on this may facilitate the design of more 'results-oriented' aid programs for Niger.

When assessing the existence of moral hazard in the allocation of aid a key challenge is often the unavailability of detailed data on the interaction between a country and its donors. The general lack of transparent aid data makes aid assessments difficult; a point lamented by economists (Easterly, Pfutze 2008). One of the exceptions is the IMF, which publishes all the documentation of its collaboration with its member countries.[42]

Moral hazard is difficult to quantify, but qualitative analysis techniques such as case studies can be used (Amusa, Monkam & Viegi 2016). To ensure their validity three major elements must be established: a theoretical framework (already addressed), the definition of a "case", and the design of the case study (Yin 2012). Those elements are defined in this analysis as follows:

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in 2005 significant efforts have been exerted to reduce this practice, especially by the OECD, and today it is arguably marginal (Clay, Geddes & Natali 2009). However, new donors are bringing new challenges. For example, China does provide finance that meets the definition of ODA but this share is relatively small. Export credits, non-concessional state loans or aid used to foster Chinese investment do not fall into the category of ODA (Brautigam 2011).

[41] Assessing the adequacy of those policy reforms goes beyond the scope of this chapter.

[42] The IMF is not the only donor that shares potentially-sensitive information about its operations. For example, the World Bank's Independent Evaluation Group makes available information about the Implementation Completion and Results Report Review of its member countries – including Niger (https://ieg.worldbankgroup.org/ieg-search-icrr). Nevertheless, the nature of those reports is different and they still do not have information from a dynamic interaction perspective (i.e. who gives what for what and then what happens), so it could not be used it to undertake the same kind of analysis.

The case definition is normally determined by the data available and its theoretical relevance. The IMF is one of Niger's primary macroeconomic donors. Its relevance for a case study is therefore easily justified.[43]

The design of the case study relates to the units of analysis. The investigation here focuses on the beneficiary (Government) and the donor (IMF), without differentiating between Niger's individual ministries or different IMF offices (headquarters/their Niger office). This form of case study, which analyses the stylized facts of a situation, has been referred to as a "holistic single-case study" (Yin 2012). Again, data availability provides the main reason for this methodological approach.

The structure of the case study is determined by the nature of the research question. After introducing the IMF, the strategy is to show empirically the dynamic interaction between Niger and the IMF as a transaction that is repeated over time (i.e. who supplies what in exchange for what, and what happens next). In section 4.5 the nature and incentives of the parties are used to interpret the pattern.

4.2. Data and limitations

The main source of information is the IMF e-Library Data and the main IMF website, where the IMF has posted the official documents relating to its interaction with Niger.[44] There were links to 158 documents at the time of writing; the first document was posted on May 10th 1995 and the last on October 11th, 2014. The available files vary in nature and importance; while all were perused, the focus here is on those that show the ex-post assessments of ex-ante agreed conditionalities.

To minimize the potential effect of other confounding factors, the study only takes individual consideration of the relations between Niger and the IMF. To the extent that the IMF made its decisions based on what other stakeholders do, the situation would reflect others' decision making towards Niger.[45] (If anything, other donors often made their decisions after considering the IMF actions).

[43] Globally, the IMF is the main development partner in the area of macroeconomic management, as measured by frequency of communication with governments (Custer et al. 2015).
[44] http://elibrary-data.imf.org/ and http://www.imf.org/external/country/NER/index.htm?pn=0
[45] An example is the case of the Highly Indebted Poor Countries (HIPC), a debt-relief initiative whereby donors forgave poor countries' debt (not only Niger's). Thus, including HIPC in the analysis would introduce aspects such as civil society demands for debt relief, poor countries' debt sustainability levels (not only Niger's), or donors' capacity to make political pledges and reach agreements. The effect of a high number of donors on the existence of moral hazard is unclear, as it depends on their coordination. If donors are not coordinated, Niger may care less about its promises if there is a large pool of other donors to go to. However, if donors collude and take a unified approach, the government would have less leeway. This has been confirmed at a global level: "a potential

The study has at least three potential limitations. First, it could be argued that since the available documentation is provided by the IMF, it constitutes a positively-biased sample of the Niger-IMF interaction. Although this is plausible, the IMF website does have documents that provide clearly negative feedback about the IMF's interventions in Niger. While this does not rule out the existence of a bias, it is a clear sign of transparency.

Secondly, some of the data for specific years are not available, which precludes a complete analysis for each of the different IMF programs (called arrangements). The data available are therefore only a sample of the data of interest. As the study shows, the years where data are missing were marked by socio-political turmoil. As a result, Niger's performance in this sample is likely to be positively biased. Hence, the fact of showing negative results –in terms of complying with the IMF conditionalities– suggests that Niger's performance would be poorer if the complete data set was available. To give a more accurate image, the data are reported on a quarterly basis, which also allows us to assess how many observations on IMF compliance are missing.

Finally, the analysis allocates equal weight to all the reforms agreed between the IMF and Niger. Admittedly this may be a limitation, but weighting them based on unclear criteria would likely introduce a bias. Hence, the option adopted is to analyse them all combined, and by category.

4.3. The IMF: What it is and how it operates

The IMF is a multilateral financial organization that promotes international financial stability. It is composed of 188 countries and the primary source of its financial resources is its members' subscriptions. Each member country has a quota which determines its subscription, its voting weight, its access to IMF financing and its share in the allocation of Special Drawing Rights (SDR).[46]

Countries pay their subscription and can then apply for funding from the organization in case of need. Funding to members usually takes the form of soft loans, e.g. repayable over 10 years with an annual interest rate of 0.5 percent and a 5 ½ year grace period on principal payments. Funding is done in the framework of multi-year programs called 'financial

source of bargaining power is choice and competition. Fragmentation among development partners provides partner countries with more choice with regard to which agencies they work with and listen to, thereby endowing the domestic authorities with increased leverage." (Custer et al. 2015).

[46] "SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves. Its value is based on a basket of four key international currencies, and SDRs can be exchanged for freely usable currencies." (Available on: http://www.imf.org/external/np/exr/facts/sdr.htm)

arrangements'. These have a duration of 3 years and tend to focus on specific objectives such as macroeconomic stability or poverty reduction. The first of these programs, called the Trust Fund (1977-1981), disbursed SDR 3.0 billion (about $3.8 billion). Beginning March 1986, the new arrangement was the Structural Adjustment Facility (SAF), which disbursed SDR 1.8 billion (about $2.4 billion). From December 1987, the SAF led to the Enhanced Structural Adjustment Facility (ESAF), which gained in importance during the 1990s: between 1987 and 1999 SDR 7.6 billion (about $10.7 billion) were disbursed to 52 countries under 90 arrangements.

In 1999 the ESAF was replaced by the Poverty Reduction and Growth Facility (PRGF). This change was motivated by the view that aid had thus far been 'supply-driven' and that, in consequence, beneficiary countries did not 'own' the reforms meant to reduce their poverty. The new approach emphasized inclusive and participatory processes, intended to promote a sense of country ownership and to widen support for poverty reduction initiatives. The key instrument became countries' Poverty Reduction Strategy Papers (PRSP), national plans that assessed poverty and described the actions needed to reduce it, including estimates of how much it would cost to do so.

Eligibility for multiyear framework programs is based on per capita income, lack of durable and substantial access to international financial markets, and absence of serious short-term vulnerabilities.[47] Eligible countries can borrow up to 140 percent of the quota under a three-year arrangement, although exceptionally it could be as high as 185 percent of quota.

For a country wishing to access multiyear frameworks the procedure is as follows: first the government of the country presents the IMF with the macroeconomic policies it intends to implement. The IMF then assesses the request and gives a response – which is typically positive as the request is normally prepared jointly with IMF staff. Once the country's financial arrangements have been approved, the IMF begins the disbursement of the loan, which normally takes place in several tranches. This disbursement process allows the IMF to make quarterly assessments of compliance using objective criteria (the term conditionality is rarely used by the IMF).

The criteria for assessing the extent to which Niger complies with the program fall into two groups: quantitative (performance criteria and benchmarks) and structural (performance and benchmarks). Table 4.3 in the annex shows examples from the 2000-2003 PRGF. The

[47] Specific details available on:
https://www.imf.org/~/media/Websites/IMF/Imported/external/np/pp/eng/2015/_062415pdf.ashx

quantitative group contains indicators that reflect sound macroeconomic and/or public finances management (e.g. reduction in the government's domestic payment arrears). The structural group contains actions government must undertake, either as reforms (e.g. adopt a new pricing system for petroleum products) or as specific activities (e.g. a financial audit of the civil service wage bill).

Each of the four criteria has specific targets that are agreed ex-ante, and which can be revised (as happened often with Niger) or dropped (as happened once, in 2007). Beyond these criteria, the IMF also specifies the frequency and reporting requirement of the data to be submitted, which include information pertaining to the real sector, public finances, monetary and financial data, external debt and the balance of payments.

4.4. Dynamics of the Niger – IMF relationship

The 1990s were a convoluted decade for Niger. The Second Republic was initiated in 1989, when Major Ali Saibou was elected in a one-party election. The country's first democratically-elected President, Mahamane Ousmane, was voted in during 1993, but was deposed in a coup d'état in 1996. The coup leader and new ruler, Ibrahim Baré Mainassara, was deposed (and killed) in another coup three years later. After a military transition of roughly one year, Mamadou Tandja was elected as President in December 1999. Under his rule, Niger would see a decade of relative democratic stability that would end with yet another coup, in February 2010.

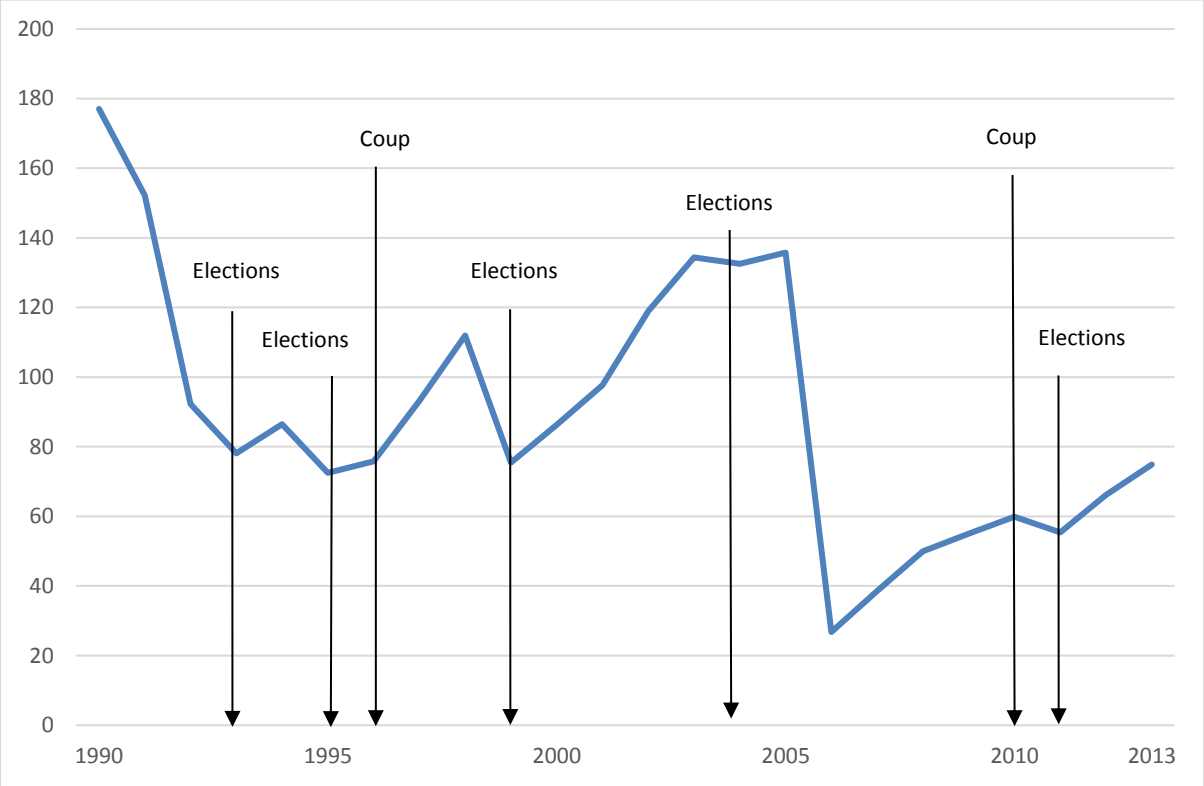
Table 4.2 in the annex shows the country's financial arrangements with the IMF since the mid-1990s (Niger joined the IMF in 1963 but no information is publicly available before the mid-1990s). In 1994, under Ousmane, there was a Stand-by Agreement that lasted only one year. The country then benefited from an ESAF's structural adjustment under the rule of Colonel Mainassara. When political stability returned with President Tandja, relations normalized. Most documents analysed here became available since 2000 onwards, so the analysis covers that period.

a. How much aid did Niger demand, and how much did the IMF supply?

Niger has not had problems in accessing the IMF financial arrangements as all its requests were approved at the amount requested –which may not be surprising, given that IMF staff support the country's applications when they are submitted for funding (Table 4.2). It is more relevant to consider the financing granted *as a share of the country's quota*. The country's actual use of

funding varied substantially, although most of the time it was within the IMF standard policy range of up to 140 percent (Figure 4.1).[48] Notably, in the early 1990s the IMF seems to have been flexible with Niger, but with the country's turmoil, its support dropped to around 80%. When Niger's application to the HIPC was accepted, its debt was wiped out and consequently, its balance decreased dramatically in 2005. In the following years, it would start to go up again.

Figure 4.1. Use of IMF credit and loans as percentage of quota (1990 – 2013)



Source: IMF e-Library Data

High proportions of the total funds agreed upon were generally disbursed (Table 4.2). The exceptions are the 1994-1995 Stand-by Agreement, the 1996-1999 ESAF and the 2008-2011 PRGF/ECF. Payments data on the first two are not available. In the third, although the PRGF/ECF officially ended in June 2011, the last disbursement made to Niger was on January 2010 (a month before the coup). This suggests that when there is a coup d'état, the IMF (as most other donors) suspends payments, and therefore is sensitive to the political situation.

At times, the access to funding initially-granted can be deemed insufficient and a higher limit can be granted, as was the case of late 2005 when it increased from 6.6% to 30% of quota (Table 4.2).

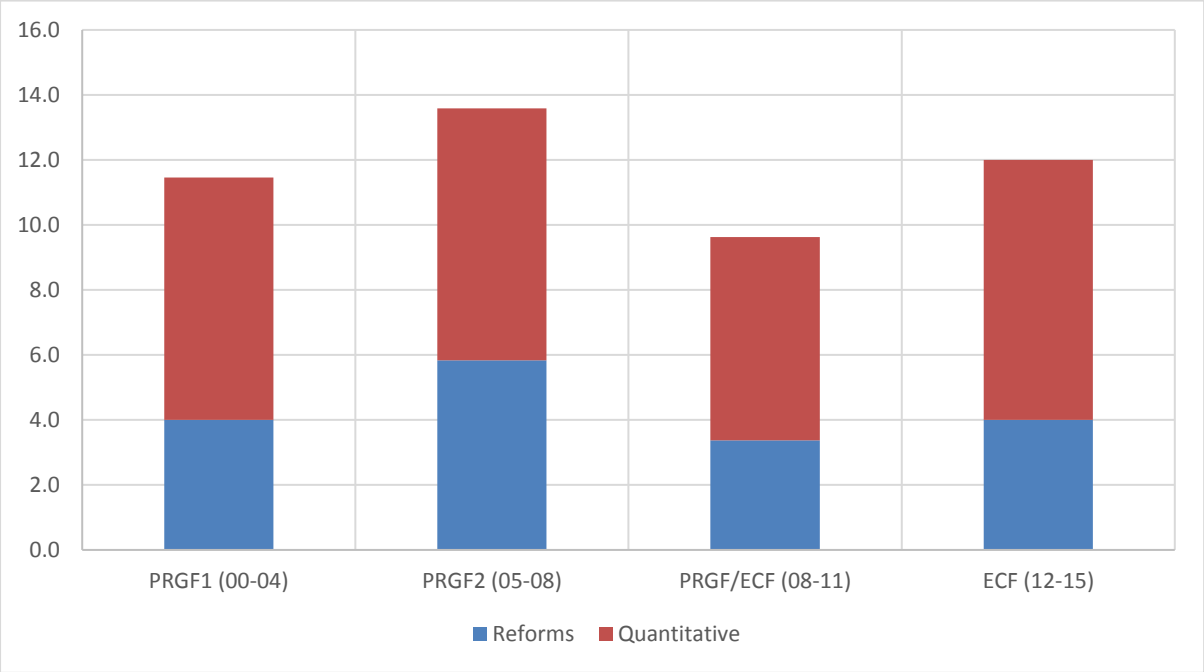
[48] There may be differences between the amount requested as Niger's share of its quota, and the actual funding used. These differences may arise due to the use of previous funds that have not been reimbursed.

b. What did the IMF expect in return from Niger's Government?

The overall goal of the IMF is to support member countries achieve macroeconomic stability that will lead to growth and poverty reduction. In exchange for its support to Niger, the IMF requested compliance with a number of conditions, compiled in the annex for each of the different arrangements: PRGF 1 (Table 4.3), PRGF 2 (Table 4.4), PRGF/ECF (Table 4.5) and ECF (Table 4.6). The nature of those conditions varied. Quantitative performance criteria and quantitative benchmarks are 'results' in nature (i.e. they reflect fiscal discipline) and are consistent over time. On the other hand, structural performance and benchmarks tended to be one-time activities for Niger to implement, either as specific reforms intended to enhance long-run growth, or as part of the democratic checks and balances to which any government should be subject.

The number of requirements is not constant and has varied over time. Considering available data per arrangement, the average number of requirements by the IMF was 11.5 per quarter from 2000 to 2004. It increased to a high 13.6 in the PRGF 2, decreased to 9.7 in the PRGF/ECF and increased again (to 12) under the ECF (Figure 4.2 and Table 4.1).

Figure 4.2. Estimated average number of IMF quarterly conditions required of Niger



Source: Own compilation from the IMF website

A review of the arrangements' requirements shows that when the number increased (especially in PRGF 2), it was because the structural performance criteria and structural benchmarks

became much more specific, generally going beyond 'operational' issues (e.g. closing dormant bank accounts) to –arguably– meddling in the government's legislative processes (e.g. to have a specific decree adopted by Government). Again, making a judgment on the appropriateness of these measures goes beyond the scope of this paper.

c. What did Niger actually deliver?

Tables 4.3 to 4.6 in the annex show Niger's ex-post compliance with the requirements to which Niger and the IMF had agreed ex-ante. Assuming equal weights across requirements, a quarterly non-compliance rate, n_q, can be computed as follows:

$$n_q = \frac{m_q}{r_q}$$

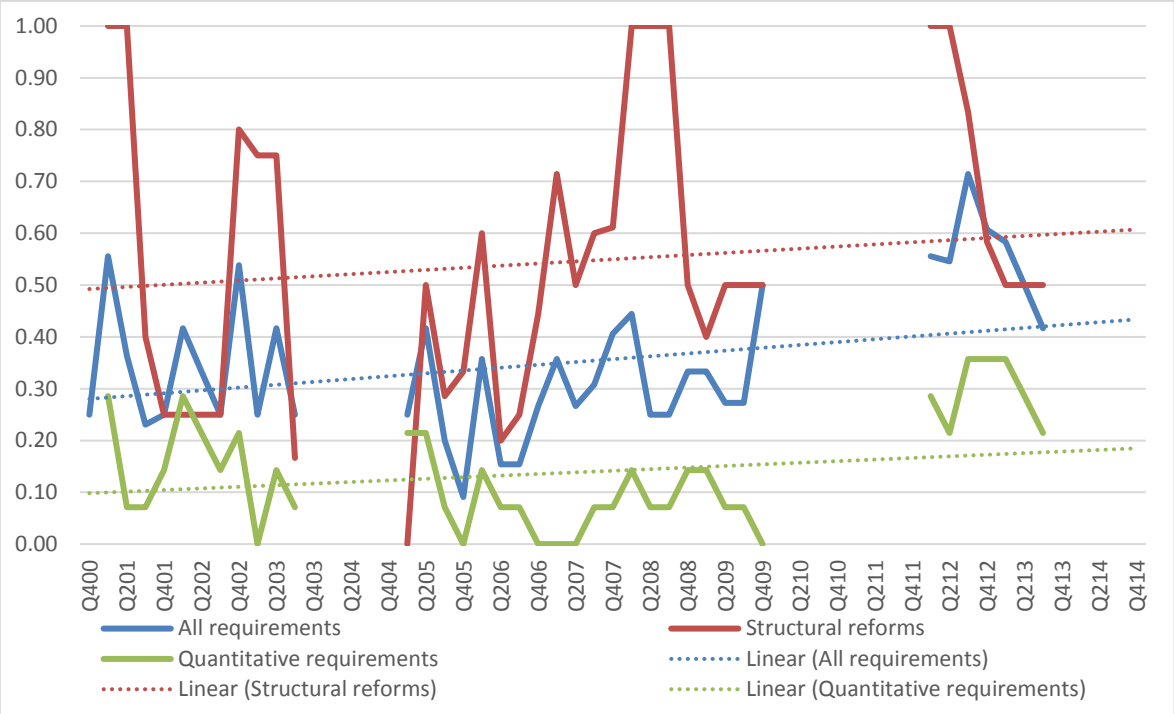
Where m_q is the rate of missed requirements in quarter q over the total requirements for that given quarter, r_q. The same rate can be calculated for all combined, and disaggregating into the two groups of indicators previously mentioned (quantitative and structural): see Table 4.1. Data are not available for all quarters, but as each program had a duration of 12 quarters (3 years), it is quite comprehensive (38 observation out of 48 possible).

Table 4.1. Summary indicators on Niger's performance under IMF arrangements (2000-2015)

	PRGF1 (00-04)	PRGF2 (05-08)	PRGF/ECF (08-11)	ECF (12-15)
Total (Number of quarters with data; total possible is 12)	11	12	8	7
Quantitative clauses to comply with	82	93	50	56
Quantitative clauses not complied with	23	13	10	29
Structural clauses to comply with	44	70	27	28
Structural clauses not complied with	21	31.5	15	18.5
Clauses to comply with – Quantitative & Structural combined	126	163	77	84
Clauses not complied with – Quantitative & Structural combined	44	45	25	47.5
Average per quarter				
Quantitative clauses to comply with	7.5	7.8	6.3	8
Quantitative clauses not complied with	2.1	1.1	1.3	4.1
Structural clauses to comply with	4	5.8	3.4	4
Structural clauses not complied with	1.9	2.6	1.9	2.6
Clauses to comply with – Quantitative & Structural combined	11.5	13.6	9.6	12
Clauses not complied with – Quantitative & Structural combined	4	3.7	3.1	6.8
Ratios of non-compliance				
Quantitative clauses	28%	14%	20%	51.8%
Structural clauses	47.7%	45%	55.6%	66.1%
All clauses	34.9%	27.3%	32.5%	56.5%

The trend over time shows that non-compliance (i.e. relative to the number of objectives) is increasing. Structural requirements have higher non-compliance (i.e. tend to be more difficult to attain), while quantitative requirements tend to be easier. Figure 4.3 shows non-compliance results for each of the quarters with available data, including linear trend lines.[49] Since the last quarter of 2000, Niger has had a slightly rising tendency to miss IMF requirements, a trend that is clear in both structural and quantitative requirements.

Figure 4.3. Quarterly non-compliance rate with conditionalities (0: All met, 1: All missed)



Source: Own compilation from the IMF website

The overall trend for the three groups is heavily influenced by the performance of early 2012, when five of the nine requirements were missed (Table 4.6). There was only one structural requirement (Quarterly budget reports on a commitment, payment order, and payment basis to be submitted to the IMF within a period of 6 weeks), but it proved to be of significant difficulty, and would subsequently be missed for the next three quarters as well (Table 4.6).

The positive trend in non-compliance for structural requirements is also strongly influenced by the performance of 2008. There was only one benchmark for most of the year, the adoption by the Council of Ministers of the Medium-Term Expenditure Framework (MTEF) for the infrastructure and transport sectors (Table 4.5). However, even this would prove difficult to implement.

[49] The interpretation does not vary when considering logarithmic and polynomial fitted lines. (If anything, under those fitted lines –especially polynomial– the argument made becomes even stronger).

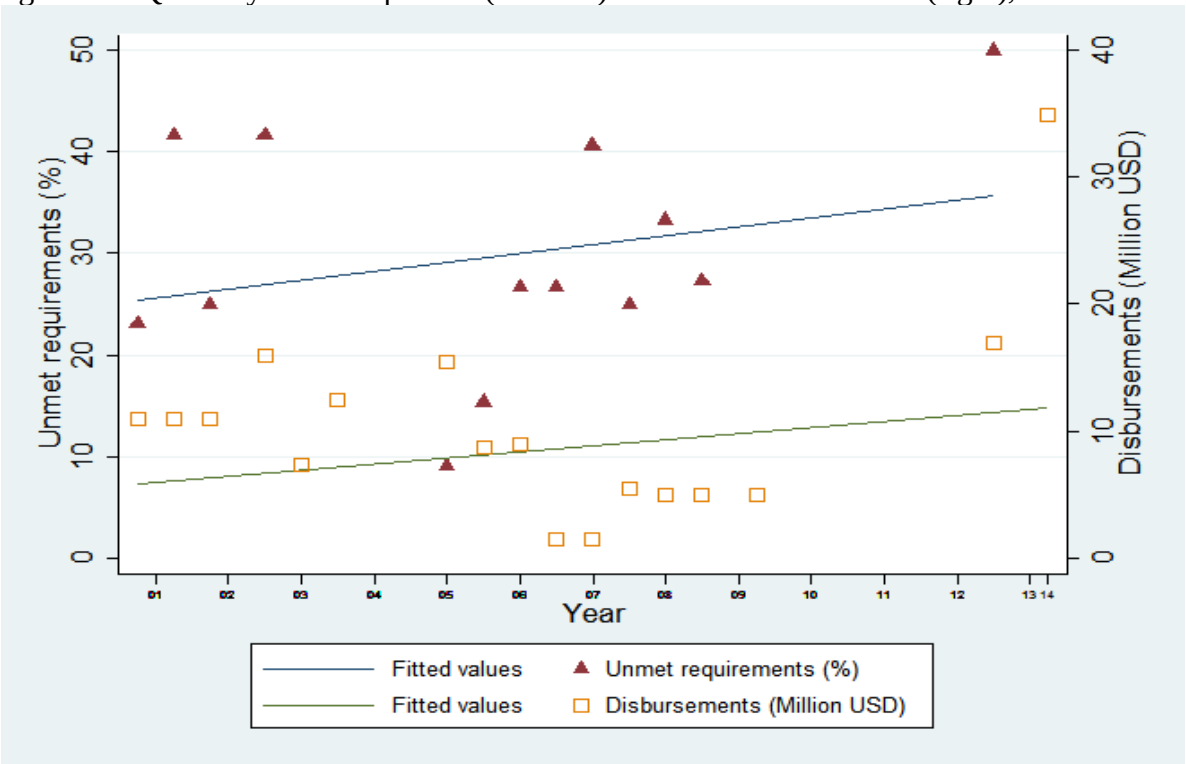
d. How did the IMF react?

Niger's compliance with the IMF's requirements has been sub-optimal, i.e. in exchange for the funds the country received, it delivered fewer reforms than it had promised. As in any relationship between a lender and a borrower, the organization can respond with measures within the current program or out of the current program (in the future). Measures within the current program could be to stop the program and cancel its disbursements, suspend them until the country's performance improves, or provide the country with less funds than were initially approved. These three options are assessed next.

Regarding the first, like most other donors the IMF suspended its aid on the occurrence of Niger's coup d'état (despite the fact that coup leaders may have sought the IMF's support, as they did in 2010).[50] However, it has never cancelled its collaboration with Niger on the basis of poor compliance with the programs' requirements.

In terms of the second, available data suggests that payments were not suspended pending improvement in Niger's compliance. Table 4.7 shows all the requests addressed to the IMF and their corresponding response: on no occasion was the request denied.

Figure 4.4. Quarterly non-compliance (left axis) and IMF disbursements (right), 2001-2014



Source: Compilation from the IMF website (data are shown in annex tables)

[50] In this instance, assistance was suspended from January 2010 till the new programme started (February 2012).

In respect of the third, no clear relationship can be established between non-performance and loan disbursements (their structure and amounts are negotiated before the program starts), which indicates that underperformance did not affect disbursement. Figure 4.4 plots Niger's quarterly non-compliance data with data from the disbursements corresponding to that point in time. All the disbursements were made according to the initial schedule, which yields a positive correlation between non-compliance and disbursements.

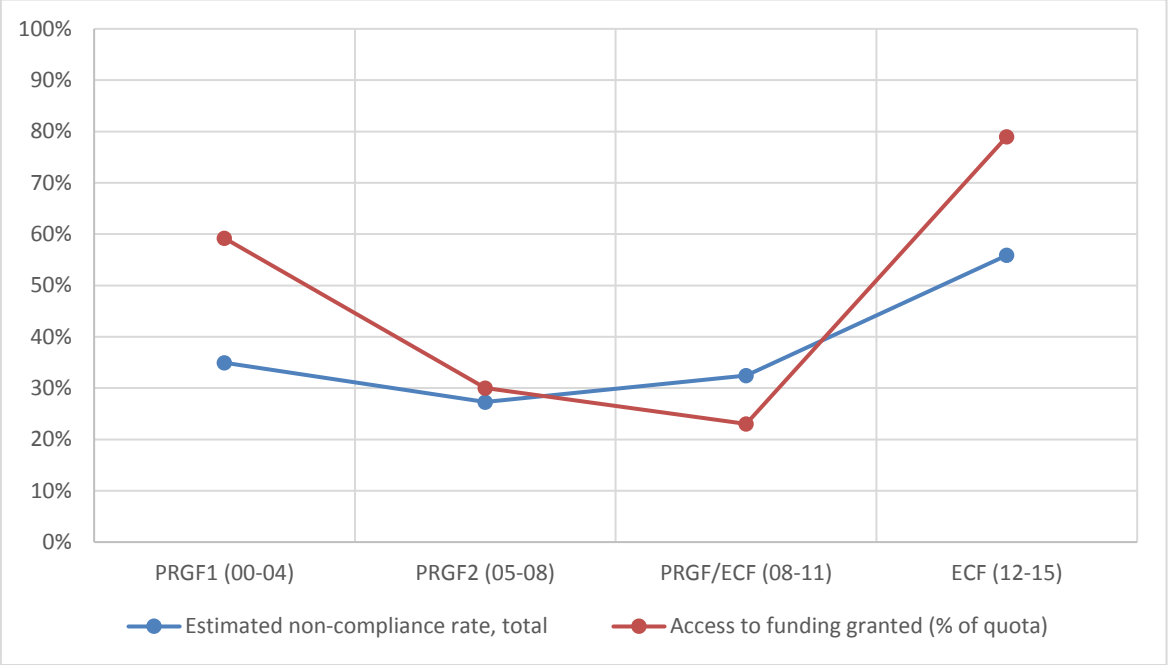
With regard to "out of program" responses to underperformance, the IMF has two possibilities: it could lend less in the future, or (taking that option to the extreme) it could stop lending money altogether, i.e. no more arrangements. It has become clear that the IMF has not stopped lending money to Niger. The question is whether future lending will be affected by present performance. Available data on non-compliance rates, and access to IMF funding (in terms of the country's percentage of quota) is plotted (Figure 4.5). The graph can be interpreted as follows: during the first PRGF Niger's performance was deemed poor, so access to funding granted decreased steeply in PRGF2. In PRGF2 Niger still underperformed, which led to less funding in the PRGF/ECF. However, in PRGF2 the country improved its performance (i.e. non-compliance decreased), so the reduction was less steep.

A rationale for the imposition of such pressures a belief that poor performance is indicative of inadequate political commitment. Indeed, the second exercise of Public Expenditure Management and Accountability Reviews (PEMFAR II), undertaken by international donors, highlighted as a key takeaway that "strong political commitment at the highest level and adequate technical assistance are key prerequisites for effective public-sector reform. Limited implementation of the PEMFAR I recommendations reflects an ineffective political support for implementing sensitive policy reforms" (World Bank 2011c).

The PRGF/ECF program saw a deterioration of Niger's performance (i.e. non-compliance increased), but the program actually only ran in 2008 and 2009. In 2009 there was a mounting socio-political crisis that included a referendum for Tandja to extend his mandate. The resulting impasse ended with the coup of February 2010, and in 2010 and 2011 there was virtually no IMF assistance to Niger. Significant efforts were made to put the country back on an IMF programme after Mahamadou Issoufou was elected president in April 2011. Those efforts involved the negotiation of a new IMF arrangement and culminated in a visit of the IMF managing director, Christine Lagarde, in December 2011. In February 2012, a formal request by Niger was sent to the IMF, and the new arrangement (ECF) was announced in March. Despite the country's poor performance in the previous arrangement, its difficult situation

during 2010 and 2011 together with all the efforts undertaken, facilitated access to IMF financing in the new ECF.

Figure 4.5. Relationship between Niger's non-compliance and IMF disbursements



Source: Own compilation from the IMF website

4.5. Reasons underlying the Niger - IMF dynamics

Besides the financial cost (i.e. interest payable on loans), IMF loans entail a political cost: a country can pay a price in terms of reduced decision-making sovereignty. In the case of Niger this was formally stipulated in the clause: "During the period of the arrangement, the government of Niger, on its own initiative or at the Managing Director's request, will consult with the International Monetary Fund on the adoption of any measure deemed necessary. Furthermore, at the end of the period covered (…) and as long as Niger continues to have financial obligations toward the Fund resulting from loans obtained under this arrangement, the government will consult periodically with the International Monetary Fund on Niger's economic and financial policies, on the government's initiative or as requested by the Managing Director." (Government of Niger 2000).

To Niger's authorities this cost has apparently been dear. While its policymakers have never complained about the financial cost of IMF funds, they have repeatedly –and openly– complained about the conditionalities attached. For example, on Sept 25th 2005 the Minister of Economy and Finance, Ali Lamine Zeine, stated at a Press Conference with the IMF and other

African Finance Ministers: "Although encouraging progress has been made with the IMF in rationalization and program conditionality, it is still below our countries' expectation. In fact, systematic recourse to these programs (…) continues to prevail. We have observed the tendency to impose politically delicate measures which are also slow to apply, legally speaking, and this is all rather difficult. (...) The Bretton Woods Institutions are therefore called upon to rationalize the process, rationalize conditionality, to bring about a greater degree of harmonization and to limit themselves to policy measures which have a direct effect on the macroeconomic and structural results that they are trying to achieve" (IMF 2005).

Niger's statements have followed an unsurprising pattern: complaints were more common within an arrangement, or after disbursements were made, whereas praises were more likely to accompany the ongoing consultations and preparatory work ahead of a new arrangement.

The implementation of reforms is costly for Niger's government due to resistance to those reforms, which has also been publicly recognized. In April 2007 Ali Lamine Zeine (the Minister of Economy and Finance) stated, "There has also been some resistance towards these reforms, and one of our strategies, of course, was to sensitize our partners to the benefit of these reforms, and to enable us to improve the situation on the ground." An example of such resistance had been particularly visible two years earlier in early 2005 when, in the midst of a severe famine, the IMF pushed for parliament to extend VAT to include basic products.[51] This measure induced harsh criticism of Government and of the organization (Dearden 2012) and had to be reversed by parliament two months later.

From the perspective of the IMF, two effects are at play. On the one hand, it cares about helping Niger, a member country which needs support but naturally tries to minimize the price paid for it (e.g. in the number of reforms to undertake). At the same time, the organization tries to perpetuate its relevance. This is by no means unique to the IMF, although the period described above (2005-2007) may have been a particularly difficult one, due to "the threat of irrelevance creeping up on the Fund in the mid-2000s" (Sandbu 2015). To be relevant, the Fund has to provide utility, both to its member countries and to its executive board. It seems certain that the IMF's board wants the organization to fulfil its mission: it wants development. But as development is not visible ex-ante, it has to accept inputs for development as a proxy instead. Such inputs include development loans, and sound macroeconomic management and reforms, i.e. the requirements with which Niger must comply.

[51] Three measures were included: (i) extension of the VAT to processed food products (milk, sugar, wheat flour); (ii) reduction of VAT exemptions on water and electricity consumption; and (iii) application of the excise tax to soft drinks and sodas

To show its relevance the IMF has used several strategies. The most obvious was extending loans, which explains why all the requests from Niger have been accepted (provided there was not coup d'état). But the IMF has also expanded its assistance by incorporating new products to its portfolio. An example is its Regional Technical Assistance Centre for West Africa (AFRITAC), an office inaugurated in 2008 to bring services closer to governments. In April 2013 a press release noted, "AFRITAC has remained on track throughout an eventful year and foresees a significant increase in its activities for the financial year starting May 1st 2013. Meanwhile, an external evaluation has underlined the relevance and effectiveness of the technical assistance delivered."

The usefulness of the IMF in Niger has also been asserted explicitly. In 2011 the IMF undertook an ex-post assessment of its engagement with Niger. The first three points in the conclusion were:

> "i) Underlying progress was steady until late-2009,
>
> ii) Niger is at a critical turning point, and
>
> iii) There is a strong case for continued Fund engagement under an ECF arrangement".

The first point was justified as follows:

> "Until the political crisis in 2009–10, Niger's performance under Fund-supported programs had been quite good, particularly given the significant capacity constraints. It performed well on quantitative performance criteria and met most structural benchmarks, though some with delay. Despite recurrent shocks, Niger was able to maintain prudent fiscal policies while steadily improving priority spending. It is also instructive that reform implementation and fiscal performance deteriorated (along with the levels of donor support) when Fund relations were on hold." (IMF 2011).

The data in this chapter has shown that the assessment quoted above was not based on an objective measurement of data on Niger's compliance, and that delays in the implementation of reforms were the norm rather than the exception. Admittedly, reforms did deteriorate when the IMF and other donors suspended operations, but since these suspensions were associated with coups d'état (linked to high instability and serious economic deterioration), the results are unsurprising and it cannot be inferred that the reason for the decline in reforms was the lack of donor support.

The IMF shareholders want a framework of assistance aligned with the governance systems they preach. Therefore, giving aid to countries ruled by the military (especially after a coup d'état) is typically avoided. Following the 2010 coup, discussions regarding the IMF's fourth

review were put on hold pending clarification as to whether the organization's members recognized the transitional regime as the *de jure* government of Niger. To that effect, a members' poll was organized and it was decided that, "if the results of the poll clearly show that Niger's transitional government is recognized by the international community, the Fund would recognize such a regime as the government of Niger and policy discussions for the fourth program review would commence within a short period of time" (IMF 2010). Once the return to democracy is secured, or the international community recognizes the transitional regime as 'de jure', donors quickly resume their aid and justify calls for more aid – based on the lack of progress due to the political situation.

Donors can be criticized, and the IMF's work in Niger has sometimes been condemned. During the 2005 famine, it was argued that conditionalities imposed by the IMF aggravated the country's calamities (amidst fiscal consolidation there was no room for food for Nigériens). Media from the UK and Germany criticized the IMF's intervention, arguing that it worsened the response to the country's devastating famine. In all cases the Fund's external relations department reacted quickly to defend its image. *The Independent* published the headlines "IMF and EU are blamed for starvation in Niger" on August 1st 2005, and on August 5th the IMF posted a reply.[52] On August 3rd the *Frankfurter Allgemeine Zeitung* published the article "Von einer Hungerkatastrophe in Niger kann derzeit aber noch keine Rede sein" and on August 9th the IMF posted a reply.[53] Similarly, *The Observer* published on August 7th the letter "This is not just another act of God – this is ingrained poverty", including the assertion that, "the IMF stood in the way of free food distribution in Niger". The IMF denied it on August 9th.[54]

The episode of the 2005 crisis had far-reaching repercussions, in terms of the IMF advertising its assistance to Niger. Thereafter, the IMF started to publicize its activities in the country very actively. The IMF's monthly review *IMF Survey* had started in January 1997, and in the ensuing eight years had given no attention to Niger. However, in August 2005 the country made the headlines with an article entitled "IMF focuses on Niger relief".[55] Later, in January 2008, an article entitled "Debt Relief Yields Results in Niger" was published on the IMF website[56], and re-published weeks later on *IMF Survey*'s February issue.[57] Since then, there have been references to Niger in the *IMF Survey*, typically linked to the country's natural

[52] Available on http://www.imf.org/external/np/vc/2005/080505.htm
[53] "It cannot be said that at present Niger suffers a famine". Available on http://www.imf.org/external/np/vc/2005/080905a.htm
[54] Available on http://www.imf.org/external/np/vc/2005/080905abc.htm
[55] Available on http://www.imf.org/external/pubs/ft/survey/2005/081505.pdf
[56] Available on http://www.imf.org/external/pubs/ft/survey/so/2008/CAR012508A.htm
[57] Available on http://www.imf.org/external/pubs/ft/survey/2008/022808.pdf

resources. And even at present, the IMF website shows statements by its staff at the end of all their missions to the country, in which IMF officials usually praise Niger's authorities for their hospitality and good disposition to cooperate (to my knowledge, this is not done at similar organizations such as the World Bank or the United Nations).

In the interaction between Niger and the IMF, the key elements identified in the documentary review –as resulting in continuous aid disbursements– can be presented as:

$$\begin{aligned} & Request\ (a) \\ & +Context\ (b) \\ & +Progress\ made\ \cup\ justification\ for\ the\ lack\ of\ it\ (c) \\ & +\ Future\ Commitment\ (d) = \\ & Aid \end{aligned}$$

The first element (a) is the country's formal request. This may seem obvious, but given Niger's context of poor institutional, technical and human skills' capacity, it is not. Based on informal consultations, it is common to hear donors say that extra resources could be mobilized for the country if official requests were submitted to them.[58] Instead, those slack funds often have to either be reallocated elsewhere by donors, or spent on non-planned activities before the end of the budget period. Otherwise, donors may be subject to budget cuts in the future. Often, to fulfil this requirement and avoid a potential loss of funds, donors may take the initiative and draft the communications which they then have signed by government officials. This suggests that trying to ensure their relevance, donors may fuel moral hazard by allocating funds even when they are not (actively) requested. This approach has been referred to by Easterly (2002) as 'supply-driven' development, and fuels lack of national ownership (widely recognized as a problem in the Paris Declaration).

The second element is the context (b), which relates to the country's socioeconomic situation. Niger's development indicators are so meagre that they would justify assistance to the country by any donor whose reasons for giving aid were the existence of poverty or lack of development.[59] The justification for a country's precarious context may also include future prospects, be they negative (e.g. insufficient rains that lead to a famine), or even positive (e.g. oil prospecting that may lead to a governance deterioration). [60] Hence, almost any contextual situation can be valid (the only exception is when there is a coup d'état).

[58] This is consistent with the fact that disbursements are higher than commitments, as seen in Chapter 3.
[59] Niger's development indicators were described in Chapter 3
[60] Accounting for 12.3% of GDP in 2013 (IMF 2015), natural resources mining is important for Niger, which may raise the possibility of a "mineral curse". Given the magnitude of revenues collected so far, however, that possibility would seem unlikely. Niger's government reported to have collected USD 341 Million in 2012 (EITI

The third element (*c*) is a union of two sets: progress made or justification for the lack of it. The efforts the country makes to comply with the arrangement requirements contribute to progress. At the same time, since the quantitative requirements are also influenced by positive events independent of government efforts (e.g. high rainfall leading to a good harvest), progress is often influenced by factors exogenous to government efforts. The reverse is not true, however. When exogenous negative events hit, the government receives (understandably) an empathetic reaction from the IMF. Hence, the situation can be characterized as: when good things happen it results in aid, and when bad things happen it results in aid as well.

Finally, future commitment (*d*) relates to national authorities' will to undertake the necessary activities to achieve the program objectives. As this is not observable ex-ante and difficult to assess ex-post, the country 'shows' a lot of this through statements of commitment that are omnipresent in the exchange of correspondence. In turn, the IMF also uses this component as an argument to justify its disbursements.

4.6. Can the actual outcomes be appraised?

It is difficult to assess quantitatively whether aid in a specific sector has yielded positive outcomes (especially in macroeconomic policy).[61] This section instead does it qualitatively, considering two elements: a direct measurement of Niger's financial systems (the Public Expenditure and Financial Accountability, PEFA), and a key development input on which much emphasis has been placed (the PRSP). The first is of interest because, all things equal, it should be expected that the reforms undertaken by Niger in response to the IMF requirements would yield results. The second is grounded on a basic principle of economics – that people react to incentives (Mankiw 2001). If valid, then, should the incentive structure in the Niger-IMF relationship reward development inputs instead of outputs, efforts to deliver those inputs should proliferate over time.

The PEFA program is a multi-donor initiative which aims at assessing country public expenditure, procurement and financial accountability systems based on objective assessments. The PEFA assessments are relevant for several reasons: i) they offer measurable results, ii) they are directly linked to the IMF's domain, and iii) they "build on the principles of the

2014). This was the second highest year on record; from 2005 to 2012 the yearly revenue collected on mining was USD 164.6 Million (EITI 2014).

[61] This is particularly problematic in a principal-agent relationship as it means that moral hazard can hardly be resolved; if the principal cannot assess quantitatively the outcome of interest, how can a contract be written? In other sectors/interventions with a clearer causality link and more quantifiable results, however, a quantitative assessment may be easier (e.g. number of children vaccinated).

Strengthened Approach to Supporting Public Financial Management Reform which is embodied in three components and closely aligned with the Paris Declaration on Aid Effectiveness" (PEFA 2016). Table 4.8 shows the results of two PEFA assessments undertaken in Niger for 2008 and 2012, using the same methodology. No improvement is visible, and in the 2012 assessment the IMF notes that "progress has been insignificant. Of the 31 indicators, 21 were ranked the same or lower than their 2008 level. Only ten indicators improved slightly." (IMF 2013)[62]

Nevertheless, the IMF points out that the betterment was obtained "mainly in areas that received foreign technical assistance, namely public policy-based budgeting owing to the introduction of the medium-term expenditure frameworks and the preparation of a government debt strategy, and the improvements of the revamped procurement system" (ibid, p.9).

Progress is expected for the future as well, albeit cautiously: "Reform programs in progress in the area of oversight and external auditing are moving ahead; as this trend continues, the progress will be reflected in the scores of subsequent assessments. However, the progress of the external audit will continue to depend on positive trends in the area of accounting, information recording and financial reporting. The persistent weaknesses observed in the area of accounting also limit the extent of progress in policy-based budgeting. The budgetary and financial information required for analysis and decisions is incomplete, unreliable and irrelevant." (ibid, p.9).

With regards to the PRSPs, the first one (interim) was 82 pages, the second (2005-2007) was 187 pages, the third (2008-2012) was again 187 pages, and the fourth (2012-2015) was 280 pages. While no claim is made about their quality, it can be said that over time Niger produced more complete poverty reduction strategies - in fact, the pattern has been dubbed as an 'expertise' to develop development framework documents (Sambo 2009).

4.7. Conclusion

It might seem that the collaboration between the IMF and Niger is based on objective programs with strict conditionalities which must be met lest the disbursements be suspended or cancelled. In reality, the relationship is best understood in terms of the incentives at stake. Niger's Government gets aid flowing in, whilst avoiding the implementation of those political reforms which would create most resistance. As a counterpoint, the IMF gets that number of actions

[62] It may be reminded that in 2010 there was a coup. However, I see no clear argument to link such event and the PEFA assessments.

necessary required for its continued support of the country, support which it needs to provide if it is to demonstrate its relevance and thereby provide utility to its shareholders. The consequence is important: it is in the interests of both parties that the reforms are those easiest to undertake. Thus, the outcome reforms implemented are unlikely to be the structural ones which may be clearly needed.

It could be argued that the evaluation of the country's performance considers aspects other than the agreed ex-ante criteria, i.e. moral hazard understood as socio-political rationality, because the government would not want to risk implementing conditionalities which may lead to political or social instability. However, in the case of Niger that seems to have been an exception. Niger's performance is poor and shows a declining trend over time. The coexistence of this underperformance with ongoing aid from the Fund supports the existence of moral hazard. Faced with broken promises, the IMF has not reacted by disrupting its arrangements or even disbursements. This behaviour, on a repeated basis, has certainly fed moral hazard.

An important caveat must now be added. This chapter is not arguing that the Fund has been totally passive. The data analysed are consistent with the possibility that current performance (along with political factors) may influence access to quota in future arrangements. However, it seems clear that what is promoted are development inputs (e.g. PRSPs) instead of development results. Given the dynamics of the relationship and its incentives, there is no strong basis for arguing that the overall outcome is suboptimal. The key lesson is that the incentives system should altered, e.g. disbursing aid only upon delivery of results, or identifying stakeholders who will lose with the planned reforms and therefore have a strong incentive to block those reforms (Mosley, Harrigan & Toye 1991). The timing of reforms may also be crucial, as the 2005 crisis showed: pushing for a VAT rise at a different moment might have succeeded; done in the middle of a famine it was destined to failure and criticism.

Finally, while it may be easy to criticize the IMF based on these results, there is no other organization to compare it with at this level of detail. Few donors make available information about their interaction with their beneficiaries. In this regard, the IMF's approach to transparency is a rare merit that should be emulated by other donors.

4.8. Annexes

Table 4.2. Key data of Niger's financial arrangements with the IMF since the mid-1990s

Type	Date	Expiration	Amount requested (SDR Million)	Amount Approved (SDR Million)	=	US$ Million	Amount Drawn (Million SDR)	Amount Drawn (%)
Stand-by Agreement	04/03/1994	03/03/1995	-	18.6		-	11.1	59.7
ESAF	12/06/1996	27/08/1999	-	58.0		83	48.3	83.3
PRGF	22/12/2000	30/06/2004	59.2	59.2		76	59.2	100
PRGF	31/01/2005	31/05/2008	6.6	6.6*		6.6	26.3	100
PRGF/ECF[63]	02/06/2008	01/06/2011	23.0	23.0		37.5	13.2	57
ECF	16/03/2012	15/03/2015	79.0	79.0		121.0	45.1	57.1

* Raised to 26.32 on 28/10/2005

[63] On February 12th 2010, the IMF announced that "The Extended Credit Facility (ECF) replaced the Poverty Reduction and Growth Facility (PRGF) "as the Fund's main tool for medium-term financial support to low-income countries by providing a higher level of access to financing, more concessional terms, enhanced flexibility in program design features, and more focused streamlined conditionality. Financing under the ECF currently carries a zero-interest rate, with a grace period of 5½ years, and a final maturity of 10 years. The Fund reviews the level of interest rates for all concessional facilities every two years."

Table 4.3. Niger's ex-post compliance with the IMF ex-ante agreed conditionalities (PRGF)

	2000	2001				2002				2003			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Quantitative Performance Criteria													
- Net bank credit to government	√	√	√	√	√	√	X	√	X	√	X	X	-
- Reduction in government domestic payments arrears	X	X	X	√	X	X	X	√	√	√	√	-	-
- Accumulation of government external payment arrears	√	X	√	X	√	X	√	X	√	√	√	-	-
- Non-concessional external debt contracted or guaranteed by government with maturities < 1 year	√	√	√	√	√	√	√	√	√	√	√	-	-
- Non-concessional external debt contracted or guaranteed by government with maturities > 1 year	√	X	√	√	√	X	√	√	√	√	√	-	-
Quantitative benchmarks													
- Budgetary revenue	√	√	√	√	√	√	√	√	X	√	X	-	-
- Wage bill	X	√	√	√	X	X	X	X	X	√	√	-	-
- Basic budget deficit (commitment basis, excl. grants)	√	X	√	√	√	√	√	√	√	√	√	√	-
Structural Performance													
- Implementation of an automatic, transparent and flexible pricing system for petroleum products			X	X	√	√	√	√	√	√	√	√	-
Structural Benchmarks													
- Clearing of external payments arrears accumulated at end June 2001 vis-à-vis Paris Club creditors			X	√									
- Establishment of the opening balances for the 2001 accounts on the treasury books		X	-	√									
- Preparation and use of a new public accounting nomenclature that improves the recording of government operations and ensures consistency between the budget law and public accounting			X	√	√	√	√	√					
- Computerization of the budgetary expenditure processes of the government at the central level				X	√								
- Preparation of a final budget law (*Loi de Règlement*) for 2000 to be submitted to the National Assembly and transmittal of the 2000 budgetary accounts to the Audit Court					X	√							
- Submission of a report on (i) the execution of the presidential program to reduce poverty and (ii) the use of resources freed by the HIPC Initiative in 2001						X	√						
- Introduction of the new budget nomenclature and the new public accounts charger, and their use in preparing the 2003 Budget Law.								√					
- Strengthening of the external debt service unit through the introduction of a new debt-management software and training of staff							X	X	X	X	X	√	
- Transmittal to the IMF staff of a draft final budget law for 2001, together with the declaration of conformity established by the Audit Court, and transmittal of the fiscal-year 2001 accounts to the audit court.									X	X	X	√	
- Selection of a consultant to prepare a study on the medium-term financial projections of the National Retirement Pension Fund (FNR)									X	-	-	-	-
- Transmittal to the government of a study prepared by an independent consulting firm on the remuneration of the petroleum sector operators included in the pricing formula of the petroleum products.									X	X	X	√	
- Completion of an actuarial audit of the National Retirement Pension Fund												X	-
- Completion of a financial audit of the wage bill												√	-
- Preparation of a medium-term expenditure framework for two key social sectors													-
- Computerization of 2 regional treasury offices for the implementation of the government's new charter of public accounts													-
Missed (X)	2	5	4	3	3	5	4	3	7	3	5	2	-
Total with Available Data (T)	8	9	11	13	12	12	12	12	13	12	12	8	-

Table 4.4. Niger's ex-post compliance with the IMF ex-ante agreed conditionalities (2005-2007 PRGF)

	2005				2006				2007			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Quantitative Performance Criteria												
- Domestic financing of the budget	√	√	√	√	√	√	√	√	√	√	√	√
- Basic budget balance (commitment basis, excl. grants)	X	X	√	√	X	√	√	-	√	√	√	√
- Reduction in government domestic payments arrears	X	X	X	√	X	X	X	√	√	√	√	X
Quantitative benchmarks												
- Accumulation of government external payment arrears	√	√	√	√	√	√	√	√	-	√	√	√
- Non-concessional external debt contracted or guaranteed by government with maturities < 1 year	√	√	√	√	√	√	√	√	√	√	√	√
- Non-concessional external debt contracted or guaranteed by government with maturities > 1 year	√	√	√	√	√	√	√	√	√	√	√	√
Indicative targets												
- Total revenue	X	X	√	√	√	√	√	√	√	√	√	√
- Wage bill	√	√	√	√	√	√	√	√	-	-	-	-
Structural performance criteria												
- Apply the pricing system for petroleum products adopted on August 1st, 2001	√	√	√	√	√	√	X	X	X	X	X	X
- Adopt monthly performance indicators for the main customs offices and consistently track compliance with these indicators by producing monthly implementation reports for submission to the IMF	√	√	√	√	√	√	√	√	√	√	√	√
- Institute joint pre-shipment company-customs imports verification teams at Dan Issa, Gaya, Konni, Maradi, Matamey, Torodi, Zinder					√							
- Set up the issue-oriented audit unit (brigade de controle pronctuel) in the medium-size taxpayer office (DPME) and audit 30 percent taxpayer of the concerned taxpayers					X	-	-					
- Raising the turnover threshold from CFAF 50 million to CFAF 100 million so that the large taxpayer unit (LTU)'s activities are refocused on the 300- 400 largest taxpayers					X	-	-					
- Use of a pre-shipment inspection company's imports valuation lists for imports taxation purposes							-					
- Reduce the number of VAT non-filers at the large taxpayers' office (LTO) to maximum of 5 percent							√					
- Audit a minimum of 60 large enterprises under the control of the LTO by September 2006.							√					
- Set up, in the three largest regional customs offices, the units for ex-post control of imports valuations and exemptions.								√				
- Establish the overall balance of the consolidated government accounts including the interim balances from 1997 to December 2002										√		
- Adopt a decree defining the modalities for reimbursing the frozen postal savings accounts of the former National Postal Saving Office over a two-year period (para. 15 of MEFP of December 2006)											D	
- Introduce a simplified tax regime with quarterly filing for the small and medium scale enterprises, to replace monthly declarations												√
Structural benchmarks												
- Prepare a list of customs exemptions and a credible plan to reduce them	√											
- Prepare a report clarifying the status of the government's domestic arrears and adopt a timetable for their elimination		X	X	X	X	X						
- Computerize the financial operations of five provincial pay offices		-	√	-	-	-						
- Implement the bidirectional Treasury-Budget computer link		-	√	-	-	-						
- Establish a master list of expenditure directly related to poverty reduction and a monthly mechanism to track their execution			√	-	-	-						
- Prepare and adopt an operating strategy and detailed plan of action to enhance the mobilization of tax revenues			X	-	-	√						
- Present revenue mobilization measures to parliament, including (i) extension of the VAT to processed food products (milk, sugar, wheat flour); (ii) reduction of VAT exemptions on water and electricity consumption; and (iii) application of the excise tax to soft drinks and sodas	√	X										

- Design a time schedule to audit entities that benefit from tax and customs duty exemptions, with the objective of auditing 30 percent of revenue foregone in each year						√	√					
- Reduce the number of non-filers at the medium sized taxpayer office (MTO) to a maximum of 10 percent (later redefined to 25)								√				
- Computerize the management of customs transit between Torodi and Niamey, including electronic exchange of messages								√				
- Pay the government's capital contribution to FinaPoste								√				
- Establish an action plan to clear domestic arrears outstanding at end-1999								X	X	√		
- Adopt the decree establishing a supervisory agency for the microfinance sector								X	X	√		
- Disbursement of the annual government subsidy to NigerPoste								X	√			
- Launch tender process for privatization of Credit to Niger to shortlisted investors										X	√	
- Update the list of Large Taxpayers Unit, according to the 100 billion CFAF turnover threshold									√			
- Publish 2006 data on national budget execution and expenditure execution under the unified list of priority expenditures on a payment order basis priority unified list									X	X	X	X*
- Regularize Treasury depositors' accounts that are in overdraft, and close accounts of inactive depositors.									X	X	X	X
- Provide for the adoption of the decree on the organization and mandate of the Directorate General for Control of Public Procurement by the Council of Ministers												√
- Finalize compensation arrangements between the Treasury, NIGELEC, and SONATEL												X
- Finalize agreements for the settlement of Treasury arrears with banks												X
- Reduce the threshold for contracts requiring approval by the General Directorate for Control of Public Procurement from CFAF 300 to CFAF 100 million												X
Missed (X)	3	5	3	1	5	2	2	4	5	4	4	6.5
Total with Available Data (T)	12	12	15	11	14	13	13	15	14	15	13	16

D: Not met and dropped

Table 4.5. Niger's ex-post compliance with the IMF ex-ante agreed conditionalities (2008-2009 PRGF/ECF)

	2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Quantitative Performance Criteria								
- Domestic financing of the budget	√	√	√	√	X	√	√	
- Reduction in government domestic payments arrears	X	X	X	X	√	X	X	
Quantitative benchmarks								
- Accumulation of government external payment arrears	√	√	√	√	√	√	√	
- Non-concessional external debt contracted or guaranteed by government with maturities < 1 year	√	√	√	√	√	√	√	
- Non-concessional external debt contracted or guaranteed by government with maturities > 1 year	√	√	√	√	√	√	√	
Indicative targets								
- Total revenue	X	√	√	√	X	√	√	
- Basic budget balance (commitment basis, excl. grants)	√	√	√	√	√	√	√	
- Wage bill								
Structural performance criteria								
- Adoption of the decree specifying the terms for repayment of the savings deposits frozen by the former ONPE.	X							
- Adopt a law or decree establishing a principle for, and defining the modalities of, the full reimbursement of VAT credits to all exporting enterprises.				M				
- Elimination of the ceiling for reimbursement of VAT credits to all exporters.								√
- Reduction of the rate of profit tax from 35 to 30 percent, applicable to profits reported for FY 2009 and for following years.								√
Structural benchmarks								
- Adoption by the Council of Ministers of the MTEF for the infrastructure and transport sectors.	X	X	X	X	X	X	X	X
- Presentation in the budget law for 2009 of the investment programs for the priority sectors of the PRSP for 2009-2012.				X	X	X	X	X
- The Budget Law for 2010 will include a production of the main budget aggregates (revenue and expenditure) for the period 2010-12.								X
- Production by the Ministry of Finance of semi-annual reports on the foreign debt contracted and its terms, and on the borrowing program for the next six months and the terms specified.				√	√	√	√	√
- Publish (or issue) data on budget outturn for 2008, including for the unified list of priority expenditures and the President's Special Program.				√	√	√	√	
- Reduction of the fees for registering a new business in the Register of Commerce at the courts.					√			
Missed (X)	4	2	2	4	4	3	3	3
Total with Available Data (T)	9	8	8	12	12	11	11	6

D: Not met and dropped
M: Not met and modified

Table 4.6. Niger's ex-post compliance with the IMF ex-ante agreed conditionalities (2012-2015 ECF)

	2012				2013				2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Quantitative Performance Criteria												
- Net domestic financing of the budget	X	√	X	X	X	X	X					
- Reduction in government domestic payments arrears of government obligations	√	√	X	X	√	√	√					
Quantitative benchmarks												
- Accumulation of government external payment arrears	√	√	√	√	√	√	√					
- Non-concessional external debt contracted or guaranteed by government with maturities < 1 year	√	√	√	√	√	√	√					
- Non-concessional external debt contracted or guaranteed by government with maturities > 1 year	√	√	X	X	X	X	X					
Indicative targets												
- Basic budget balance (commitment basis, excl. grants)	X	X	X	X	X	√	√					
- Total revenue	X	X	X	X	X	X	√					
- Spending on poverty reduction	X	X	√	√	X	X	X					
Structural performance criteria												
- Adoption by the Council of Ministers of an action plan discussed with IMF staff to provide a sound financial footing for the refinery, including a decision to set ex-refinery prices of petroleum products and crude oil input prices at levels that ensure the profitability of the refinery and the petroleum sector.				√								
Structural benchmarks												
- Compile comprehensive quarterly budget reports on a commitment, payment order, and payment basis, to be submitted to Fund staff within a period of 6 weeks.	X	X	X	X	√	√	√					
- Limit expenditure not authorized in advance to a maximum of 5 percent of committed expenditure, with the exception of debt-service payments and fiscal expenditure related to exemptions.			X	X	√	√	√					
- Complete an inventory of bank accounts held by government entities and agencies.		X	√									
- Give all known importers a tax identification number (TIN) and reserve the code for operators without a tax identification number exclusively for occasional operators, and submit a report on the implementation of this measure.		X	X	√								
- Adoption by the Council of Ministers of a revision of the Investment Code to exclude the possibility of granting exemptions to already-established telecommunication companies when they introduce new technologies.			D									
- Close irregular and dormant bank accounts.			X									
- Complete the interface between the Directorate General of the Budget and the Directorate General of the Treasury and Government Accounting to improve monitoring of the expenditure chain.			X	X*								
- Establish a Treasury single account.				X								
- Quarterly budget allocations will be released no later than four weeks after January 1, 2013 for the first quarter and within two weeks after the start of other quarters.					X	X	X					
- Prepare quarterly cash management and commitment plans that take account of spending ministries' plans for contract awards; the plans will be aligned with one another and updated monthly.					X	X	X					
- Finalize the study to select the path of the pipeline										√		
Ratio (X)	5	6	10	8.5	7	6	5			0		
Total with Available Data (T)	9	11	14	14	12	12	12			1		

Table 4.7. Official requests from Niger to the IMF and corresponding response

Date	Request	IMF Response	Amount to disburse (Million USD)
19/07/2001	Waiver for non-observance and completion of PRGF 1st review	Granted	11
16/01/2002	Waiver for non-observance and completion of PRGF 2nd review	Granted	11
08/08/2002	Waiver for non-observance and completion of PRGF 3rd review	Granted	11
28/03/2003	Waiver for non-observance and completion of PRGF 4th review	Granted	16
21/10/2003	Waiver for non-observance and completion of PRGF 5th review	Granted	7.3
15/06/2004	Waiver for non-observance and completion of PRGF 5th review	Granted	12.4
28/10/2005	Waiver for non-observance and completion of new PRGF 1st review, and augmentation of access to PRGF of 30% of quota	Granted	15.4
05/06/2006	Waiver for non-observance and completion of PRGF 2nd review	Granted	8.7
06/12/2006	Waiver for non-observance and completion of PRGF 3rd review	Granted	8.9
16/05/2007	Waiver for non-observance and completion of PRGF 4th review	Granted	1.4
08/11/2007	Waiver for non-observance and completion of PRGF 5th review, modification of criteria and 5-month extension to complete the 6th review	Granted	1.5
12/05/2008	Waiver for non-observance and completion of PRGF 6th review, and a new 3-year PRGF arrangement	Granted	5.4
03/12/2008	Waiver for non-observance and completion of PRGF 1st review	Granted	5
27/04/2009	Waiver for non-observance and completion of PRGF 2nd review	Granted	5
21/01/2010	Waiver for non-observance and completion of ECF 3rd review	Granted	5
28/02/2013	Waiver for non-observance and completion of ECF 1st review	Granted	16.9
13/03/2014	Waiver for non-observance and completion of ECF 2nd and 3rd review	Granted	34.9

Table 4.8. Summary of the PEFA 2012 assessment results compared to those of 2008

Indicator		Scores 2008	Scores 2012
Credibility of the budget			
PI-1	Aggregate expenditure outturn compared to original approved budget	C	D
PI-2	Composition of expenditure outturn compared to original approved budget	A	C+
PI-3	Aggregate revenue outturn compared to original approved budget	D	D
PI-4	Stock and monitoring of expenditure payment arrears	D+	D+
KEY CROSS-CUTTING ISSUES: Comprehensiveness and Transparency			
PI-5	Classification of the budget	C	C
PI-6	Comprehensiveness of information included in budget documentation	D	C
PI-7	Extent of unreported government operations	B+	B+
PI-8	Transparency of inter-governmental fiscal relations	D+	D
PI-9	Oversight of aggregate fiscal risk from other public-sector entities	C+	C+
PI-10	Public access to key fiscal information	C	C
C. BUDGET CYCLE			
C(i) Policy-based budgeting			
PI-11	Orderliness and participation in the annual budget process	C+	C+
PI-12	Multi-year perspective in fiscal planning, expenditure policy and budgeting	C	B
C (ii) Predictability and Control in Budget Execution			
PI-13	Transparency of taxpayer obligations and liabilities	C+	C+
PI-14	Effectiveness of measures for taxpayer registration and tax, fee, and customs duties assessment	C	C
PI-15	Effectiveness in collection of tax and customs payments	D+	D+
PI-16	Predictability in the availability of funds for commitment of expenditures	C+	B
PI-17	Recording and management of cash balances, debt and guarantees	D+	C
PI-18	Effectiveness of payroll controls	D+	C
PI-19	Competition, value for money, controls in procurement and mechanisms for filing complaints	B	B+
PI-20	Effectiveness of internal controls for non-salary expenditure	C+	C+
PI-21	Effectiveness of internal audit	C	C
C (iii) Accounting, Recording and Reporting			
PI-22	Regularity and timeliness of accounts reconciliation	D	D
PI-23	Availability of information on resources received by primary services delivery units	D	C
PI-24	Quality and timeliness of in-year budget execution reports	D+	C+
PI-25	Quality and timeliness of annual financial statements	C+	D+
C (iv) External Scrutiny and Audit			
PI-26	Scope, nature and follow-up of external audit	D	D+
PI-27	Legislative scrutiny of the annual budget law	C+	B+
PI-28	Legislative scrutiny of external audit reports	C+	D+
DONOR PRACTICES			
D-1	Predictability of direct budget support	D+	D
D-2	Financial information provided by donors for budgeting and reporting on project and program aid	C+	D+
D-3	Proportion of aid that is managed by use of national procedures	D	D

Source: Niger's PEFA 2012 Assessment (IMF, 2013)

Chapter 5. Does Aid Reduce Poverty?

"Yes, we can eradicate extreme poverty, but do we want to..."
(Ravallion 2013)

5.1. Introduction

This chapter attempts to explore the relationship between aid and poverty in Niger at the community level. Analysing the impact of aid is arguably the most important aspect in the aid debate. This has been explored through aid-growth regressions, an approach that assesses the statistical relationship between aid and economic growth and was used as early as the 1970s (e.g. Papanek 1973). Using such methodology, it has been stated that in Niger, ODA has a positive effect on growth (Nafiou 2009), a necessary condition for poverty reduction. This macroeconomic relationship has been quantified –for Niger– as follows: "If foreign aid as a share of GDP were to be permanently increased from the equivalent of 10 percent of GDP in 2007 to 15 percent in 2008, annual economic growth would accelerate by more than 1 percentage point, without generating significant risks for macroeconomic stability" (Farah, Sacerdoti & Salinas 2009, p.3).

A different possibility is to relate aid to an objective other than growth, such as poverty or human development. This methodological approach, which is more 'micro' in nature, has tended to gain favour over the years thanks to the increased availability of data. Poverty may be the variable of highest interest, but due to a lack of reliable internationally comparable poverty data, studies have often used health and education indicators (e.g. infant mortality and illiteracy rates) as proxies for poverty (Alvi, Senbeta 2012). It has been contended that globally, aid has no significant impact on infant mortality, primary schooling ratio or life expectancy (Boone 1996). At the same time, more recently it has been noted that health aid has a statistically significant effect on infant mortality: doubling per capita health aid is associated with a 2 percent reduction in the infant mortality rate (Mishra, Newhouse 2007). It has also been asserted that while NGO aid reduces infant mortality, there is no evidence that bilateral aid reduces infant mortality and illiteracy rates (Yontcheva, Masud 2005). Kosack finds that foreign aid does not itself affect the Human Development Index (HDI), although, when

combined with democracy, aid is positively associated with improvements in HDI (Kosack 2003). This finding, that the impact of aid is influenced by the political regime, is common (e.g. Boone 1996), although not universally accepted. After conditioning on the state of democracy, Arvin and Barillas indicate that in some cases aid disbursement and poverty reduction are not linked (Arvin, Barillas 2002).

The studies identified relate to global samples over large periods of time, e.g. 97 developing countries from 1971 to 1990 (Boone 1996), 79 countries from 1981 to 2004 (Alvi, Senbeta 2012) or 58 countries from 1990 to 2001 (Yontcheva, Masud 2005). Under such a structure the use of average income, health and education indicators neglects within-country distributional aspects, i.e. even if there is an increase in per capita income or reduction in infant mortality due to aid, it remains unclear whether the poor are the beneficiaries of development assistance (Alvi, Senbeta 2012). To address this, Alvi and Senbeta assess the role of aid in poverty reduction after controlling for average income, redistribution components of changes in poverty and a set of covariates identified as growth-enhancing policies and institutions. Their results suggest that foreign aid is associated with declines in poverty as measured by poverty rate, poverty gap index and squared poverty gap index (Alvi, Senbeta 2012).

Case studies on individual countries have also been suggested as a way to capture idiosyncratic characteristics that may affect the relationship between aid and poverty (Arvin, Barillas 2002). For instance, economists often neglect the fact that people benefit from development projects from sources other than aid (e.g. Government, civil society, etc.). This neglect may be rooted in lack of data on development projects' funding, but its consequences are important: coordination is one of the five pillars of the Paris Declaration for Aid Effectiveness (OECD 2006) and its lack leads to fragmentation, which is linked to duplication of efforts and wasting of resources (OECD 2012). In Niger, the monitoring of the Paris Declaration shows that progress has been elusive: only one of 13 targets were achieved between 2005 (baseline) and 2010, and some indicators actually deteriorated (Table 5.1 in annex).

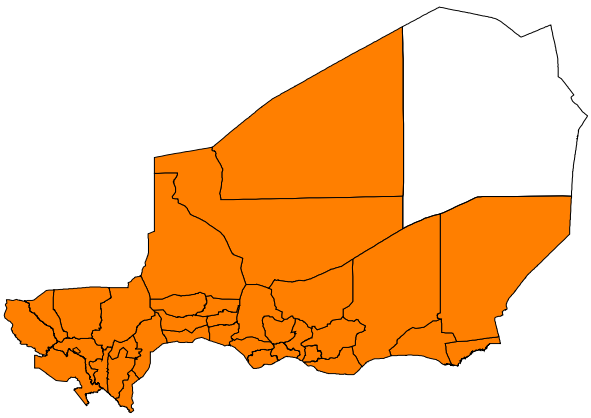
Some Sub-Saharan countries have been the object of much research with regard to the aid they receive. For example, the impact of aid in Uganda has been analysed under several lenses: its political economy (Oloka-Onyango, Barya 1997, the effects of its environmental programs (Kateregga 2013), its ability to lead to democracy relative to other countries (Hearn 1999), or its capacity to reach the final beneficiaries, e.g. an evaluation of a grants-transfer program to schools found that between 1991 and 1995, on average the schools received only 13 percent of the grants (Reinikka, Svensson 2004). Generally, however, studies linking aid and poverty at a country level are scarce. A survey of all work done shows that Niger has been conspicuously

under-researched at a micro level, considering either aid's effect on poverty or any other dimension. The few exceptions consist in qualitative studies (Sambo 2009) and field project descriptions (Rossi 2006). This lack of attention is rather surprising given that it is one of the poorest countries in the world. As an attempt to reduce this void, this chapter explores the relationship between aid and poverty in Niger.

5.2. Data and Methodology

This section describes available data, research hypotheses and the methodological approach adopted. Data are from a National Survey on Household Living Conditions (ENCVM)[64] undertaken in 2005 by Niger's National Statistics Institute (INS)[65]. The objective of the ENCVM was to evaluate poverty. Its methodology was that of Core Welfare Indicators Surveys (INS Niger 2007).[66] The survey targeted ordinary Nigerien households except those of diplomatic personnel. It covered the entire national territory with the exception of the department of Bilma due to cost–accessibility reasons (INS Niger 2007): Bilma is situated in the North-East of the country, in the Sahara desert, and hosts only 0.2% of the population, mostly nomads (Figure 5.1).

Figure 5.1. Coverage of Niger's ENCVM 2005 (in orange), with Bilma uncoloured



The ENCVM's sampling methodology was stratified at 2 levels. First, each of the 7 regions was divided in 2 sub-regions (urban and rural), which led to 14 strata plus the capital, or 15

[64] *Enquête Nationale sur les Conditions de Vie du Ménage 2005 (ENCVM)*
[65] *Institut National de la Statistique (INS)*
[66] *Questionnaire des Indicateurs de Bien Etre de base (QUIBB)*

strata in total.[67] Next, primary sampling units (*zones de dénombrement*, ZD) were selected from each stratum, proportional to their size in number of households. In total 335 ZDs were selected and 20 households were sampled per ZD, which led to a sample of 6,700 households. Of those, ten households could not be surveyed because they were nomadic, which led to the final sample of 6,690 households. The equivalence between households and individuals is given by survey weights (INS Niger, Banque Mondiale 2006). According to this sample, the country's population was estimated at 12,627,063 people. The ENCVM questionnaire contained four modules: general household characteristics such as general education or health; income and expenditures; savings and credit; and community perception and activities.

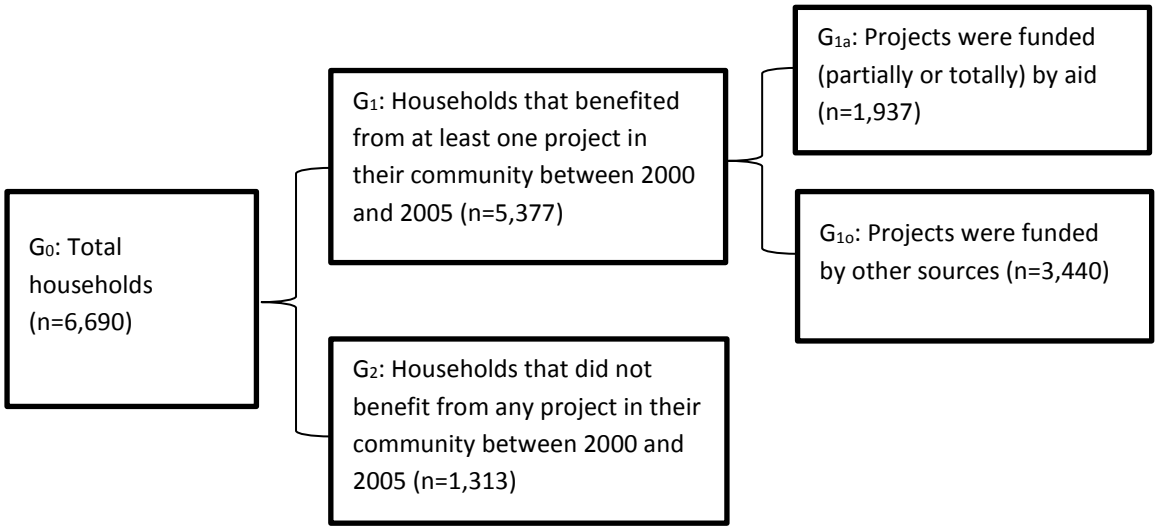
The community module collected data on the development projects which households saw implemented in their community between 2000 and 2005. Key selected questions are shown in the annex (Figure 5.3). Households were asked if any development project had taken place in their community; if so, what it consisted of, who funded it, and how much the household's living conditions improved as a result. Data were also collected on the change in access to education, health, water, electricity and justice during the period of reference. Poverty was explored in the ENCVM objectively and subjectively. Objectively, households were asked to quantify their expenditures, which allowed the estimation of the country's national poverty level: a person was considered poor if his/her annual expenditures were equal to or lower than 144,750 FCFA (275 USD) in an urban environment, and 105,827 FCFA (201 USD) in a rural setting (INS Niger, Banque Mondiale 2006).[68]

Based on this poverty line, 62.1% of the country's population was estimated to be poor (INS Niger, Banque Mondiale 2006). Subjectively, households were asked to self-evaluate their poverty level in 2000 and in 2005, on a Likert scale from 0 (wealthiest) to 9 (poorest). This allows for a calculation of the change in their self-assessed poverty. The frequency distribution of poverty for both years is shown in the annex (Figure 5.4 and Figure 5.5). The relationship between objective and subjective poverty in 2005 is robust despite the existence of outliers (Figure 5.6).[69] Households' expenditures and their self-assessed poverty in 2005 are significantly correlated, with the cut-off of 6 in the Likert scale being the best match, i.e. objectively-poor households tend to self-evaluate their poverty between 6 and 9 (INS Niger, Banque Mondiale 2006).

[67] Niger's capital is administered separately, referred to as the "*Communauté Urbaine de Niamey*"
[68] Exchange rate used is 1 USD = 526.3 FCFA (as of 16 December 2014)
[69] Few wealthy households stated that they are poor (no poor households claimed to be wealthy).

Impact evaluation is performed by comparing a group or subject that has been exposed to a specific intervention (treatment group) with one that hasn't (control group). In this setting, the structure of the groups is depicted in Figure 5.2. The treatment group is composed of households who benefited from at least one aid-funded development project (G_{1a}), while the main control group is composed of those households who did not (G_2+G_{1o}). The control group thus defined comprises two sub-groups: households who did not benefit from any project at all (G_2), and those who benefited from projects by sources other than aid (G_{1o}).

Figure 5.2. Overall scheme of this research (n denotes number of households with available data)



The objective is to assess if households who benefit from aid projects (G_{1a}) show significant changes in poverty relative to i) those who do not benefit from aid (G_2+G_{1o}), ii) those who benefit from no project at all (G_2), and ii) those who benefit from 'non-aid' development projects i.e. those provided by other sources such as Government, civil society, etc. (G_{1o}). Formally, the null and alternate versions of the research hypothesis are stated in equations (5-1) to (5-2):

$$H_0: PC_A - PC_C = 0 \quad (5\text{-}1)$$

$$H_1: PC_A - PC_C \neq 0 \quad (5\text{-}2)$$

Where:

PC_A: Poverty change of households that benefited from aid projects (group G1a)

PC_C: Poverty change of households in control group (for the 3 different groups noted)

This research setting and available data offer several key advantages. First, it is possible to discriminate between development projects in general (i.e. regardless of funding source[70]) and those development projects funded by aid.[71] Furthermore, the sample of households is large and appears representative of the country's population. Third, although the ENCVM data is mainly cross-sectional, there are variables with information about changes in time, so in addition to cross-sectional analysis it is possible to estimate differences-in-differences. Similarly, consistency checks between objective and subjective poverty indicators are possible. Moreover, it is possible to distinguish between aid projects funded solely by aid or co-funded with other donor types, which is useful when exploring any differences induced by coordination between donors. Finally, although the number of projects was not explicitly requested, it can be calculated from the data. Consequently, while the hypothesis is formulated under a discrete approach (project – no project), the same framework can be used to assess whether the number of projects is associated with changes in poverty.

There are some underlying assumptions to bear in mind. It is assumed that all aid projects are equal (i.e. their alleged effect on poverty is uniform), an assumption that will be relaxed in the next chapter.[72] It is also assumed that when a community benefits from a project, all the households therein do so equally (there is no obvious justification to think otherwise). Third, the effect of projects is assumed to be somewhere between immediate and within 5 years, which is plausible, especially with a subjective poverty measurement, because people tend to forget the very long run; e.g. the effect of a project undertaken 20 years ago would be zero. Finally, the definition of what a community is was not explicitly given in the survey; as several households may benefit from a given project, the inclusion of primary sampling units (ZD) as clusters is appropriate.

From the perspective of relative deprivation, it may be argued that a household's self-perception of poverty can be influenced by the poverty in the community where that household resides. The analysis also takes this possibility into account.

In terms of methodology the available data offer several options. Considering only its cross-sectional nature, a simple OLS regression may be used to express the poverty of households as

[70] Besides aid the options in the ENCVM were government, Special Program of the Republic's President, community, private investor, religious community, other. Differences between them are analysed in Chapter 6.
[71] Throughout the chapter, projects are consistently referred to as falling into the following categories: development projects (all projects regardless of funding source), projects from other sources, aid projects (those implemented by an aid donor, and which may be co-funded or not), and aid-only projects (aid projects funded only by aid).
[72] Admittedly this may be a limitation, but the available dataset does not include data on the size of the projects.

a linear function of a number of variables (e.g. education, being in a rural setting, etc.) denoting these variables by a vector X_{ji} as follows:

$$p_i = \alpha + \beta_j X_{ji} + e_i \quad (5\text{-}3)$$

Where p_i is the poverty level of household i, α is an intercept, X_{ji} is the vector of explanatory variables j relating to household i, and e_i is the error term for household i. Adding a dummy variable for aid that would take a value of 1 (treatment group) or 0 (control group) yields an OLS equation for impact evaluation (5-4):

$$p_i = \alpha + \beta_1 \mathrm{aid}_i + \beta_j X_{ji} + e_i \quad (5\text{-}4)$$

In this case, households that benefited from aid projects (i.e. aid=1) are compared with those in the control group, keeping other factors (X_{ij}) constant. More interestingly, it is also possible to add a continuous variable instead, with the number of aid projects household i benefited from (aid projects), which would take a value of zero if household i does not belong in the group G_{1a}:

$$p_i = \alpha + \beta_1 \mathrm{aidprojects}_i + \beta_j X_{ji} + e_i \quad (5\text{-}5)$$

For OLS to be valid two key assumptions are: that the right-hand side variables excluded from the model (which by being excluded would fall into e_i) not be correlated with the explanatory variables included; and that they do not differ between program participants (aid=1) and non-participants (aid=0). These two conditions may prove unrealistic when dealing with interventions to tackle poverty. First, because as poverty is multidimensional it may be difficult to include all the control variables, which would cause omitted variable bias. And second, given the potential purposive targeting of aid projects, treatment and control households are not expected to be comparable ex-ante, so endogeneity may arise due to reverse causality (i.e. projects may influence poverty but poverty may also influence projects).

One way of dealing with such endogeneity is to use an instrumental variable (IV). This technique recognizes that at least one explanatory variable, x, may be correlated with the error term, or $\mathrm{cov}(x,e) \neq 0$. The solution is to find an additional variable, or instrument z, which is not an explanatory variable by itself and is correlated (as highly as possible) with x but uncorrelated with the error term, so that $\mathrm{cov}(z,x) \neq 0$ and $\mathrm{cov}(z,e) = 0$. An IV may reduce the problem, but at the cost of efficiency because IV estimators show higher standard errors. In some cases the trade-off is such (e.g. if the instrument is very weak) that it may still be preferable to use OLS. The instrument chosen here is "Is anybody in the household a member of a community development association? (1: yes, 0: no)", which is assumed to be uncorrelated

with the error term and is not an explanatory variable itself. If members of development associations have any influence in attracting aid projects, the proposed IV would be statistically associated with benefiting from aid, and there is no obvious reason to believe that households in which any of the family members is a member of a development association are different from regular households in terms of aid impact. This IV is statistically associated with the main key variable, i.e. having benefited from an aid project, as will be shown in the section on results.

The panel character of the ENCVM data is particularly useful in exploring whether poverty change is related to aid projects. Using the subjective poverty measurements, we can calculate the poverty change of household i as the difference between its poverty level in 2005 and in 2000:[73]

$$pc_{i(05-00)} = p_{i(2005)} - p_{i(2000)} \tag{5-6}$$

In the new variable, a higher positive value means more poverty while higher negative values indicate less poverty. Values range from -9 (a household is self-assessed as among the wealthiest in 2005, while in 2000 it was among the poorest) to 9 (a household is self-assessed as among the poorest in 2005 while it was among the wealthiest in 2000). The frequency distribution of the variable thus calculated is shown in the annex (Figure 5.7).

In an ideal experimental setting, treatments would be randomly assigned (which would allow us to make causal inferences) and so would the experimental units (which would ensure the results are generalizable to the population). Thus, selection bias would be assumed to be zero because subjects in the treatment and control groups are statistically equal; if the two groups are statistically identical ex-ante but after the intervention they differ in some characteristic that can be linked to the intervention, the difference ex-post is expected to be caused by the intervention. In such a setting, the Average Treatment Effect (ATE) can be estimated as the difference-in-differences (Wooldridge 2012):

$$\text{ATE} = \left(\bar{p}_{05,\text{aid}} - \bar{p}_{05,c}\right) - \left(\bar{p}_{00,\text{aid}} - \bar{p}_{00,c}\right) \tag{5-7}$$

Where $\bar{p}$ denotes the mean poverty level, the subscripts 05 and 00 refer to years 2005 and 2000, aid refers to the group of households that benefited from aid and c is the control group(s). Equation (5-6) is valid when all other factors are expected to be similar, however. As noted, in the current setting that is not plausible owing to the purposive nature of aid projects, which means that control variables must be included. To have a clear understanding of a model

[73] The subjective measure of poverty must be used, as data on objective poverty in 2000 were not available.

specified in differences, and which includes control variables, we can re-write the model that explains the poverty level, equation (5-4), indexing it with time as:

$$p_{it} = \alpha + \beta_1 aid_{it} + \beta_j X_{jit} + e_{it} \quad (5\text{-}8)$$

Taking the same equation (5-8) one time period earlier yields:

$$p_{i(t-1)} = \alpha' + \beta'_1 aid_{i(t-1)} + \beta'_j X_{ji(t-1)} + e'_{i(t-1)} \quad (5\text{-}9)$$

The parameters in equation (5-9) are indicated by an apostrophe to show that they are a sample of the same process (poverty) one period earlier. Subtracting equation (5-9) from equation (5-8) and renaming $\alpha - \alpha' = \phi$ and $e_{it} - e'_{i(t-1)} = \nu_i$, yields equation (5-10):

$$pc_{it(t-1)} = \phi + [\beta_1 aid_{it} - \beta'_1 aid_{i(t-1)}] + [\beta_j X_{jit} - \beta'_j X_{ji(t-1)}] + \nu_i \quad (5\text{-}10)$$

This equation explains the change in poverty on the change in two groups of explanatory variables: one relating to aid and the other composed by controls. With regard to the first, taking a 5-year period (a lustrum) as the difference between t and t-1, the change in poverty is explained by having benefited from an aid project undertaken between 2000 and 2005. Regarding the control variables, there are several options:

First, if all $X_{jit} = X_{ji(t-1)}$, this would be the case of Fixed Effects (FE); X_{ji} is constant over time and therefore would disappear taking first differences. Then, all the variance of the dependent variable would be accounted for by ϕ, aid, and the error term.

Secondly, if $\beta_j = \beta'_j$ and $X_{jit} \neq X_{ji(t-1)}$, then the effect of control variables becomes $\beta_j[X_{jit} - X_{ji(t-1)}]$. In this case, the model is estimated using ΔX_{jit}, or difference-in-differences.

Finally, it is possible that $\beta_j \neq \beta'_j$ and $X_{jit} \neq X_{ji(t-1)}$. The estimation requires data on $X_{ji(t-1)}$, so if variables pertaining to the true model are not available (i.e. equation is estimated only with X_{jit}), the information of $X_{ji(t-1)}$ will be included in ν_i, this would be problematic because X_{jit} is likely to be correlated with $X_{ji(t-1)}$ and therefore would lead to endogeneity. In this research, this would be equivalent to including as control variables the values of X_{ji} in 2005, effectively assuming $X_{ji(2000)} = 0$ when $X_{ji(2000)} \neq 0$.

It is not possible to determine exactly which scenario is most applicable, for that requires knowing $X_{ji(2000)}$ and β'_j. However, it is likely that in a 5-year framework a combination of the three cases is given, as in equation (5-11): some control variables are likely to change (e.g. education) and therefore first differences, $\Delta X_{ji(05-00)}$, would be adequate; other variables are more likely to remain constant, e.g. whether a household lives in a rural setting; finally, it is

also possible that for some variables X_{ki}, the value in 2000 was zero, so it would be correct to include their value in 2005 in the model.

$$pc_{i(05-00)} = \phi + \beta_1 aid_{i(05-00)} + \beta_j \Delta X_{ji(05-00)} + \beta_k X_{ki05} + \nu_i \quad (5\text{-}11)$$

5.3.Results

Selected statistics of interest are shown in the annex (Table 5.2), which includes variables already identified as being associated with poverty in Niger (INS Niger, Banque Mondiale 2006). In 2005, 62.1 percent of the country's population was poor, most lived in rural areas (only 16.8 percent of households were urban), and the mean annual expenditure per capita was 124,740 FCFA or approximately 237 USD. With regard to development projects, 82.1 percent of the population were reached by at least one between 2000 and 2005, while aid projects reached 31.7 percent of the total population. The average Nigerien household saw 2.6 development projects in its community, compared to 3.6 projects for households reached by aid. This means that aid projects complement projects from other sources; indeed, of all aid projects, only 27.8 percent were funded by aid alone, the other 72.2 percent were co-funded.[74] Results of t-tests for a comparison of means between the G_{1a} and (G_2+G_{1b}) groups show that households benefitting from aid tended to be rural, to have lower household expenditures per capita and more often to be objectively poor (64.9 percent vs. 60.8 percent).

Table 5.2 also shows that in 2005, aid-receiving households self-assessed themselves as poorer on a scale from 0 to 9 (means of 6.208 vs. 6.074). However, in 2000 they were wealthier (means of 5.19 vs. 5.295), which implies a deterioration of their economic situation over time (Poverty Change = 1.018 vs. 0.779). In terms of the change in poverty across groups, an equality of variance test shows a p-value of 0.0294 (the null hypothesis of equal variances can be rejected at 5% significance). Considering unequal variances, the difference in their means is statistically significant. Furthermore, in 2005 treatment households consider their communities to be wealthier than households who did not benefit from aid (5.814 vs 5.960). Between treatment and control groups there are no statistically significant differences in terms of the gender of the household head or the household size. Most of the variables, however, show differences that are statistically significant. This is the case for education, where differences are large at the level of secondary education, professional/technical qualification and university (Table 5.4). Regarding the marital status of the household head, the most

[74] Conversely, if households that benefited from aid saw fewer projects on average than the general Nigerien household, it would suggest that aid projects substitute projects from other sources.

remarkable difference is that aid beneficiaries have higher rates of polygamous marriages (Table 5.5).

The differences identified across groups might be interpreted as evidence of poverty targeting. However, these differences relate to 2005. Incidence of aid projects and poverty levels in 2000 show correlation coefficients implying that, if anything, households that were wealthier in 2000 benefited from projects more often (Table 5.3). This applies to all development projects, aid projects, aid compared to no project and aid compared to other projects (Table 5.3). The only case in which households that were poorer in 2000 seem to have benefited more from aid is when aid was the only source of funding, which may imply that aid-only projects are more likely to target the poor (Table 5.3).

The distribution of aid projects' incidence is very positively skewed (Figure 5.8), and strong differences across the country's regions are clear (Figure 5.9). In terms of the number of projects, the relationship between number of aid projects and poverty change may fit a non-linear plot (Figure 5.10).

Table 5.6 in the annex shows an OLS regression of households' subjective poverty level in 2005. Explanatory variables include having benefited from at least one aid project and other controls (columns 1-4). Again, the main result is that households that are poorer in 2005 are positively associated with aid projects. Households in poorer communities and those who self-assess themselves as poorer in 2000 consider themselves poorer in 2005, which is consistent with the common perception that poverty is sticky. Education of household heads is negatively associated with poverty, although not at all levels: it starts being statistically significant with a high school degree and the coefficients rise progressively to reach the highest coefficient for those who hold a university degree. This is consistent with the extreme scarcity of human capital in Niger.[75] It is also worth noting that households in Zinder are less poor than those in Agadez. Indeed, the Zinder region has a number of benefits; it enjoys less harsh climatic conditions, is located in an important peanut producing region and is at the crossroads of the East-West road through Niger to Chad, and North-South route from Agadez to Kano (Nigeria).

The specification in columns (5-8) compares households that benefitted from aid (G1a) with the sub-group households who saw no project at all during the period 2000-2005 (G2). In this case, aid projects do not increase or reduce households' poverty. Depending on the specification, households who were consulted about the projects to be undertaken in their community showed lower levels of poverty (columns 6-7). Other results are similar to those in

[75] For more details see Chapter 2.

columns (1-4), although now older household heads are poorer, and urban households do not show higher levels of poverty than rural households.

A third group of interest is composed of households who benefited from development projects funded by other sources (G1b). The estimation is shown in columns (9-12) of Table 5.7. Remarkably, households benefiting from aid are poorer than those households who have benefited from other projects. In this instance, consulting households is not significant at all, which may suggest that the key feature is not so much what donor the project came from, but the information on the necessary interventions to carry out: projects coming from sources other than aid are national, and therefore they allegedly understand local realities better, which has been noted in the implementation of projects in Niger at the grassroots level (Rossi 2006). The geographical dimension becomes important, and households in all regions are consistently less poor than those in Agadez, a vast poor region in the Sahara Desert where only 67 of the total 1,937 aid projects were implemented.

Aid-only projects are compared to those that were co-funded in columns (13-16) of Table 5.7, and there are no differences between them. This suggests that with regard to households' poverty in 2005, aid donors who undertake projects on their own are not more or less efficient than those co-funding.

Table 5.8 shows the initial model of columns (1-4), but now an instrumental variable (IV) is chosen instead of the aid project dummy. The IV is "Is anybody in the household a member of a community development association? (1: yes, 0: no)", which as noted earlier is not an explanatory variable itself and is assumed to be uncorrelated with the error term. The IV shows a correlation coefficient with having benefited from an aid project (group G1a) vs the opposite (G2+G1b) of 0.14, significant at 99 percent confidence. The first-stage estimation in columns (21-24) confirms that the relationship is robust to the inclusion of control variables (Table 5.8). The 2SLS results show that the association between aid and poverty level is insignificant (columns 17-20), with a p-value of 0.539. To compare the IV and OLS estimates, results of the Hausman test are shown (Table 5.9). The null hypothesis that the difference in coefficients (between IV and OLS estimators) is not systematic cannot be rejected, therefore OLS is preferred because it is more efficient.

The relationship between poverty level and the number of aid projects, instead of the discrete approach, is also estimated (columns 25-28 in Table 5.10). Visibly, the relationship is non-linear: the number of aid projects is associated with higher poverty levels but at a decreasing return. The other results are broadly similar: education is negatively associated with poverty, and poorer households in 2000, those in urban areas and those in poorer communities

consider themselves to be poorer. Columns (29-32) show that with regard to aid projects, aid-only projects are not associated with poverty in 2005 compared with co-funded projects (Table 5.10).

Next, change in poverty is regressed under the discrete approach on having benefited from aid (G1a vs G2+G1b), control variables in change, and other control variables that are less susceptible to change in 5 years, which are progressively added in the 2005 level (Table 5.11). Benefiting from aid is associated with an increase in poverty (columns 33-36). Considering change in explanatory variables, those households who state that access to justice has improved are significantly less poor than those who say it has deteriorated (the reference group), although access to water also statistically significant—is not required to have changed. Households who live in poorer communities and urban areas have become poorer, while more education in 2005 is a factor strongly associated with greater reductions in poverty. The coefficient of households' poverty in 2000 shows that the poorer a household was in the past, the less its poverty has increased, i.e. given a very bad baseline, things do not get much worse.

Disaggregating the main control group, we can see that with regard to the second control group (no project at all, G2), there is no association between aid and poverty change (columns 37-40). Again, this means that the overall association between aid and poverty change must be driven by the comparison between aid projects and other funders' projects. Results for other control variables are similar, although specific characteristics of household heads denote the possibility of social exclusion (e.g. being older or widowed divorced or separated).

Considering the third control group (G1b), households who benefited from aid were left relatively worse off than those who benefited from a project from a different source (columns 41-44 in Table 5.12). Benefiting from projects that are funded by aid only (vs co-funding) shows no significant statistical relationship to poverty change (columns 45-48).

Finally, poverty change is regressed on the number of aid projects and explanatory variables in differences and level (Table 5.13). Once again, the number of aid projects suggests a non-linear relationship with a change in poverty (columns 49-52). And again, households who consider access to justice has improved see negative increases in poverty. The other results are similar to the other models and specifications (e.g. household's poverty in 2000, community's poverty, etc.). As in previous models, relative to co-funding, aid-funding alone is not associated with improvements or deteriorations in poverty (columns 53-56).

Fitting the four models estimated with poverty to the number of aid projects (Table 5.10 and Table 5.13) allows for a graphic interpretation of the results (Figure 5.11): considering all aid projects, poverty stays stable (and if anything increases slightly) up to around 10 projects.

At that level, it starts decreasing as households benefit from more aid initiatives. The 'breakeven' is reached at about 18 projects, i.e. at that moment households self-assess as having improved relative to their initial situation. Interestingly, however, the pattern of the graphs is positively-sloped when aid-only projects are considered. Although the slope is very close to zero, this may suggest that collaborating with national partners plays a critical role, i.e. it is not guaranteed that an aid donor adding more projects on its own will ever reach the threshold at which poverty starts to decline. The residuals of the models estimated with number of projects are normally distributed around zero (Figure 5.12).

5.4. Conclusion

Given the evidence presented, the null hypothesis that aid projects are associated with reductions in households' poverty, is rejected. If anything, the findings suggest the opposite. In 2005, households who benefited from aid between 2000 and 2005 are poorer. This is not due to the purposive poverty targeting of aid, but because households who benefited from aid have become poorer. Disaggregating the control group in two sub-groups is vital to shed light on this: relative to households who received no project, aid projects are not significantly associated with changes in households' poverty. The overall result is driven by the second group instead, which means that households benefiting from aid are poorer relative to households who benefit from other donors' projects.

What could explain such a result? Projects that are funded by aid alone are not associated with improvements or deteriorations in poverty relative to co-funded projects (which may be surprising given that donor coordination in Niger was poor in 2005). However, the pattern of poverty reduction as a function of the number of aid projects becomes slightly positively-sloped when aid-only projects are considered, which suggests that collaborating with national partners may enhance the impact of aid projects. Given the significance of consulting households in some cases, the key may lie in information and knowledge about local conditions: projects coming from sources other than aid are national, and therefore understand local realities better, which is in line with the (scarce) descriptions of Niger's aid interventions (Rossi 2006).

To reduce poverty (or at least its self-perception), it is necessary to go beyond the threshold at which cross-sector synergies appear. Keeping the quality of projects constant, that threshold is estimated at 10 projects; 18 for households to be better off than 5 years earlier. Such a high number is insightful: poverty is sticky and multidimensional, as it can be determined by such factors as governance, family background, distance to public services or trade corridors,

education or bad luck. Given this complexity, aid projects must reach a critical mass to create synergies across different dimensions and reduce poverty: for someone in a rural context such as Niger's *brousse*, just a few projects such as fixing the nearby school, a new well or a veterinary service will not be enough; not when that person still has so many other challenges, e.g. has to feed a family of 10, cannot find a qualified job due to illiteracy, is often sick, has no access to financial services, no access to fertile land, etc.

The findings support the idea that there is a minimum number of home-grown interventions required to achieve the economies of scale that lead to poverty reduction. For aid donors, this may arguably entail a different role, e.g. more in line with budget support than with the traditional aid parallel structures for project implementation.

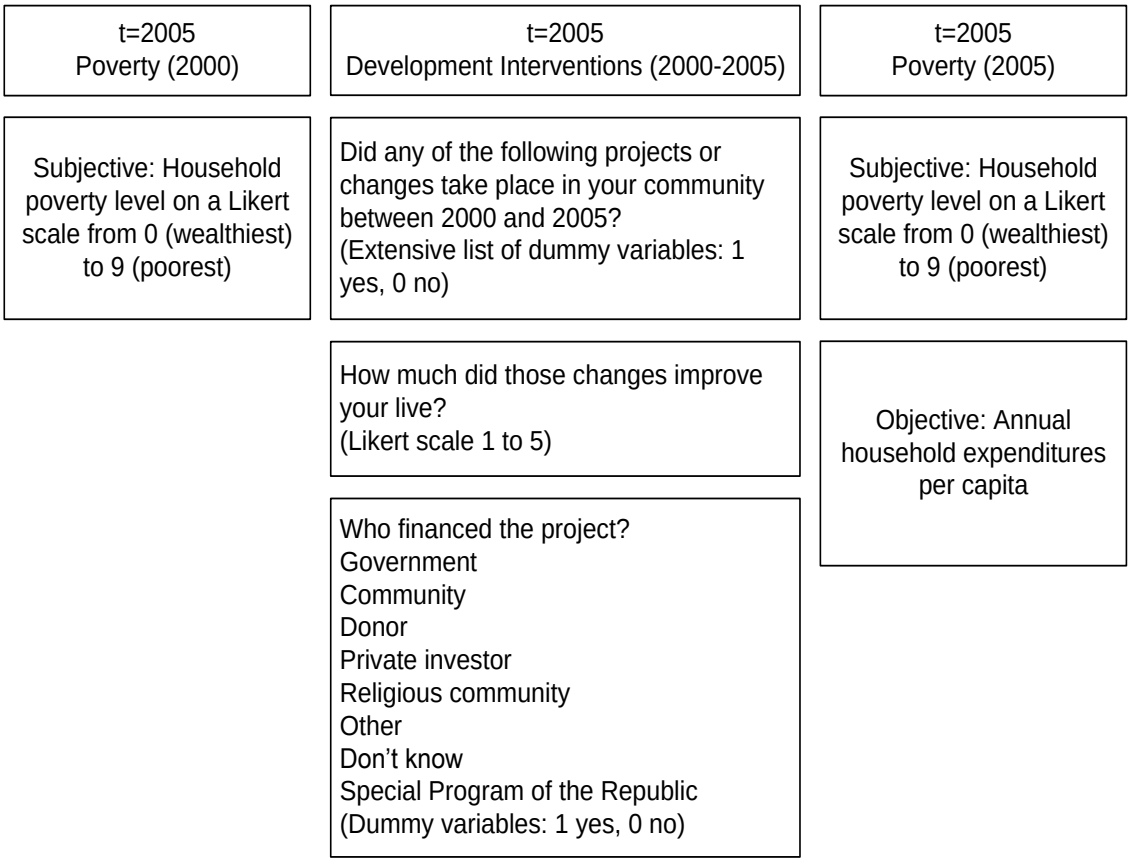
5.5. Annexes

Table 5.1. Monitoring indicators of the Paris Declaration on Aid Effectiveness for Niger[76]

Indicator	2005	2007	2010	Target 2010
Operational development strategies	C	C	C	> C
Reliable Public Financial Management (PFM) systems	3.5	3.5	3.5	4
Reliable Procurement systems	N/A	B	N/A	No target
Aid flows are aligned on national priorities	99%	91%	85%	100%
Strengthen capacity by co-ordinated support	15%	50%	55%	50%
Use of country Public Financial Management systems	27%	26%	29%	51%
Use of country procurement systems	49%	37%	23%	No target
Strengthen capacity by avoiding parallel Project Implementation Units (PIU)	52	47	53	17
Aid is more predictable	73%	78%	72%	87%
Aid is untied	85%	76%	84%	> 85%
Use of common arrangements or procedures	31%	49%	41%	66%
Joint missions to the field	21%	15%	3%	40%
Joint country analytic work	40%	32%	34%	66%
Results-oriented frameworks	D	D	C	> C
Mutual accountability	NO	NO	NO	YES

Source: (OECD 2012)

Figure 5.3. Key questions of interest in the ENCVM 2005[77]



[76] No data are available after 2010.
[77] t denotes when the questions were asked, while the year to which the information relates is in parenthesis.

Figure 5.4. Frequency distribution of subjective poverty in 2000, with normal density plot

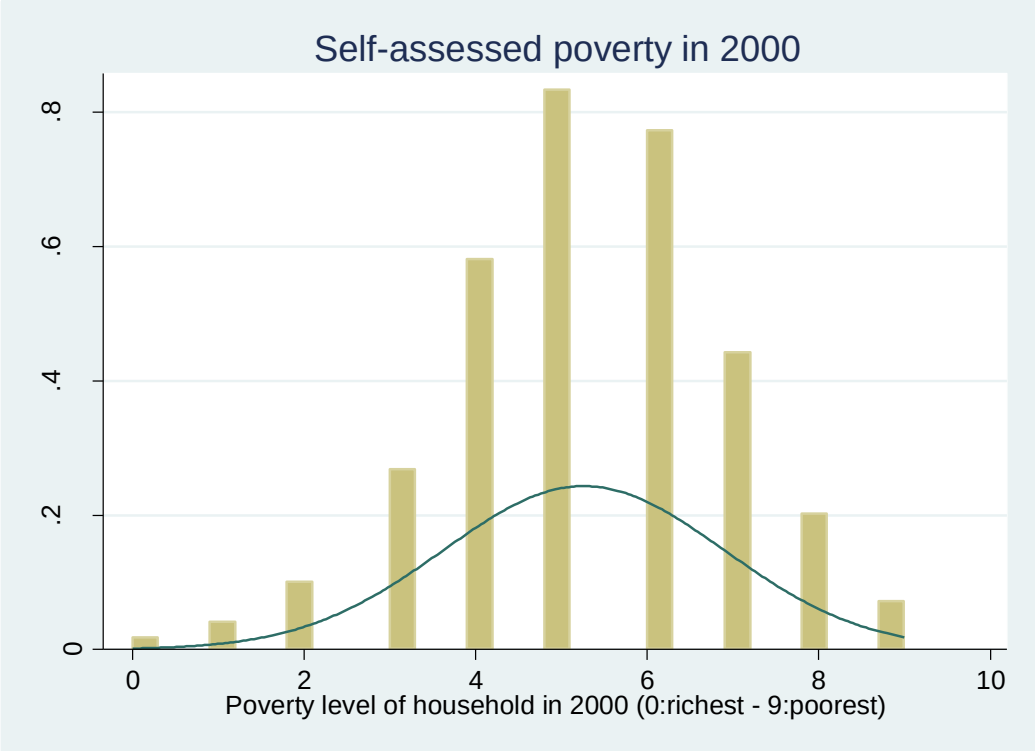


Figure 5.5. Frequency distribution of subjective poverty in 2005, with normal density plot

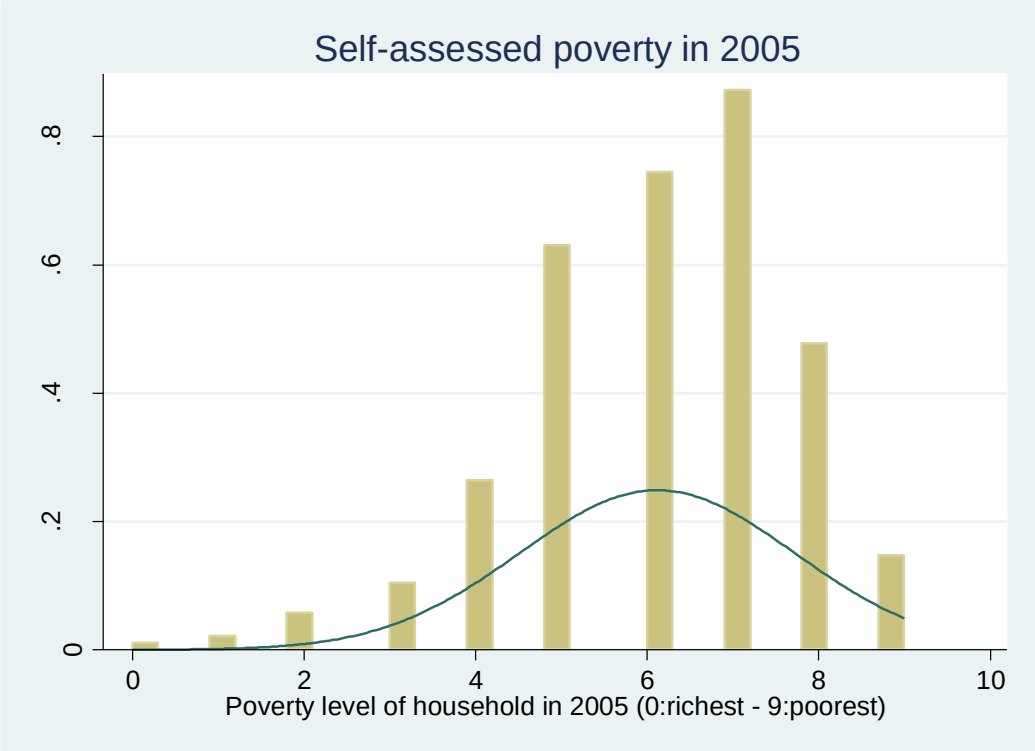


Figure 5.6. Fitted linear relationship between self-assessed poverty and expenditures per capita (FCFA)

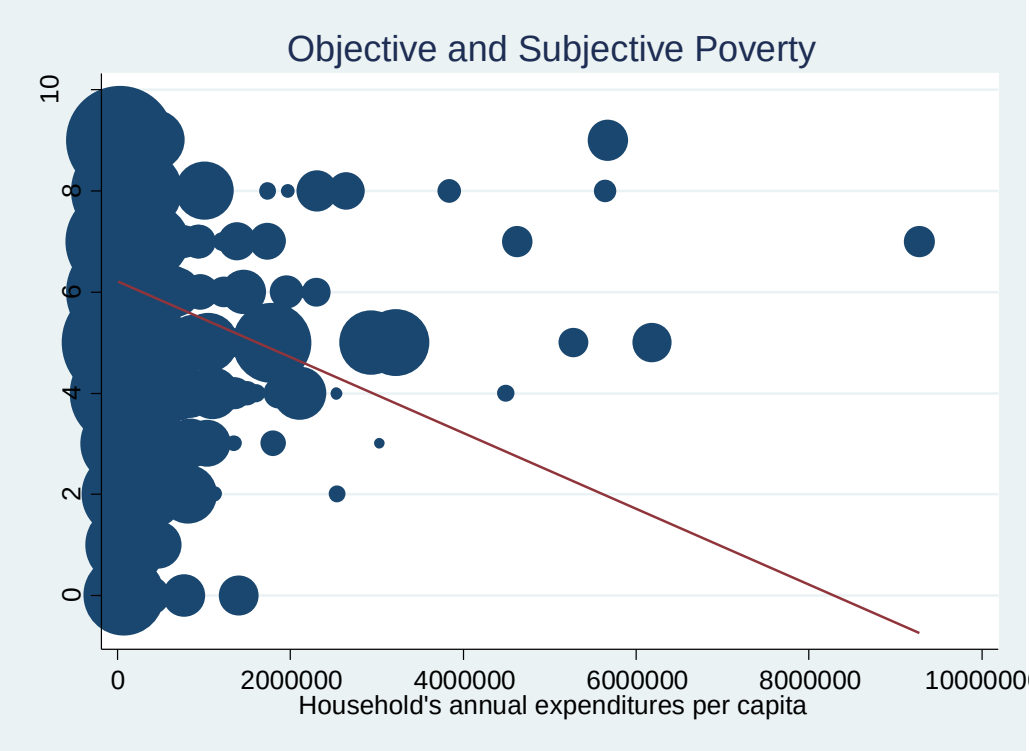


Figure 5.7. Frequency distribution of "Poverty change 2005–2000" with normal density plot

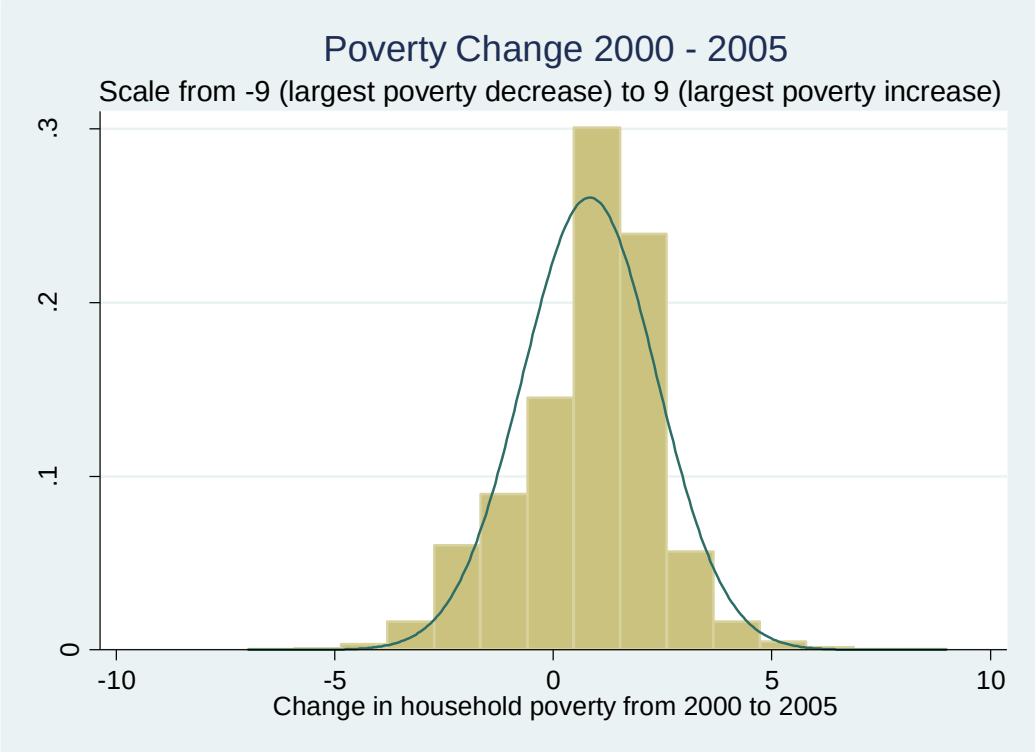


Table 5.2. Summary statistics of key variables for all households (a), those benefited from a development project (b) and those who did not (c)[78]

	All households (G_0)					Aid-project households= Yes (G_{1a})					Aid-project households=No (G_2+G_{1b})					t-test
	n	mean	s.d.	min	max	n	mean	s.d.	min	max	n	mean	s.d.	min	max	p-value[79]
HH's poverty level in 2000 (0: wealthiest to 9:poorest)	6,679	5.262	1.64	0	9	1,936	5.19	1.562	0	9	4743	5.295	1.674	0.0	9.0	0.051
HH poverty level in 2005 (0: wealthiest to 9:poorest)	6,689	6.116	1.603	0	9	1,937	6.208	1.479	0	9	4752	6.074	1.656	0.0	9.0	0.009
Poverty change 2000-2005	6,679	0.854	1.535	-7	9	1,936	1.018	1.515	-6	8	4,743	0.779	1.534	-7.0	9.0	0.000
HH is objectively poor in 2005 (1:yes, 0:no)	6,690	0.621	0.485	0	1	1,937	0.649	0.477	0	1	4753	0.608	0.488	0.0	1.0	0.007
Community's poverty level (0: wealthiest to 9:poorest)	6,678	5.914	1.616	0	9	1,935	5.814	1.515	0	9	4743	5.960	1.658	0.0	9.0	0.006
Urban (1:yes, 0:no)	6,690	0.168	0.374	0	1	1,937	0.118	0.322	0	1	4753	0.191	0.393	0.0	1.0	0.000
HH head female (1:yes, 0:no)	6,690	0.046	0.209	0	1	1,937	0.042	0.2	0	1	4753	0.048	0.213	0.0	1.0	0.269
HH head age	6,690	46.604	14.194	15	99	1,937	45.765	13.726	17	99	4753	46.993	14.390	15.0	99.0	0.008
HH Size	6,690	8.389	4.457	1.0	31.0	1937	8.307	4.130	1.0	28.0	4753	8.427	4.600	1.0	31.0	0.514
HH total annual expenditure per capita (thousand FCFA)	6,690	124.7	207.7	6.9	9,277.6	1,937	112.2	200.4	8.6	6,189.3	4753	130.5	210.8	6.9	9,277.6	0.000
Benefited from at least a project during 2000-2005 (1:yes, 0:no)	6,690	0.821	0.383	0	1	1,937	1	0	1	1	4753	0.738	0.440	0.0	1.0	0.000
Benefited from an aid project during 2000-2005 (1:yes, 0:no)	6,690	0.317	0.465	0	1	1,937	1	0	1	1	4753	0.000	0.000	0.0	0.0	0.000
No. of projects HH benefited during 2000-2005	6,690	2.565	2.498	0	30	1,937	3.608	2.319	1	29	4753	2.081	2.430	0	30	0.000

Table 5.3. Correlation coefficients between household poverty indicators and benefiting from projects

	Dummy: Development Project (1:yes, 0:no)	Dummy: Aid project (1:yes, 0:no)	Dummy: Aid project (1) vs No project (0)	Dummy: Aid project (1) vs Project from others (0)	Dummy: Aid-only project (1) vs Aid project (0)
Household poverty level, 2000	-0.0436***	-0.0462***	-0.08***	-0.0379***	0.0457**
Obs.	6,679	6,679	3,248	5,367	1,936
Household poverty level, 2005	-0.0559***	0.0079	-0.0506***	0.0301**	0.0228
Obs.	6,689	6,689	3,249	5,377	1,937
Dummy: Objectively poor, 2005 (1:yes, 0:no)	0.0314**	0.0459***	0.0664***	0.0422***	0.1415***
Obs.	6,690	6,690	3,250	5,377	1,937
Community's poverty level, 2005	-0.0620***	-0.0440***	-0.0992***	-0.0287**	-0.0092
Obs.	6678	6678	3247	5366	1935

* significant at 5% level; ** significant at 1% level

[78] All data refer to 2005, unless otherwise stated in a specific variable

[79] Test of equality of means between groups (G_{1a}) and (G_2+G_{1b})

Table 5.4. Summary statistics of the population: education of the household head in 2005

	All households (G_0)		Aid-project households= Yes (G_{1a})		Aid-project households=No (G_2+G_{1b})	
Level	Freq.	Percent	Freq.	Percent	Freq.	Percent
None	3,962	59.22	788	60.02	1,147	59.22
Islamic school	1,307	19.54	272	20.72	391	20.19
Read & Write	123	1.84	15	1.14	55	2.84
Primary	620	9.27	101	7.69	196	10.12
Secondary	339	5.07	62	4.72	84	4.34
Professional/Technical	220	3.29	46	3.5	45	2.32
University	119	1.78	29	2.21	19	0.98
Total	6,690	100	1,313	100	1,937	100

Pearson Chi square for groups (b) and (c) = 37.9299 Pr = 0.000

Table 5.5. Summary statistics of the population: marital status of household head in 2005

	All households (G_0)		Aid-project households= Yes (G_{1a})		Aid-project households=No (G_2+G_{1b})	
Status	Freq.	Percent	Freq.	Percent	Freq.	Percent
Single	117	1.75	29	1.5	88	1.85
Married monogamous	4,525	67.64	1,284	66.29	3,241	68.19
Married polygamous	1,420	21.23	456	23.54	964	20.28
Widow(er)/Divorced/Separated	628	9.39	168	8.67	460	9.68
Total	6,690	100	1,937	100	4,753	100

Pearson Chi square for groups (b) and (c) = 10.0918 Pr = 0.018

Figure 5.8. Average number of aid projects households benefited from

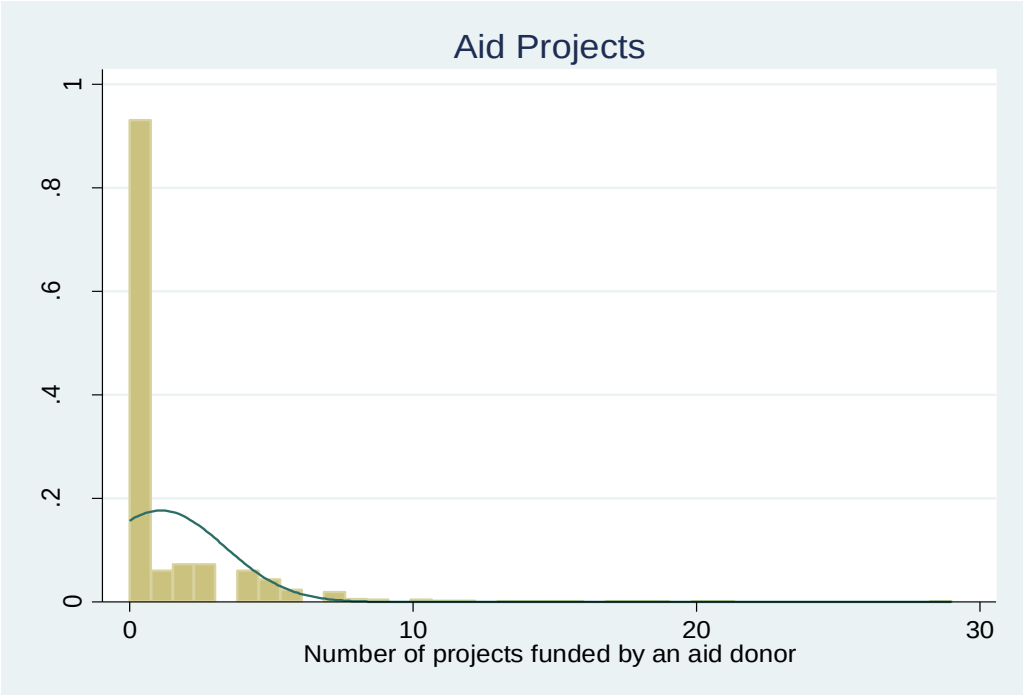


Figure 5.9. Aid projects by region

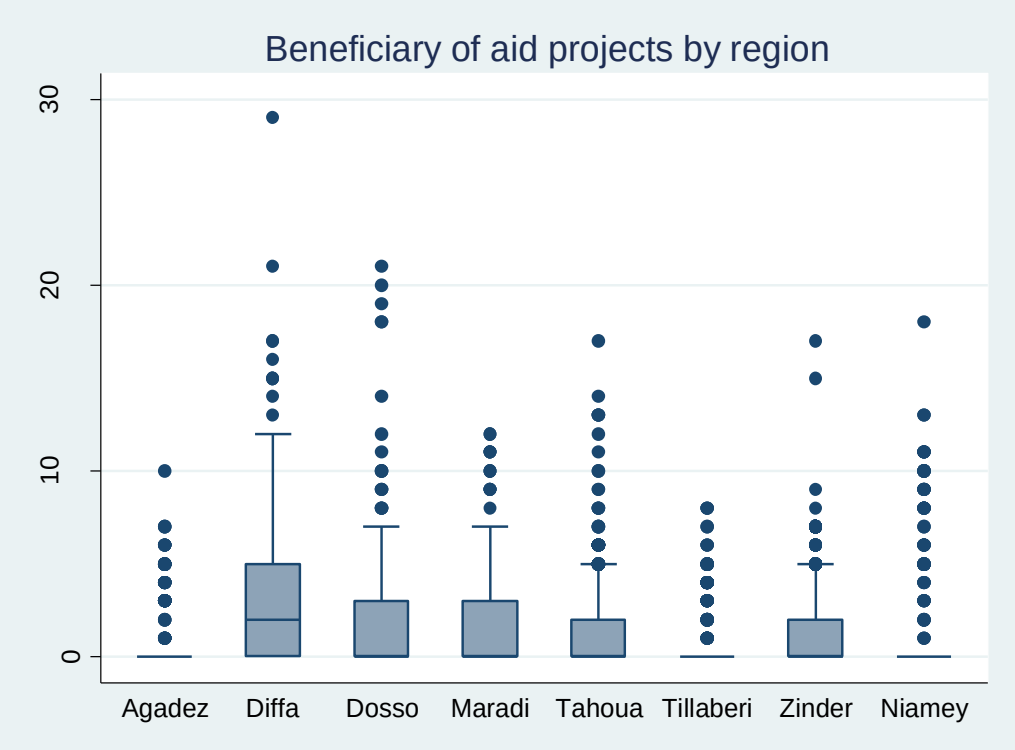


Figure 5.10. Relationship between the number of aid projects and poverty change

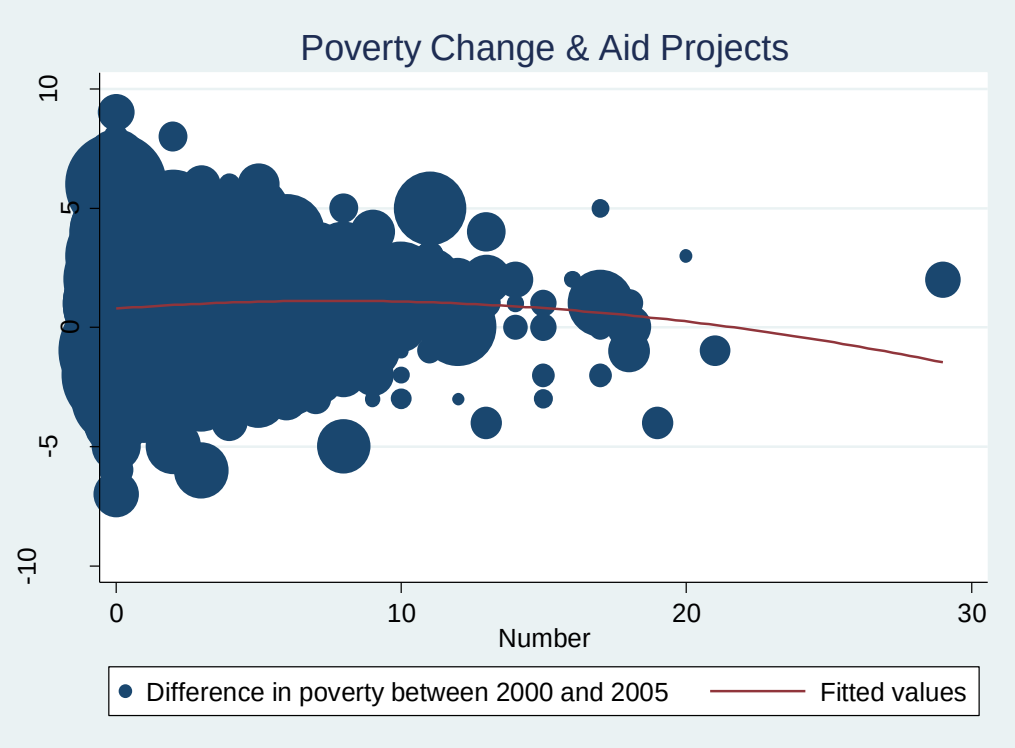


Table 5.6. Poverty level and benefiting from aid projects

	Poverty level of household in 2005 (0:richest - 9:poorest)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dummy: Project funded by aid (G_{1a}) vs No aid (G_2+G_{1b})	0.147	0.246	0.25	0.251				
	[0.081]	[0.055]**	[0.054]**	[0.055]**				
Dummy: Project from aid (G_{1a}) vs No project at all (G_2)					-0.047	0.136	0.137	0.115
					[0.112]	[0.075]	[0.075]	[0.080]
Household consulted about project to do (1:yes, 0:no)	-0.081	-0.086	-0.095	-0.073	-0.156	-0.165	-0.188	-0.109
	[0.069]	[0.047]	[0.047]*	[0.051]	[0.095]	[0.067]*	[0.067]**	[0.065]
Household size		-0.01	-0.012	-0.012		-0.009	-0.016	-0.008
		[0.006]	[0.006]*	[0.006]		[0.007]	[0.008]*	[0.008]
Poverty level of community in 2005 (0:richest - 9:poorest)		0.338	0.338	0.336		0.312	0.31	0.291
		[0.022]**	[0.022]**	[0.023]**		[0.030]**	[0.030]**	[0.030]**
Poverty level of household in 2000 (0:richest - 9:poorest)		0.42	0.412	0.413		0.418	0.416	0.425
		[0.018]**	[0.018]**	[0.019]**		[0.025]**	[0.024]**	[0.025]**
Urban household (1:yes, 0:no)		0.089	0.241	0.223		-0.021	0.068	0.081
		[0.057]	[0.056]**	[0.064]**		[0.085]	[0.084]	[0.091]
Age of the household head			0.002	0.002			0.006	0.005
			[0.002]	[0.002]			[0.002]**	[0.002]*
Sex of household head is female (1:yes, 0:no)			-0.038	-0.044			-0.03	-0.07
			[0.144]	[0.141]			[0.180]	[0.171]
Education = Islamic			0	0			-0.038	-0.01
			[0.053]	[0.053]			[0.074]	[0.072]
Education = Read & Write			-0.023	-0.026			0.156	0.209
			[0.149]	[0.150]			[0.167]	[0.166]
Education = Primary			-0.069	-0.074			0.012	0.046
			[0.074]	[0.075]			[0.095]	[0.096]
Education = Secondary			-0.525	-0.532			-0.528	-0.49
			[0.107]**	[0.106]**			[0.138]**	[0.138]**
Education = Professional / Technical			-1.005	-0.994			-1.124	-1.075
			[0.127]**	[0.127]**			[0.177]**	[0.174]**
Education = University			-1.247	-1.229			-1.239	-1.139
			[0.140]**	[0.139]**			[0.331]**	[0.332]**
Marital status = Married monogamous			-0.039	-0.033			-0.024	-0.007
			[0.151]	[0.151]			[0.186]	[0.193]
Marital status = Married polygamous			-0.037	-0.033			0.037	0.031
			[0.159]	[0.160]			[0.205]	[0.213]
Marital status = Widow(er)/Divorced/Separated			0.21	0.225			0.237	0.302
			[0.201]	[0.199]			[0.243]	[0.244]
Region = Diffa				-0.172				-0.014
				[0.141]				[0.193]
Region = Dosso				-0.189				-0.105
				[0.121]				[0.163]
Region = Maradi				-0.183				-0.032
				[0.127]				[0.180]
Region = Tahoua				-0.121				0.37
				[0.127]				[0.161]*
Region = Tillaberi				-0.208				0.118
				[0.121]				[0.181]
Region = Zinder				-0.264				-0.085
				[0.113]*				[0.160]
Region = Niamey				-0.162				0.003
				[0.120]				[0.169]
Observations	6689	6667	6667	6667	3249	3245	3245	3245
R-squared	0.002	0.408	0.425	0.426	0.003	0.382	0.404	0.413

Robust standard errors in brackets

* significant at 5% level; ** significant at 1% level

Table 5.7. Poverty level and benefiting from aid projects

	Poverty level of household in 2005 (0:richest - 9:poorest)							
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Dummy: Aid project (G_{1a}) vs Project from others (G_{1b})	0.208	0.28	0.285	0.28				
	[0.085]*	[0.057]**	[0.056]**	[0.057]**				
Project funded only by aid (1:yes, 0:no)					0.081	0.035	0.003	-0.012
					[0.127]	[0.098]	[0.096]	[0.094]
Household consulted about project to do (1:yes, 0:no)	0.013	-0.032	-0.04	-0.018	0.018	-0.069	-0.09	-0.02
	[0.075]	[0.052]	[0.051]	[0.056]	[0.111]	[0.087]	[0.085]	[0.083]
Household size		-0.01	-0.01	-0.012		-0.011	-0.013	-0.007
		[0.006]	[0.007]	[0.007]		[0.009]	[0.009]	[0.010]
Poverty level of community in 2005 (0:richest - 9:poorest)		0.349	0.351	0.352		0.333	0.333	0.322
		[0.025]**	[0.025]**	[0.026]**		[0.037]**	[0.038]**	[0.038]**
Poverty level of household in 2000 (0:richest - 9:poorest)		0.401	0.393	0.39		0.364	0.366	0.374
		[0.018]**	[0.018]**	[0.019]**		[0.030]**	[0.030]**	[0.032]**
Urban household (1:yes, 0:no)		0.15	0.308	0.287		0.09	0.156	0.173
		[0.061]*	[0.059]**	[0.067]**		[0.106]	[0.098]	[0.101]
Age of the household head			0.002	0.002			0.007	0.007
			[0.002]	[0.002]			[0.003]*	[0.003]*
Sex of household head is female (1:yes, 0:no)			-0.127	-0.123			-0.41	-0.399
			[0.166]	[0.165]			[0.208]*	[0.197]*
Education = Islamic			-0.011	-0.015			-0.072	-0.049
			[0.060]	[0.060]			[0.106]	[0.102]
Education = Read & Write			-0.1	-0.118			0.081	0.122
			[0.163]	[0.163]			[0.197]	[0.193]
Education = Primary			-0.045	-0.054			0.089	0.125
			[0.077]	[0.078]			[0.112]	[0.110]
Education = Secondary			-0.595	-0.612			-0.7	-0.665
			[0.121]**	[0.118]**			[0.181]**	[0.183]**
Education = Professional / Technical			-1.029	-1.011			-1.258	-1.195
			[0.146]**	[0.146]**			[0.252]**	[0.240]**
Education = University			-1.299	-1.275			-1.447	-1.319
			[0.156]**	[0.149]**			[0.531]**	[0.509]*
Marital status = Married monogamous			0.011	0.03			0.063	0.073
			[0.167]	[0.166]			[0.227]	[0.228]
Marital status = Married polygamous			-0.019	-0.001			0.076	0.054
			[0.173]	[0.172]			[0.240]	[0.239]
Marital status = Widow(er)/Divorced/Separated			0.368	0.387			0.723	0.733
			[0.232]	[0.228]			[0.286]*	[0.283]*
Region = Diffa				-0.346				-0.252
				[0.142]*				[0.205]
Region = Dosso				-0.284				-0.206
				[0.109]**				[0.156]
Region = Maradi				-0.313				-0.184
				[0.114]**				[0.164]
Region = Tahoua				-0.301				0.157
				[0.119]*				[0.155]
Region = Tillaberi				-0.404				-0.318
				[0.110]**				[0.177]
Region = Zinder				-0.465				-0.333
				[0.101]**				[0.155]*
Region = Niamey				-0.316				-0.303
				[0.111]**				[0.206]
Observations	5377	5356	5356	5356	1937	1934	1934	1934
R-squared	0.004	0.407	0.425	0.428	0.001	0.358	0.389	0.4

Robust standard errors in brackets

* significant at 5% level; ** significant at 1% level

Table 5.8. Relationship between poverty level and aid with Instrumental Variable

	2SLS: Poverty level of household in 2005				First Stage for Aid project dummy (1:yes, 0:no)			
	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
Project funded by aid (1:yes, 0:no)	-0.478	-0.336	-0.241	-0.471				
	[0.706]	[0.525]	[0.528]	[0.767]				
IV: Member in development association (1:yes, 0:no)					0.154***	0.154***	0.148***	0.106***
					[0.039]	[0.038]	[0.038]	[0.035]
Household consulted about project (1:yes, 0:no)	0.007	-0.011	-0.034	-0.008	0.123***	0.115***	0.109***	0.080***
	[0.104]	[0.076]	[0.074]	[0.078]	[0.024]	[0.026]	[0.026]	[0.026]
Household size		-0.011	-0.014	-0.013		-0.004	-0.004	-0.002
		[0.006]	[0.006]*	[0.007]		[0.002]	[0.003]	[0.003]
Poverty level of community in 2005 (0:richest - 9:poorest)		0.331	0.333	0.335		-0.012*	-0.011	-0.002
		[0.023]**	[0.023]**	[0.024]**		[0.007]	[0.007]	[0.006]
Poverty level of household in 2000 (0:richest - 9:poorest)		0.417	0.411	0.412		-0.005	-0.004	-0.001
		[0.019]**	[0.018]**	[0.019]**		[0.007]	[0.007]	[0.005]
Urban household (1:yes, 0:no)		0.049	0.203	0.215		-0.057	-0.063	-0.002
		[0.076]	[0.076]**	[0.084]*		[0.044]	[0.047]	[0.056]
Age of the household head			0.002	0.002			-0.001	0.000
			[0.002]	[0.002]			[0.001]	[0.001]
Sex of household head is female (1:yes, 0:no)			-0.008	0.017			0.055	0.080*
			[0.151]	[0.162]			[0.045]	[0.042]
Education = Islamic			0.007	-0.001			0.009	-0.004
			[0.058]	[0.058]			[0.025]	[0.025]
Education = Read & Write			0.077	0.109			0.190***	0.178***
			[0.170]	[0.187]			[0.063]	[0.056]
Education = Primary			-0.031	-0.026			0.067**	0.060*
			[0.092]	[0.100]			[0.034]	[0.031]
Education = Secondary			-0.502	-0.482			0.043	0.066*
			[0.113]**	[0.124]**			[0.036]	[0.035]
Education = Professional / Technical			-0.989	-0.964			0.020	0.031
			[0.131]**	[0.135]**			[0.054]	[0.050]
Education = University			-1.265	-1.217			-0.043	0.011
			[0.136]**	[0.137]**			[0.057]	[0.051]
Marital status = Married monogamous			-0.045	-0.085			-0.019	-0.076
			[0.154]	[0.164]			[0.068]	[0.064]
Marital status = Married polygamous			-0.025	-0.077			0.017	-0.065
			[0.164]	[0.174]			[0.073]	[0.069]
Marital status = Widow(er)/Divorced/Separated			0.193	0.139			-0.038	-0.119**
			[0.205]	[0.219]			[0.075]	[0.070]
Region = Diffa				0.141				0.422***
				[0.378]				[0.072]
Region = Dosso				-0.04				0.190***
				[0.219]				[0.073]
Region = Maradi				0.035				0.293***
				[0.265]				[0.064]
Region = Tahoua				-0.007				0.152***
				[0.184]				[0.058]
Region = Tillaberi				-0.281				-0.098**
				[0.152]				[0.034]
Region = Zinder				-0.122				0.193***
				[0.208]				[0.065]
Region = Niamey				-0.213				-0.071
				[0.149]				[0.048]
Observations	6689	6667	6667	6667	6689	6667	6667	6667

Robust standard errors in brackets

* significant at 5% level; ** significant at 1% level

Table 5.9. Results of Hausman test comparing IV and OLS estimates

	---- Coefficients ----			
	(b) IV	(B) OLS	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Project funded by aid (1:yes, 0:no)	-0.4708408	0.2508839	-0.7217247	0.7421739
Household consulted about project to do (1:yes, 0:no)	-0.0078225	-0.0727967	0.0649743	0.0564864
Poverty level of household in 2000 (0:richest - 9:poorest)	0.4116139	0.4128494	-0.0012355	0.0023242
Poverty level of community in 2005 (0:richest - 9:poorest)	0.3347056	0.3361425	-0.0014369	.
Urban household (1:yes, 0:no)	0.2154930	0.2225853	-0.0070923	0.0501034
Household size	-0.0127743	-0.0115105	-0.0012638	0.0023784
Age of the household head	0.0023445	0.0021983	0.0001462	0.0002805
Sex of household head is female (1:yes, 0:no)	0.0174895	-0.0437429	0.0612324	0.0687104
Marital status = Married monogamous	-0.0848870	-0.0326685	-0.0522185	0.0512015
Marital status = Married polygamous	-0.0767714	-0.0327229	-0.0440486	0.0535083
Marital status = Widow(er)/Divorced/Separated	0.1390868	0.2249812	-0.0858944	0.0757918
Education = Islamic	-0.0010834	0.0003501	-0.0014335	0.0201499
Education = Read & Write	0.1091344	-0.0255747	0.1347091	0.1017301
Education = Primary	-0.0260445	-0.0744728	0.0484284	0.0617758
Education = Secondary	-0.4824491	-0.5324940	0.0500449	0.0577055
Education = Professional / Technical	-0.9643343	-0.9937054	0.029371	0.0337989
Education = University	-1.2170770	-1.2287490	0.0116718	.
Region = Diffa	0.1408606	-0.1723101	0.3131707	0.3384032
Region = Dosso	-0.0401198	-0.1889246	0.1488048	0.1747443
Region = Maradi	0.0345706	-0.1832695	0.2178401	0.2232767
Region = Tahoua	-0.0069322	-0.1205646	0.1136324	0.124782
Region = Tillaberi	-0.2805212	-0.2083627	-0.0721585	0.0845447
Region = Zinder	-0.1215156	-0.2640101	0.1424945	0.1666759
Region = Niamey	-0.2130217	-0.1621862	-0.0508355	0.080528
Constant	2.2808670	2.1393310	0.1415362	0.1435971

b = consistent under Ho and Ha; obtained from ivregress
B = inconsistent under Ha, efficient under Ho; obtained from regress
Test: Ho: difference in coefficients not systematic
Chi2(25) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 1.36
Prob>chi2 = 1.000
(V_b-V_B is not positive definite)

Table 5.10. Poverty level and number of aid projects (all funding combined and aid-only funding)

	Poverty level of household in 2005 (0:richest - 9:poorest)							
	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
Number of aid projects	0.054	0.079	0.082	0.081				
	[0.028]	[0.022]**	[0.021]**	[0.022]**				
Number of aid projects, squared	-0.002	-0.004	-0.004	-0.004				
	[0.002]	[0.002]*	[0.002]*	[0.002]*				
Number of projects funded only by aid					0.073	0.124	0.12	0.106
					[0.105]	[0.080]	[0.078]	[0.080]
Number of projects funded by aid only, squared					0.006	-0.007	-0.007	-0.005
					[0.023]	[0.016]	[0.016]	[0.016]
Household consulted about project to do (1:yes, 0:no)		-0.078	-0.086	-0.065		-0.064	-0.072	-0.056
		[0.047]	[0.046]	[0.051]		[0.048]	[0.048]	[0.051]
Household size		-0.01	-0.013	-0.012		-0.011	-0.013	-0.012
		[0.006]	[0.006]*	[0.006]		[0.006]	[0.006]*	[0.006]
Poverty level of community in 2005 (0:richest - 9:poorest)		0.336	0.337	0.335		0.335	0.336	0.335
		[0.023]**	[0.023]**	[0.023]**		[0.023]**	[0.023]**	[0.023]**
Poverty level of household in 2000 (0:richest - 9:poorest)		0.42	0.412	0.413		0.418	0.411	0.412
		[0.018]**	[0.018]**	[0.019]**		[0.018]**	[0.018]**	[0.019]**
Urban household (1:yes, 0:no)		0.079	0.232	0.212		0.083	0.232	0.228
		[0.058]	[0.057]**	[0.066]**		[0.060]	[0.059]**	[0.069]**
Age of the household head			0.002	0.002			0.002	0.002
			[0.002]	[0.002]			[0.002]	[0.002]
Sex of household head is female (1:yes, 0:no)			-0.046	-0.051			-0.018	-0.02
			[0.145]	[0.142]			[0.146]	[0.144]
Education = Islamic			0	0			0.004	0.001
			[0.053]	[0.053]			[0.054]	[0.054]
Education = Read & Write			-0.039	-0.043			0.009	0.007
			[0.146]	[0.147]			[0.151]	[0.152]
Education = Primary			-0.075	-0.081			-0.06	-0.065
			[0.075]	[0.075]			[0.074]	[0.074]
Education = Secondary			-0.525	-0.532			-0.511	-0.513
			[0.107]**	[0.106]**			[0.108]**	[0.107]**
Education = Professional / Technical			-1.014	-1.002			-0.992	-0.981
			[0.126]**	[0.126]**			[0.128]**	[0.128]**
Education = University			-1.255	-1.235			-1.255	-1.226
			[0.142]**	[0.141]**			[0.137]**	[0.137]**
Marital status = Married monogamous			-0.034	-0.031			-0.05	-0.054
			[0.152]	[0.152]			[0.150]	[0.150]
Marital status = Married polygamous			-0.03	-0.032			-0.041	-0.052
			[0.161]	[0.162]			[0.160]	[0.160]
Marital status = Widow(er)/Divorced/Separated			0.22	0.231			0.19	0.189
			[0.203]	[0.200]			[0.202]	[0.199]
Region = Diffa				-0.173				-0.067
				[0.141]				[0.144]
Region = Dosso				-0.192				-0.15
				[0.122]				[0.127]
Region = Maradi				-0.169				-0.127
				[0.127]				[0.134]
Region = Tahoua				-0.115				-0.083
				[0.128]				[0.132]
Region = Tillaberi				-0.218				-0.219
				[0.121]				[0.125]
Region = Zinder				-0.261				-0.212
				[0.114]*				[0.120]
Region = Niamey				-0.161				-0.176
				[0.121]				[0.126]
Observations	6689	6667	6667	6667	6689	6667	6667	6667
R-squared	0.002	0.408	0.424	0.426	0.002	0.405	0.422	0.423

Robust standard errors in brackets
* significant at 5% level; ** significant at 1% level

Table 5.11. Relationship between poverty change and aid projects

	Difference in poverty between 2000 and 2005							
	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
Dummy: Project funded by aid (G_{1a}) vs No aid (G_2+G_{1b})	0.239	0.199	0.223	0.191				
	[0.073]**	[0.101]	[0.074]**	[0.081]*				
Dummy: Project funded by aid (G_{1a}) vs No aid (G_2)					0.116	0.097	0.19	0.117
					[0.099]	[0.166]	[0.123]	[0.124]
Change in access to education = unchanged		0.141	0.069	0.064		0.323	0.257	0.281
		[0.164]	[0.126]	[0.126]		[0.248]	[0.176]	[0.180]
Change in access to education = improved		-0.017	-0.062	-0.059		0.038	-0.057	-0.06
		[0.109]	[0.086]	[0.085]		[0.165]	[0.127]	[0.130]
Change in access to electricity = unchanged		-0.083	-0.168	-0.169		-0.074	-0.098	0.026
		[0.134]	[0.114]	[0.113]		[0.206]	[0.162]	[0.139]
Change in access to electricity = improved		-0.166	-0.219	-0.167		-0.189	-0.244	-0.074
		[0.142]	[0.121]	[0.118]		[0.203]	[0.181]	[0.165]
Change in access to health = unchanged		-0.078	0.023	-0.039		0.346	0.228	0.126
		[0.158]	[0.130]	[0.130]		[0.237]	[0.186]	[0.193]
Change in access to health = improved		-0.141	-0.051	-0.09		0.102	0.068	0.022
		[0.109]	[0.099]	[0.098]		[0.158]	[0.136]	[0.132]
Change in access to justice = unchanged		0.037	0.095	0.098		-0.159	-0.121	-0.064
		[0.113]	[0.084]	[0.084]		[0.167]	[0.118]	[0.118]
Change in access to justice = improved		-0.266	-0.199	-0.202		-0.591	-0.412	-0.37
		[0.106]*	[0.081]*	[0.078]**		[0.144]**	[0.111]**	[0.111]**
Change in access to water = unchanged		-0.19	-0.248	-0.216		-0.337	-0.486	-0.484
		[0.121]	[0.106]*	[0.108]*		[0.203]	[0.148]**	[0.154]**
Change in access to water = improved		-0.072	-0.133	-0.139		-0.174	-0.304	-0.29
		[0.097]	[0.080]	[0.081]		[0.146]	[0.108]**	[0.113]*
Age of the household head			0.006	0.005			0.011	0.009
			[0.002]*	[0.003]			[0.003]**	[0.003]**
Household consulted about project to do (1:yes, 0:no)			-0.058	-0.048			-0.17	-0.171
			[0.080]	[0.082]			[0.100]	[0.107]
Household size			-0.007	0.001			-0.021	-0.009
			[0.009]	[0.011]			[0.012]	[0.013]
Poverty level of community in 2005 (0:richest - 9:poorest)			0.261	0.263			0.27	0.254
			[0.029]**	[0.029]**			[0.040]**	[0.042]**
Poverty level of household in 2000 (0:richest - 9:poorest)			-0.551	-0.566			-0.584	-0.588
			[0.024]**	[0.025]**			[0.036]**	[0.038]**
Urban household (1:yes, 0:no)			0.065	0.274			0.043	0.281
			[0.093]	[0.101]**			[0.132]	[0.124]*
Sex of household head is female (1:yes, 0:no)				-0.208				0.059
				[0.213]				[0.270]
Education = Islamic				0.104				-0.011
				[0.083]				[0.111]
Education = Read & Write				0.129				0.264
				[0.225]				[0.278]
Education = Primary				0.091				0.16
				[0.103]				[0.129]
Education = Secondary				-0.568				-0.597
				[0.151]**				[0.234]*
Education = Professional / Technical				-0.854				-1.03
				[0.190]**				[0.216]**
Education = University				-1.085				-1.071
				[0.169]**				[0.352]**
Marital status = Married monogamous				0.133				1.027
				[0.242]				[0.367]**
Marital status = Married polygamous				-0.015				0.894
				[0.258]				[0.375]*
Marital status = Widow(er)/Divorced/Separated				0.518				1.244
				[0.312]				[0.434]**
Region = Diffa				0.037				0.544
				[0.364]				[0.418]
Region = Dosso				-0.024				0.526
				[0.358]				[0.415]
Region = Maradi				-0.091				0.485
				[0.355]				[0.417]
Region = Tahoua				0.09				1.163
				[0.360]				[0.422]**
Region = Tillaberi				-0.169				0.469
				[0.360]				[0.442]
Region = Zinder				-0.125				0.469
				[0.350]				[0.403]
Region = Niamey				-0.147				0.367
				[0.349]				[0.401]
Observations	6679	2659	2654	2654	3248	1321	1320	1320
R-squared	0.005	0.018	0.346	0.371	0.001	0.04	0.377	0.413

Robust standard errors in brackets
* significant at 5% level; ** significant at 1% level

Table 5.12. Relationship between poverty change and aid projects

	Difference in poverty between 2000 and 2005							
	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)
Dummy: Project from aid (1) vs Project from others (0)	0.283	0.226	0.239	0.202				
	[0.076]**	[0.102]*	[0.077]**	[0.085]*				
Project funded only by aid (1:yes, 0:no)					-0.046	-0.099	-0.046	-0.078
					[0.130]	[0.188]	[0.131]	[0.134]
Change in access to education = unchanged		-0.084	-0.151	-0.166		-0.022	-0.047	0.003
		[0.188]	[0.131]	[0.132]		[0.347]	[0.195]	[0.199]
Change in access to education = improved		-0.077	-0.082	-0.075		-0.096	-0.089	-0.09
		[0.120]	[0.091]	[0.090]		[0.203]	[0.148]	[0.155]
Change in access to electricity = unchanged		-0.021	-0.088	-0.102		0.091	0.01	0.058
		[0.139]	[0.124]	[0.133]		[0.263]	[0.228]	[0.216]
Change in access to electricity = improved		-0.158	-0.168	-0.109		-0.136	-0.19	-0.031
		[0.150]	[0.128]	[0.134]		[0.266]	[0.236]	[0.232]
Change in access to health = unchanged		-0.138	0.068	0		0.368	0.317	0.206
		[0.167]	[0.127]	[0.126]		[0.266]	[0.207]	[0.206]
Change in access to health = improved		-0.163	-0.038	-0.068		0.13	0.049	0.033
		[0.114]	[0.101]	[0.102]		[0.190]	[0.163]	[0.159]
Change in access to justice = unchanged		0.091	0.18	0.169		-0.141	-0.034	0.002
		[0.124]	[0.088]*	[0.087]		[0.202]	[0.133]	[0.134]
Change in access to justice = improved		-0.203	-0.135	-0.151		-0.564	-0.359	-0.358
		[0.116]	[0.089]	[0.084]		[0.184]**	[0.131]**	[0.131]**
Change in access to water = unchanged		-0.216	-0.194	-0.173		-0.466	-0.413	-0.421
		[0.128]	[0.113]	[0.114]		[0.249]	[0.175]*	[0.187]*
Change in access to water = improved		-0.023	-0.053	-0.09		-0.144	-0.229	-0.281
		[0.106]	[0.085]	[0.084]		[0.182]	[0.124]	[0.127]*
Age of the household head			0.006	0.005			0.01	0.009
			[0.003]*	[0.003]			[0.004]**	[0.004]*
Household consulted about project to do (1:yes, 0:no)			0.02	0.049			-0.047	-0.003
			[0.088]	[0.087]			[0.111]	[0.117]
Household size			-0.007	0			-0.027	-0.02
			[0.011]	[0.012]			[0.014]*	[0.015]
Poverty level of community in 2005 (0:richest - 9:poorest)			0.274	0.279			0.312	0.309
			[0.031]**	[0.031]**			[0.041]**	[0.042]**
Poverty level of household in 2000 (0:richest - 9:poorest)			-0.575	-0.597			-0.652	-0.664
			[0.024]**	[0.025]**			[0.036]**	[0.039]**
Urban household (1:yes, 0:no)			0.157	0.296			0.207	0.289
			[0.098]	[0.111]**			[0.147]	[0.156]
Sex of household head is female (1:yes, 0:no)				-0.416				-0.405
				[0.237]				[0.295]
Education = Islamic				0.121				-0.064
				[0.093]				[0.141]
Education = Read & Write				0.015				0.099
				[0.238]				[0.301]
Education = Primary				0.118				0.19
				[0.105]				[0.141]
Education = Secondary				-0.614				-0.74
				[0.155]**				[0.276]**
Education = Professional / Technical				-0.829				-1.125
				[0.207]**				[0.276]**
Education = University				-1.158				-1.479
				[0.142]**				[0.305]**
Marital status = Married monogamous				0.044				0.884
				[0.251]				[0.495]
Marital status = Married polygamous				-0.141				0.74
				[0.267]				[0.501]
Marital status = Widow(er)/Divorced/Separated				0.591				1.467
				[0.338]				[0.547]**
Region = Diffa				-0.417				-0.379
				[0.308]				[0.369]
Region = Dosso				-0.345				-0.138
				[0.287]				[0.347]
Region = Maradi				-0.515				-0.332
				[0.288]				[0.346]
Region = Tahoua				-0.352				0.326
				[0.300]				[0.383]
Region = Tillaberi				-0.641				-0.615
				[0.295]*				[0.387]
Region = Zinder				-0.605				-0.433
				[0.283]*				[0.336]
Region = Niamey				-0.464				-0.183
				[0.281]				[0.409]
Observations	5367	2262	2257	2257	1936	924	923	923
R-squared	0.008	0.018	0.371	0.402	0	0.038	0.435	0.478

Robust standard errors in brackets
* significant at 5% level; ** significant at 1% level

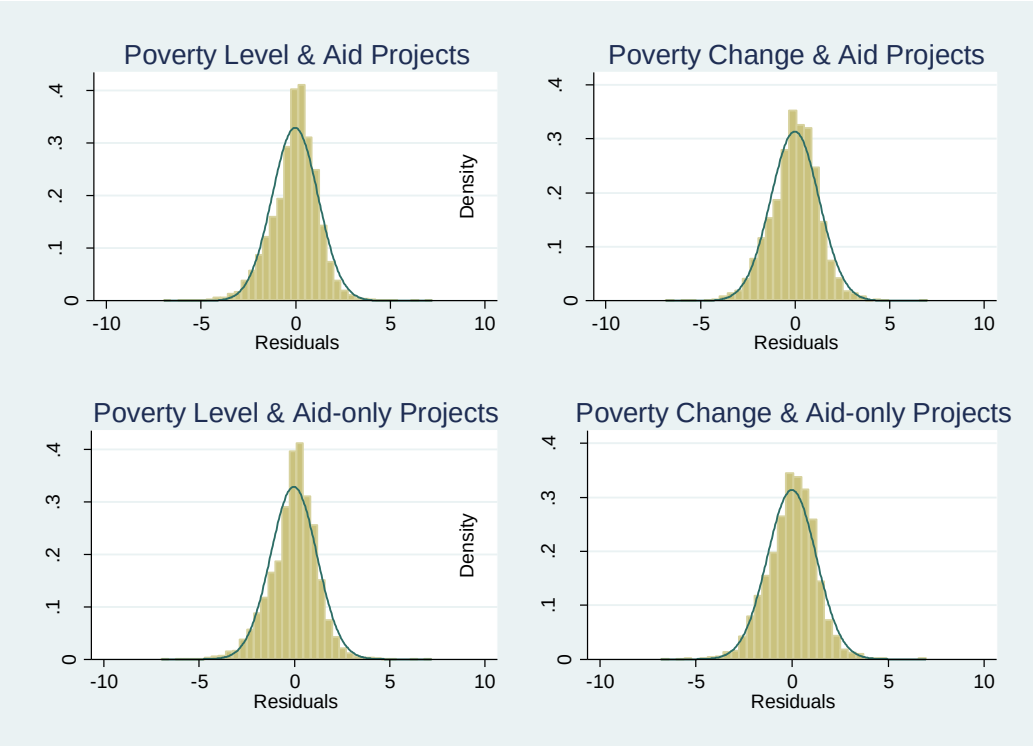
Table 5.13. Relationship between poverty change and number of aid projects (all funding sources and aid-only projects)

	Change in poverty between 2000 and 2005							
	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)
Number of projects funded by aid	0.086	0.094	0.082	0.075				
	[0.028]**	[0.038]*	[0.024]**	[0.026]**				
Number of projects funded by aid, squared	-0.006	-0.007	-0.005	-0.004				
	[0.003]*	[0.003]	[0.002]*	[0.002]*				
Number of projects funded only by aid					0.079	-0.01	0.068	0.05
					[0.115]	[0.172]	[0.122]	[0.125]
Number of projects funded by aid only, squared					-0.002	0.02	-0.005	-0.003
					[0.024]	[0.033]	[0.028]	[0.028]
Change in access to education = unchanged		0.15	0.08	0.069		0.139	0.068	0.054
		[0.166]	[0.126]	[0.127]		[0.161]	[0.125]	[0.125]
Change in access to education = improved		-0.012	-0.05	-0.055		-0.014	-0.054	-0.058
		[0.108]	[0.085]	[0.085]		[0.109]	[0.087]	[0.086]
Change in access to electricity = unchanged		-0.076	-0.197	-0.16		-0.071	-0.211	-0.163
		[0.136]	[0.122]	[0.114]		[0.133]	[0.122]	[0.116]
Change in access to electricity = improved		-0.159	-0.205	-0.163		-0.142	-0.198	-0.154
		[0.143]	[0.124]	[0.118]		[0.140]	[0.125]	[0.121]
Change in access to health = unchanged		-0.085	-0.024	-0.043		-0.086	-0.023	-0.042
		[0.156]	[0.131]	[0.130]		[0.157]	[0.134]	[0.132]
Change in access to health = improved		-0.144	-0.075	-0.094		-0.124	-0.064	-0.092
		[0.109]	[0.099]	[0.098]		[0.110]	[0.099]	[0.098]
Change in access to justice = unchanged		0.031	0.088	0.095		0.043	0.102	0.105
		[0.113]	[0.084]	[0.084]		[0.114]	[0.085]	[0.084]
Change in access to justice = improved		-0.267	-0.203	-0.204		-0.263	-0.197	-0.204
		[0.106]*	[0.078]*	[0.078]**		[0.104]*	[0.078]*	[0.077]**
Change in access to water = unchanged		-0.181	-0.208	-0.209		-0.199	-0.225	-0.218
		[0.122]	[0.107]	[0.109]		[0.120]	[0.107]*	[0.109]*
Change in access to water = improved		-0.076	-0.122	-0.141		-0.067	-0.109	-0.13
		[0.097]	[0.081]	[0.081]		[0.097]	[0.084]	[0.083]
Age of the household head			0.005	0.005			0.005	0.005
			[0.003]	[0.003]			[0.003]	[0.003]
Household consulted about project to do (1:yes, 0:no)			-0.077	-0.044			-0.052	-0.023
			[0.078]	[0.082]			[0.079]	[0.083]
Household size			0.001	0.001			0.001	0.001
			[0.010]	[0.011]			[0.010]	[0.011]
Poverty level of community in 2005 (0:richest - 9:poorest)			0.265	0.261			0.269	0.264
			[0.029]**	[0.029]**			[0.028]**	[0.029]**
Poverty level of household in 2000 (0:richest - 9:poorest)			-0.564	-0.565			-0.564	-0.566
			[0.025]**	[0.025]**			[0.025]**	[0.025]**
Sex of household head is female (1:yes, 0:no)			-0.215	-0.217			-0.198	-0.195
			[0.212]	[0.212]			[0.214]	[0.214]
Urban household (1:yes, 0:no)			0.254	0.268			0.242	0.273
			[0.092]**	[0.101]**			[0.094]*	[0.103]**
Education = Islamic			0.113	0.108			0.116	0.102
			[0.082]	[0.082]			[0.084]	[0.084]
Education = Read & Write			0.114	0.113			0.162	0.152
			[0.220]	[0.221]			[0.225]	[0.225]
Education = Primary			0.092	0.085			0.118	0.107
			[0.102]	[0.103]			[0.102]	[0.103]
Education = Secondary			-0.568	-0.563			-0.552	-0.544
			[0.160]**	[0.152]**			[0.159]**	[0.152]**
Education = Professional / Technical			-0.872	-0.859			-0.86	-0.839
			[0.191]**	[0.190]**			[0.190]**	[0.190]**
Education = University			-1.131	-1.086			-1.141	-1.084
			[0.167]**	[0.170]**			[0.164]**	[0.167]**
Marital status = Married monogamous			0.144	0.139			0.148	0.133
			[0.243]	[0.245]			[0.237]	[0.241]
Marital status = Married polygamous			0.003	-0.009			0.009	-0.012
			[0.258]	[0.260]			[0.254]	[0.257]
Marital status = Widow(er)/Divorced/Separated			0.527	0.527			0.523	0.509
			[0.315]	[0.313]			[0.313]	[0.312]
Region = Diffa				0.024				0.119
				[0.363]				[0.371]
Region = Dosso				-0.042				0.034
				[0.359]				[0.363]
Region = Maradi				-0.088				-0.042
				[0.354]				[0.361]
Region = Tahoua				0.086				0.117
				[0.360]				[0.368]
Region = Tillaberi				-0.176				-0.183
				[0.360]				[0.366]
Region = Zinder				-0.128				-0.069
				[0.350]				[0.357]
Region = Niamey				-0.146				-0.152
				[0.348]				[0.356]
Observations	6679	2659	2654	2654	6679	2659	2654	2654
R-squared	0.005	0.021	0.37	0.372	0.001	0.016	0.365	0.368

Robust standard errors in brackets
* significant at 5% level; ** significant at 1% level

Figure 5.11. Relationships poverty-number of aid projects with quadratic fit and 95% confidence interval

Figure 5.12. Residuals of relationships estimated poverty-number of aid projects, with normal distribution curve



Chapter 6. Improving People's Lives

"Aid is needed and can be highly successful. The issue is how to deliver high-quality aid to the world's poorest and most vulnerable people."
(Sachs 2014)

6.1. *Introduction*

The relationship between aid and the provision of public goods at household level remains a relatively unexplored area. Since the 1990s there has been a move towards analysing the transmission channels through which policy-making can improve people's lives, with an emphasis on the provision of public goods – often referred to as 'public service delivery' in the policy realm. A first step was to investigate whether national budget allocations in certain sectors were associated with better sector outcomes, an approach that provided mixed results. For instance, the effect of public spending for education and educational attainment was low, while for health outcomes the picture was more mixed (Gupta, Verhoeven & Tiongson 1999). It has been noted that most public spending on health and education goes to the non-poor, much of it fails to reach the frontline service provider, and service providers face weak incentives to deliver services effectively (World Bank 2003). Higher spending on water and sewerage might not lead to a proportional increase in the quality of service delivery, as leakages –both physical and financial– are high (Wolf 2007b). Economists have also analysed other determinants of public services, such as leaders' decision-making processes, to provide public goods in resource-rich countries (Sarr, Wick 2010).

It has been asserted that the key to successful service delivery programs lies in their sustainability, not only financial but also in terms of leadership and targeting the most vulnerable populations (Mubangizi 2009). Public expenditure systems in developing countries are often scrutinized in exercises such as the Public Expenditure Management and Accountability Reviews (PEMFAR) undertaken by the World Bank. In Niger, the most recent PEMFAR (PEMFAR II) was undertaken in 2011 and highlighted areas for improvement. Some of its key takeaway messages were: "Strong political commitment at the highest level and adequate technical assistance are key prerequisites for effective public-sector reform"; and "serious weaknesses affect the transparency and efficiency of the public procurement system" (World Bank 2011c). However, PEMFAR assessments remain an exercise focused on the

process of supplying public goods by national administration systems, with little focus on the demand side, i.e. households receiving those public goods.

Relatively little research has been produced on the measure and extent to which aid leads to the provision of public goods. Importantly, sometimes the modes of delivering foreign aid, by undermining rather than strengthening service delivery in the recipient country, can reduce the productivity of public spending in the medium run (World Bank 2003). Bueno de Mesquita, explores the issue from a political economy viewpoint (De Mesquita, Smith 2009). Wolf (2007) focuses on the effects of aid volatility, important because in low income countries large parts of public expenditure for basic services are financed through aid. It has been recognized that aid favours the provision of such global public goods as measures to control climate change (Kaul, Grunberg & Stern 1999), but at a national level analytical scarcity remains a concern. In poor countries, there is usually limited capacity to mobilize internal resources and aid tends to be one of the most important financial inflows (e.g. vis-à-vis foreign direct investments). These features are visible in Niger: tax revenue in 2007 was equivalent to 11.3 percent of GDP, while net FDI inflows amounted to 2.3 percent of GDP and net ODA (despite being only 40 USD per capita) was equivalent to 13.2 percent of GDP (World Bank 2013). Such figures are also reflected in few development initiatives being undertaken at a grassroots level: between 2000 and 2005, households that benefited from aid saw an average 3.6 projects in their communities, far from the 18 estimated as necessary to reduce poverty.[80]

The goal of this chapter is to inform decision making through an empirical investigation of the best way to deliver development resources in Niger. The criterion to decide what is 'best' consists of assessing the improvement experienced by households as a result of development projects. This addresses the common argument that aid rarely leads to improvements in households' living standards (Rondinelli 1983).

Three steps have been proposed to avoid seeing aid as a black box: "a) External donors/IFIs to policy makers (the way aid is given), b) Policy makers to policies (governance and institutional capacity), and c) Policies to outcomes (knowledge of what works)" (Bourguignon, Sundberg 2007). The mechanism of interest in this chapter is the provision of public goods at the local level, which in Bourguignon and Sundberg's categorization would be included in 'knowledge of what works'. The approach is useful because, as noted by the World Bank, foreign-aid donors should reinforce the accountability in these relationships, not undermine it (World Bank 2003).

[80] Figures from the previous chapter.

Exploring what the most useful initiatives are for households, implies dropping the previous chapter's assumption that all projects are uniform. This allows more flexibility: aid may not lead to structural reductions in poverty but it may at least alleviate specific situations, e.g. through agriculture-related projects during droughts. The emphasis of this chapter is also on aid, but aid is now seen as part of the larger framework of organizations supplying public goods in Niger. This larger perspective allows for a comparison between donors.[81] Are certain donors more efficient than others? Given the lack of donor assessments in general,[82] and in Niger in particular, this may have significant policy relevance.

The framework of analysis can be described as follows. First, it is assumed that development projects produce public goods (e.g. a hospital or a school) in a generic production function as:

$$g_s = g(A, l, K, L) \tag{6-1}$$

Where A, l, K and L represent total factor productivity, land, capital and labour, respectively. No assumption is made about the function's returns to scale on each of the production factors. The subscript s denotes the supplier (e.g. aid, government). As there are different types of suppliers, the possibility that their production functions may differ is considered. In particular, suppliers may differ in total factor productivity, that is, $A_j \neq A_k$ if supplier $j \neq k$. If the factors of production are limited, the amount used must be lower than or equal to the available resources: $l \leq \bar{l},\ K \leq \bar{K}$ and $L \leq \bar{L}$.

The usefulness of projects depends on how well the goods supplied address people's needs (the demand). Therefore, households may derive utility based on the type of donor that supplied it (owing to how it was supplied), other household characteristics such as its size, and specific local conditions such as being in a rural context (Pottier 1993). Public good g_s is an input into households' utility function:

$$\bar{u}_i = u(g_s, X_i) \tag{6-2}$$

In this equation, $\bar{u}_i$ represents the average utility received by household i from all the projects undertaken in its community, and X_i stands for a vector of household characteristics. It is also assumed that keeping X_i constant, households' utility function exhibits diminishing marginal

[81] Comparing donors is particularly relevant in the provision of public goods. In the previous chapter this would not have been the case, because the objective of some donors (e.g. private sector) may not necessarily be poverty reduction.
[82] For a notable exception see (Custer et al. 2015)

returns $\frac{\partial u_i}{\partial g_s} > 0$ and $\frac{\partial^2 u_i}{\partial {g_s}^2} < 0$. For instance, in communities where there is no health centre, the first one is likely to have a high marginal return, which would decrease, ceteris paribus, after the community has several of them.

6.2. Data and methodology

Available data are from a National Survey on Household Living Conditions (ENCVM)[83] undertaken in 2005 by Niger's National Statistics Institute (INS).[84] The objective of the survey was to produce baseline data to evaluate and monitor poverty, and its methodology was that of Core Welfare Indicators Surveys (INS Niger 2007).[85] The units of analysis are Niger's households, weighted based on their sampling frame representativeness. Households were asked if a specific development project (there were 30 types) had taken place in their community between 2000 and 2005; if so, who funded it and how much the household's living conditions improved as a result of that specific project.

The basic research question is whether public goods (i.e. projects) provided by aid were more useful to households than those provided by other sources (if no project was undertaken in a community, the utility derived by households is assumed to be zero). Formally, the research hypothesis can be expressed as:

$$H_0: \bar{u}_{ga} - \bar{u}_{gna} = 0 \tag{6-3}$$

$$H_0: \bar{u}_{ga} - \bar{u}_{gna} \neq 0 \tag{6-4}$$

Where $\bar{u}_{ga}$ is the average utility which households derive from the projects that were supplied by aid, and $\bar{u}_{gna}$ is the utility derived from non-aid projects. The ENCVM data available offer several key advantages for the research. First, the sample of households is large and considered to be representative of the country's population. Furthermore, it is possible to discriminate between development projects by funding source (aid, government, Special Program of the Republic's President (SP), community, private investor, religious community, other, unknown). Although respondents were not specifically asked the number of projects, this can be calculated from the data, which is useful to assess diminishing returns to scale in terms of utility for households. Similarly, it is also possible to calculate the number of donors who funded a project, which is useful to test for coordination costs between donors. Finally, the

[83] *Enquête Nationale sur les Conditions de Vie du Ménage (ENCVM).* More details are provided in Chapter 5.
[84] *Institut National de la Statistique (INS)*
[85] *Questionnaire des Indicateurs de Bien Etre de base (QUIBB)*

poverty dimension can also be incorporated in the analysis, which is vital to detect donors' purposive targeting.

Potentially there are some limitations. Endogeneity is one. This may arise mainly from two sources: first, if households influence the production of the public goods they receive (Whitaker 1980); and second, if there is selection bias and households who did receive aid projects and those who did not, were not statistically identical ex-ante. To minimize the possibility of the first, the analysis focuses only on households who did not contribute to the project (56.9 percent of all households who benefited from at least one project did not contribute in any way, i.e. did not provide materials, labour, supervision, funds or anything else). The extent to which community-driven projects are exogenous to households in their communities is still arguable, however. To address selection bias the ENCVM offers two key advantages. First, it has information on households' poverty level before the projects were implemented; this ensures that ex-ante differences in the most important dimension (poverty) are accounted for. And secondly, the ENCVM data has information on how poor households' communities were (ex-post, in 2005), which helps to tackle political economy issues relating to the process of allocating development projects.[86] Both parameters are included in the models estimated.

Public goods can be classified in various categories according to two characterisations: non-rivalry and non-excludability. It seems plausible that projects are non-excludable, but rivalry deserves attention as well: to the extent that public goods go beyond a certain capacity threshold, a household's probability of being reached by projects would be unequal, e.g. if there is a certain amount of loanable funds available and the demand for credit is much higher than the supply, households living closer are more likely to benefit from credit *ceteris paribus*. Thus, it is assumed that projects are non-excludable and within non-rivalry capacity thresholds.

It is also assumed that the visibility of different development projects does not bias households' answers, i.e. households know who supplied the public goods that reached them. Based on field visits and interviews this also seems plausible; all donor types advertise their projects in public boards (some examples in Figure 6.1).

Finally, as data are based on self-reported categorical data, there is the possibility of positive response or social desirability bias (Van de Mortel, Thea F. 2008). While this is difficult to address, it is taken care of by the choice of the econometric model: a complementary

[86] Admittedly, it would be better to have data on communities' poverty ex-ante. However, to the extent that poverty in communities is persistent (which a substantial amount of research has shown) this would not be a problem.

log-log, which assumes that higher categories in the outcome variable (i.e. utility from projects) are more probable (Norusis 2012).

The methodological choice is largely determined by the nature of the available data, with a special interest in the dependent variable. If a continuous dependent variable representing average improvement from development projects by household *i* were available, it would be useful to estimate the following generic model:

$$\bar{u}_i = \alpha + \beta_g \, proj_{gi} + \beta_h \, how_{hi} + \beta_z \, X_{zi} + e_i \qquad \forall \, fund = d \tag{6-5}$$

Where the dependent variable $\bar{u}_i$ is the mean improvement in living conditions of household i from all projects from which it benefited; $proj_{gi}$ denotes whether good g was supplied in household i's community; how_{hi} is a vector of *h* variables representing the way in which goods were delivered, including co-funding, whether there was prior consultation with the household and the number of projects; X_{zi} stands for other control variables, β_g, β_h and β_z are the associated vectors of coefficients, e_i is the error term and *fund* is a dummy variable that fixes the funding source.

The first group of explanatory variables $proj_{gi}$ relates to the type of goods provided. In the ENCVM g=30 possibilities (all project types and their incidence are shown in Table 6.3). The second group of explanatory variables is how_{hi}, which allows one to discern differences in practices across donors. It includes three issues that can affect the efficiency of the goods delivered: co-funding, information, and the number of projects. Co-funding relates to any case in which donors fund a project simultaneously (not necessarily involving aid; e.g. it may be funded by a religious community and government). It can be used either to leverage funds (more donors can put together more resources, hence have more impact) and/or for reasons of political economy (e.g. donors may want to be seen to be participating, or they may want to channel other donors' resources and earn a commission). Whatever the reasons, co-funding is common (72.2 percent of all projects involving aid were co-funded) and can have important effects on the projects undertaken, either positive (e.g. through donors' synergies or complementarities), or negative (e.g. due to coordination costs that may lead to delays or lower the quality of the results). Information relates to consulting households about the initiatives required in the community before goods are provided to them. This is not new; claims to seek local communities' participation are widely-accepted as a mechanism through which donors may better address households' needs (Feeney 1998). Finally, the number of projects may be relevant if there are economies of scale, e.g. when a minimum critical mass of projects is reached, overall utility is boosted. The utility households derive from projects also depends on

a vector of household characteristics, X_i. This may include three types of variables: relating to individual (e.g. educated household heads may consider that they derive higher utility), household (e.g. larger benefits for larger families) or context (e.g. rural households with less access to certain public services may benefit more).

When the dependent variable is not continuous, however, a different econometric technique must be used. In the ENCVM, when a specific project had taken place in a household's community, the household head was asked "How much did your household's living conditions improve thanks to that project, on a scale of 0 (Nothing), 1 (Little), 2 (Quite) or 3 (Greatly)?" (the structure of the available data is reflected in Table 6.1). Given such a dependent variable, it would be tempting to calculate an average of all projects' utility for a given household or for a given project (as in Table 6.1).

Table 6.1. Data structure (with actual ECVM sample values) with regard to improvement by project

Household	Improve Project1 (0:None, 1: Little, 2: Quite, 3:None)	Improve Project 2 (0:None, 1: Little, 2: Quite, 3:None)	…	Improve Project 30 (0:None, 1: Little, 2: Quite, 3:None)	Average by household
1	-	-	…	0	1.8
2	-	-	…	0	0
…	…	…	…	…	…
6,690	2	-	…	-	2
Average by project	2.368	2.436	…	2.387	2.372

However, to do this would be incorrect: the categories of the dependent variable can be naturally ordered but the numbers do not necessarily reflect the scale, e.g. the difference between the first category (0=None) and the second (1=Little) is not necessarily the same as that between the second (1=Little) and the third (2=Medium). In this case, ordinal regression analysis (also known as ordered choice regression) is suitable (Katchova 2013). The outcome variable can be denoted as a latent continuous variable u^* (utility from projects) that is unobservable. What is observed is that the levels of u, households' actual answers in the Likert scale noted, manifest when u^* is within specific threshold values:

$$u = j \text{ if } \alpha_{j-1} < u^* \leq \alpha_j \tag{6-6}$$

There are *j-1* threshold points and *j* marginal effects. The model describes probabilities of the different j outcomes, as there is "no obvious regression (conditional mean) relationship between the observed dependent variable, y_i and the covariates" (Greene, Hensher 2009). Most applications in ordinal regression analysis use ordered probit, which assumes a normally distributed latent variable, or ordered logit, which assumes evenly distributed categories

(Norusis 2012). In an ordered probit, F is the standard normal cumulative density function (cdf):

$$p_{ij} = p(u_i = j) = p\left(\alpha_{j-1} < u^* \leq \alpha_j\right) = F\left(\alpha_j - \boldsymbol{x}'_j\beta\right) - F(\alpha_{j-1} - \boldsymbol{x}'_j\beta) \qquad (6\text{-}7)$$

Another possibility is the complementary log-log, which takes the form *ln(-ln(1-Prob(event))* and assumes that higher categories are more probable in u^* (Norusis 2012). This is the case with the available data for u_g, improvement from project g (see one example in Figure 6.2).

Estimating the ordinal regression, we would have the probability that households give a certain answer (i.e. the probability that improvement in project $g = j$), and then we could calculate marginal effects. However, given the available data, this approach entails two inconveniences. First, it involves the estimation of 30 regressions (one for each project type);[87] more importantly, as the model is estimated for each project individually, the number of projects cannot be included as a covariate, which ignores a potentially important determinant of households' utility.

An alternative to use all the information can be devised as follows. First, the ordinal regression model is estimated 30 times, one for each project (g = 30 projects), where the dependent variable is improvement from project g, and the explanatory variables consist of the aspects explaining project efficiency: $fund_{di}$ (donor type), how_{hi} (previous consultation and total number of funding sources), and other controls of context (e.g. being in an urban area):

$$\hat{u}_i = \alpha + \beta_d\, fund_{di} + \beta_1\, consult_i + \beta_2\, funders_i + \beta_3\, urban_i + e_i \;\forall\; project = g \qquad (6\text{-}8)$$

This model estimated is then used to predict the values of improvement from project g for household i. This may then be seen as a new variable $\hat{u}$ (Table 6.2).

Table 6.2. Data structure with predicted values for g projects

Household i	Predicted value (improvement for Project g=1 is …)	Predicted value (improvement for Project g=2 is …)	…	… Predicted Prob(improvement for Project g=30 is…)	Mean predicted improvement
1	$\hat{u}_{1,\, i=1}$	$\hat{u}_{2,\, i=1}$		$\hat{u}_{30,\, i=1}$	$\bar{u}_{\, i=1}$
…				…	…
6,690	$\hat{u}_{1,\, i=6690}$	$\hat{u}_{2,\, i=6690}$		$\hat{u}_{30,\, i=6690}$	$\bar{u}_{\, i=6690}$

The new variable $\hat{u}$ is continuous and can now be averaged across projects, which yields the mean predicted improvement from development projects for household i, calculated as:

[87] It would also be possible to focus on a sub-sample of projects, but then significant information would be lost.

$$\bar{u}_i = \frac{1}{30}\sum_{g=1}^{g=30} \hat{u}_{g,i} \quad (6\text{-}9)$$

The mean predicted improvement for household i, or $\bar{u}_i$, is then regressed on factors that explain to what extent households benefit from development projects. These explanatory variables are mainly composed of number of projects (including a 'number of projects squared' term to assess non-linearity), and a vector of other household characteristics relating to the household head (e.g. if female), the household (e.g. its size), and the context (e.g. region), as follows:

$$\bar{u}_i = \alpha + \beta_1 projects + \beta_z X_{zi} + e_i \qquad \forall\, fund = d \quad (6\text{-}10)$$

Intuitively, this approach may be interpreted as estimating equation (6-5) in two steps. It is worth noting that as the dependent variable in equation (6-10) is based on predicted values, the information as to its underlying predictors is already included. This means that if those predictors are introduced again as explanatory variables in equation (6-10), the R^2 will approach one. In the same vein, predicting new values based on the second model and regressing them on the initial predictors (e.g. to see how much of the variance in the final model is explained by them), the statistical relationship will naturally be strong.

6.3. Results

Data on the incidence of development projects are summarized in the annex (Table 6.3). Such projects as building a school/classroom or a health centre were the most common between 2000 and 2005, due to Mamadou Tandja's priorities when he came to power (Gouvernement du Niger 2010). At that time, it also became clear that microfinance initiatives for women in South Asia had been successful, and substantial efforts were made to replicate them (with so much emphasis that other segments of the population such as the youth did not benefit much).

With regards to aid funding, the overall pattern was similar although there were some marked differences. For instance, aid was generally much more active in the agricultural sector (e.g. breeding forages, wells and agricultural inputs) and gender initiatives (i.e. women and women's microfinance). Other projects were less commonly financed by aid, especially if they were seen as more 'private' in nature. This was the case for the promotion of home ownership and the purchase of agricultural inputs, which were driven by community funding (correlation coefficients: 0.5179*** and 0.1377***, respectively) and private investors (correlation coefficients: 0.2756*** and 0.2287***, respectively). Aid was also notably less focused on transport infrastructure projects (e.g. rehabilitation of roads and transport services).

The most common source of finance for development projects has been government, although others such as aid and the SP have been notable (Table 6.4). As these are projects at the local level, this leads in the case of aid to criticism for creating parallel structures (to the national) to implement projects, associated with duplication of efforts and inefficiencies (OECD 2012). The case of the SP may not be different; when Niger was considered for accessing the HIPC Initiative in 2001, the international creditor community wanted to make sure that their condoning of Niger's debt would have positive effects on poverty reduction, and favoured a new funding vehicle. Hence, President Mamadou Tandja instituted the SP as separate from Government's regular functioning, although similarly aligned with the country's Poverty Reduction Strategy (PRS) and relying on the country's decentralized structure: Préfets, Sous-Préfets, regional and sub-regional executives (Gouvernement du Niger 2010). The SP operated until 2005.

Equation (6-8) is estimated 30 times (once for each project) with three ordinal regression models: ordered probit, ordered logit and complementary log-log (results not shown). The predicted values are averaged across all projects for each household, which yields the mean predicted utility (1st step). Of the three models, the complementary log-log shows the highest values (Table 6.5), and is the most indicated for the frequency distribution of the available data.[88] Taking the mean predicted utility as a dependent variable, equation (6-10) is estimated (the second step) and two specification tests are executed: the Ramsey RESET and the link test (results given in Table 6.6). Both tests support the specification adopted. The model's residuals are also examined, for all funding sources and separately for each of them (Figure 6.3). The only graph of residuals that is clearly not normally distributed belongs to projects funded by religious communities, which may be understandable as there are only 19 observations. The results for the estimation of equation (6-10) are shown for all donors and decomposing for each of them (Table 6.7), which allows for a comparison to see who drives the overall result.

The number of projects exhibits a concave function: as households benefit from more projects, their average utility increases but at a decreasing rate (Table 6.7). Based on donors' coefficients, the most useful are communities, the SP, private investors, aid and government. Decreasing returns are most important for communities and the SP, and of very little importance for private investors, supporting the view that private investors are more efficient than public sector entities.

[88] Not shown for all 30 projects. Figure 6.2 shows the frequency distribution for the first project as an example.

Niger is a vast country with a low population density and large geographical distances associated with high costs, which is a critical determinant in accessing such services as microfinance (Pedrosa-Garcia, Do 2011). In this context, urban households have a clear advantage vis-à-vis rural ones when it comes to accessing a critical mass of other services that will enhance the impact of development projects (column 1). Urban households are more able to benefit from projects than rural households, a result driven by aid, government and private investors (Table 6.7). Private projects are led by such firms as French AREVA's subsidiaries in Niger (Somair and Cominak), often as part of their corporate Social Responsibility (Daouda 2014). To the extent that firms are interested in getting recognition and/or future potential demand for their projects (their main goal is not to reduce poverty), it is not surprising that they are more interested in executing projects in urban areas.

The results give some interesting insights on poverty. Overall, poor communities and households (either in 2000 or in 2005) are not associated with reaping higher benefits from development projects (Table 6.7). When Tandja took office one of his priorities was to tackle poverty, especially in rural areas (Gouvernement du Niger 2010), which translated in poorer communities –but not poorer households– benefiting more from government projects (column 3). These results reflect political economy aspects at the local level: when communities finance their own projects, wealthier households benefit more than their poorer neighbours (column 6). Conversely, projects financed by religious organisations are more able in wealthier communities (who fund them through donations) to cater for poorer households (column 7). Aid, the SP and private investors fail to take into account poverty (both at the household and community level).

In terms of households' characteristics, two results are remarkable besides regional specificities. First, women are less likely to reap benefits from projects. This is driven by SP projects and may reflect the fact that the SP was a short-lived, quick-action program implemented by decentralized posts held by men in a conservative Muslim society. Secondly, as education level increases, the average improvement from projects decreases: when the household head can only read and write (the majority of whom are self-employed), their households benefit more from projects. On the other hand, when the head is a professional (most of whom are employed by someone else) households benefit less.

The other item of interest relates to variables on how a project is supplied, namely co-funding, number of funders and prior consultation. Based on the second model estimated, a new variable is predicted, called final mean predicted utility, which is then regressed on the explanatory variables of the first model explicitly to show their relationship (results in Table

6.8). Not only does co-funding impose a coordination cost on the project's utility; public donors who tend to be more bureaucratic (SP, Government and Aid) pay the biggest toll, while communities and private investors (less formal and more agile) show the smallest negative coefficients on co-funding. Impact increases by adding more types of donor, but with decreasing marginal returns. Finally, consulting households becomes irrelevant when co-funding aspects are included, which suggests that information may not necessarily be collected from households: co-funders also provide valuable information to improve projects.

The final mean predicted utility summarized by donor (Table 6.9), shows that aid is the second lowest source of utility (only better than communities, which have few resources as they depend on their constituents). The type of project (Figure 6.4) and sector (Figure 6.5) is largely irrelevant; what is vital is information or the number of funders (Figure 6.6). Finally, it is worth noting that based on the number of projects, the highest utility is reached with 10-18 projects (depending on the donor), which is consistent with the number required to start curbing poverty (Figure 6.7).[89]

6.4. Conclusion

This chapter has shown that development projects improve people's lives. In contrast to poverty reduction (previous chapter), improvements start from the first project. The peak coincides with the estimated 10-18 projects needed to reduce poverty. This supports the importance of interconnectedness between development projects as a way to fight poverty, highlighting –as in the previous chapter– the need for a critical mass of projects if people are to be lifted out of the poverty trap.

For an efficient provision of development projects, political economy considerations must be considered. Notably, government efforts translate to poorer communities benefiting more, but not poorer households. When communities finance their own projects, wealthier households benefit more than their neighbours, and projects financed by religious organisations have a preference for wealthier communities (from which their donations come) to cater for poorer households. Aid, the SP and private investors fail to take into account poverty both at household and community levels.

The type of project by itself is largely irrelevant; what is important is to adapt the intervention to the households which benefit from it. And for this, the key is information. As important as consultations to households may have seemed, information can also be collected

[89] Estimated in the previous chapter.

through co-funding agencies. Co-funding involves clear coordination costs that depend on the donor's nature, and the more donors there are, the more projects will be useful, although at a decreasing rate.

Based on the model estimated aid projects do help people, but most other donors are better at doing so. This puts aid in the spotlight and can raise several questions, but one is central: should (or perhaps could) aid be channelled through other donors that are more efficient?

6.5. Annexes

Figure 6.1. Examples of real project boards from several funding sources

Figure 6.2. Cumulative distribution of answers from project 1 (build a school or classroom)

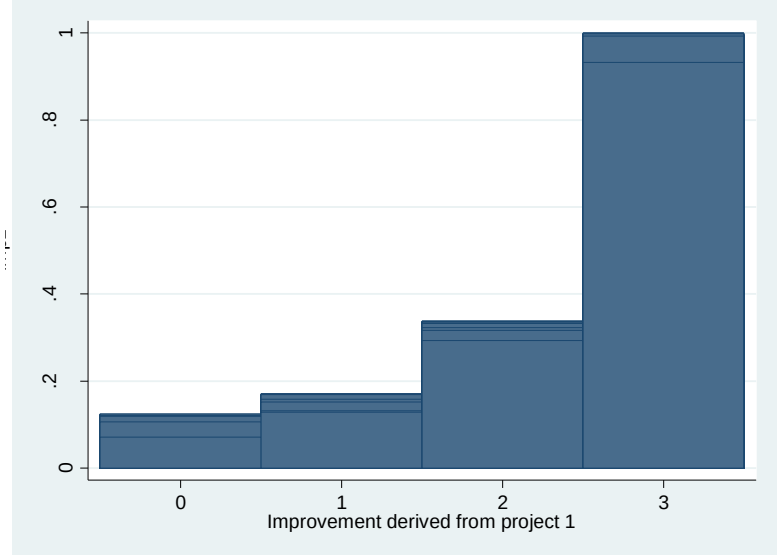


Table 6.3. Incidence of development projects

Project	All Niger			Aid-funded: Yes			Aid-funded: No			T test
	count	mean	sd	count	mean	sd	count	mean	sd	(Aid:Yes-no)
1: Build school or classroom	6690	0.462	0.499	1,937	0.569	0.495	3440	0.559	0.497	0.01
2: Rehabilitate school	6690	0.122	0.327	1,937	0.123	0.328	3440	0.165	0.371	-0.042***
3: Build health centre	6690	0.25	0.433	1,937	0.361	0.48	3440	0.269	0.444	0.092***
4: Rehabilitate health centre	6690	0.05	0.219	1,937	0.067	0.25	3440	0.058	0.233	0.009
5: Health / Hygiene improvements	6690	0.028	0.165	1,937	0.045	0.206	3440	0.027	0.163	0.018***
6: Build road	6690	0.047	0.212	1,937	0.066	0.248	3440	0.053	0.223	0.013**
7: Rehabilitate road	6690	0.055	0.229	1,937	0.048	0.213	3440	0.08	0.271	-0.032***
8: Transport service	6689	0.022	0.146	1,937	0.012	0.108	3439	0.036	0.186	-0.024***
9: Village and breeding forages	6689	0.121	0.326	1,937	0.218	0.413	3439	0.103	0.304	0.115***
10: Village and breeding wells	6690	0.166	0.372	1,937	0.242	0.429	3440	0.177	0.382	0.065***
11: Water channelling	6689	0.035	0.183	1,937	0.051	0.219	3439	0.037	0.189	0.014**
12: Rehabilitation of water channelling	6690	0.019	0.137	1,937	0.027	0.162	3440	0.021	0.143	0.006
13: Access to credit for agricultural inputs	6690	0.056	0.23	1,937	0.11	0.313	3440	0.042	0.2	0.068***
14: Better access to agricultural inputs	6690	0.041	0.199	1,937	0.079	0.27	3440	0.033	0.178	0.046***
15: Purchase of agricultural products	6690	0.054	0.226	1,937	0.048	0.215	3440	0.077	0.267	-0.029***
16: Availability of supplementary services	6690	0.025	0.156	1,937	0.042	0.201	3440	0.023	0.15	0.019***
17: Build veterinary centre	6690	0.018	0.133	1,937	0.026	0.159	3440	0.019	0.138	0.007
18: Work opportunities	6689	0.033	0.177	1,937	0.068	0.252	3439	0.022	0.146	0.046***
19: More people owning their homes	6690	0.141	0.348	1,937	0.085	0.279	3440	0.226	0.418	-0.141***
20: Police service	6690	0.011	0.105	1,937	0.006	0.075	3440	0.018	0.134	-0.012***
21: Access to credit to women's groups	6690	0.312	0.463	1,937	0.448	0.497	3440	0.337	0.473	0.111***
22: Credit to young graduates' organizations	6690	0.013	0.115	1,937	0.021	0.145	3440	0.013	0.114	0.008**
23: Access to credit for milking cows	6690	0.055	0.229	1,937	0.056	0.231	3440	0.075	0.263	-0.019***
24: Other types of access to credit	6690	0.107	0.309	1,937	0.185	0.388	3440	0.095	0.294	0.09***
25: Access to electricity	6690	0.046	0.209	1,937	0.071	0.256	3440	0.047	0.211	0.024***
26: Build weir	6690	0.01	0.097	1,937	0.019	0.136	3440	0.007	0.084	0.012***
27: Build mini-dam	6690	0.03	0.171	1,937	0.058	0.234	3440	0.023	0.151	0.035***
28: Actions favouring women	6690	0.121	0.326	1,937	0.222	0.416	3440	0.1	0.299	0.122***
29: Rehabilitate hydro-agricultural equipment	6690	0.012	0.111	1,937	0.011	0.103	3440	0.018	0.133	-0.007**
30: Others	4880	0.137	0.344	1,411	0.298	0.458	2538	0.081	0.274	0.217***

* p<0.05, ** p<0.01, *** p<0.001

Table 6.4. Dummy variable on source of funding: "Was the project financed by the following source?" (1:yes, 0:no)

	Obs.	Mean	Std. Dev.	Min	Max
Aid	5,377	0.386	0.487	0.0	1.0
Government	5,377	0.443	0.497	0.0	1.0
SP	5,377	0.363	0.481	0.0	1.0
Private Investor	5,377	0.304	0.460	0.0	1.0
Community	5,377	0.258	0.438	0.0	1.0
Religious community	5,377	0.005	0.068	0.0	1.0
Others	5,377	0.002	0.048	0.0	1.0
Unknown	5,377	0.022	0.145	0.0	1.0

Table 6.5. Summary of mean predicted utility, estimated through 3 ordinal regression models

	Obs.	Mean	Std. Dev.	Min	Max
Ordered probit	5,377	0.161	0.437	-1.063	2.712
Ordered logit	5,377	0.240	1.041	-2.275	7.451
Complementary log-log	5,377	1.036	1.196	-1.763	3.933

Table 6.6. Result of specification tests

Ramsey RESET test for omitted variables		
H_0: model has no omitted variables	F(3, 3022) =	1.72
	Prob > F =	0.1610

Link Test	(1)
_hat	1.100
	[0.0645]***
_hatsq	-0.050
	[0.065]
_cons	-0.0397
	[0.068]
Observations	3047
R-squared	0.1443

Figure 6.3. Distribution of residuals, for all donors and by individual donor

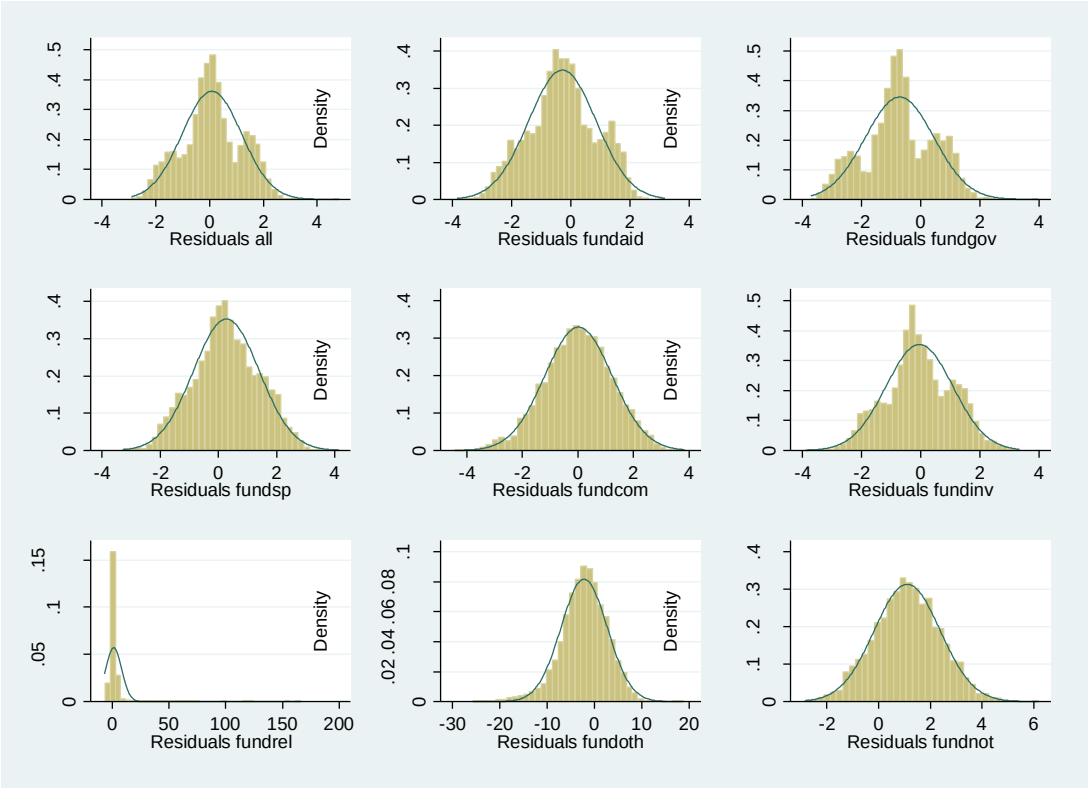


Table 6.7. Regression results of mean predicted utility

	All	Aid	Govt.	SP	Private	Community	Religious	Other	Unknown
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Number of projects	0.267	0.28	0.132	0.368	0.287	0.382	1.692	1.275	0.255
	[0.036]**	[0.067]**	[0.036]**	[0.058]**	[0.054]**	[0.060]**	[4.123]	[.]	[0.168]
Number of projects squared	-0.012	-0.011	-0.008	-0.014	-0.01	-0.015	-0.241	-0.067	-0.012
	[0.002]**	[0.005]*	[0.002]**	[0.004]**	[0.003]**	[0.002]**	[1.051]	[.]	[0.009]
Urban household (1:yes, 0:no)	0.354	0.648	0.462	0.251	0.437	-0.103	0.797	-1.765	0.716
	[0.146]*	[0.235]**	[0.109]**	[0.174]	[0.196]*	[0.232]	[1.871]	[.]	[0.455]
Poverty level of community in 2005 (0:richest - 9:poorest)	-0.032	-0.039	0.054	0.022	-0.037	0	-0.568	-2.418	-0.204
	[0.019]	[0.039]	[0.019]**	[0.036]	[0.044]	[0.074]	[0.044]**	[.]	[0.163]
Poverty level of household in 2000 (0:richest - 9:poorest)	-0.017	0.016	-0.011	0.027	-0.035	-0.149	0.548	-0.373	-0.051
	[0.019]	[0.040]	[0.022]	[0.025]	[0.029]	[0.069]*	[0.023]**	[.]	[0.104]
Poor household in 2005 (1:yes, 0:no)	0.101	0.099	0.112	0.036	0.045	0.069	-0.859	0	-0.067
	[0.058]	[0.097]	[0.067]	[0.099]	[0.107]	[0.153]	[1.429]	[.]	[0.237]
Household size	0.011	0.011	0.008	-0.016	0.005	-0.004	0.069	0.505	-0.002
	[0.008]	[0.013]	[0.008]	[0.013]	[0.015]	[0.018]	[0.269]	[.]	[0.021]
Sex of household head is female (1:yes, 0:no)	-0.244	-0.194	-0.145	-0.348	-0.003	0.01	0	0	-0.591
	[0.097]*	[0.163]	[0.102]	[0.131]**	[0.179]	[0.249]	[0.000]	[.]	[0.386]
Education = Islamic	-0.096	-0.149	-0.056	-0.016	-0.128	-0.309	-0.075	0	-0.399
	[0.080]	[0.136]	[0.101]	[0.124]	[0.139]	[0.185]	[2.420]	[.]	[0.356]
Education = Read & Write	0.518	0.373	0.475	0.531	0.664	0.41	0	0	0
	[0.209]*	[0.348]	[0.215]*	[0.463]	[0.232]**	[0.211]	[0.000]	[.]	[0.000]
Education = Primary	0.015	-0.181	0.029	0.019	0.08	-0.141	0	0	-1.607
	[0.083]	[0.103]	[0.100]	[0.149]	[0.174]	[0.261]	[0.000]	[.]	[0.483]**
Education = Secondary	-0.165	-0.113	0.104	-0.349	-0.417	-0.367	0	0.48	-0.88
	[0.124]	[0.221]	[0.121]	[0.177]*	[0.163]*	[0.302]	[0.000]	[.]	[0.787]
Education = Professional / Technical	-0.424	-0.637	-0.217	-0.583	-0.364	-0.159	0	0	-1.04
	[0.139]**	[0.304]*	[0.133]	[0.196]**	[0.198]	[0.281]	[0.000]	[.]	[0.557]
Education = University	-0.421	-0.537	-0.02	-0.478	-0.376	-0.448	0	0	-0.305
	[0.235]	[0.446]	[0.162]	[0.353]	[0.322]	[0.296]	[0.000]	[.]	[0.579]
Region = Diffa	0.323	0.173	0.14	0.65	1.174	0.409	0	0	0
	[0.181]	[0.247]	[0.310]	[0.319]*	[0.305]**	[0.481]	[0.000]	[.]	[0.000]
Region = Dosso	0.535	0.2	0.012	1.018	1.106	-0.105	0	0	0.796
	[0.229]*	[0.297]	[0.201]	[0.399]*	[0.308]**	[0.549]	[0.000]	[.]	[0.491]
Region = Maradi	0.508	0.531	0.411	0.648	1.16	1.41	0	0	1.179
	[0.211]*	[0.261]*	[0.204]*	[0.334]	[0.411]**	[0.455]**	[0.000]	[.]	[0.957]
Region = Tahoua	0.23	0.392	-0.125	0.088	0.478	-0.25	-2.421	0	0.381
	[0.209]	[0.249]	[0.212]	[0.351]	[0.247]	[0.437]	[0.854]*	[.]	[0.468]
Region = Tillaberi	0.493	0.848	-0.048	0.735	1.136	0.284	-0.223	0	0.828
	[0.186]**	[0.316]**	[0.198]	[0.325]*	[0.219]**	[0.413]	[2.663]	[.]	[0.415]
Region = Zinder	0.77	0.456	0.281	1.157	1.362	0.693	-1.425	0	0.97
	[0.183]**	[0.235]	[0.189]	[0.314]**	[0.262]**	[0.468]	[1.713]	[.]	[0.471]*
Region = Niamey	0.487	0.383	-0.42	1.173	1.105	0.468	-0.758	0	0.149
	[0.207]*	[0.353]	[0.196]*	[0.361]**	[0.276]**	[0.476]	[3.718]	[.]	[0.555]
Observations	3047	862	1516	1087	858	353	14	8	87
R-squared	0.144	0.214	0.148	0.303	0.28	0.353	0.94	1	0.436

Robust standard errors in brackets
* significant at 5% level; ** significant at 1% level

Table 6.8. Estimated improvement and variables relating to how public goods are supplied

	All				Aid				Govt.			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Household consulted about project to do (1:yes, 0:no)	0.005	-0.019	-0.019	-0.015	-0.044	-0.005	-0.004	0.008	-0.01	-0.06	-0.062	-0.058
	[0.013]	[0.011]	[0.011]	[0.011]	[0.022]*	[0.019]	[0.019]	[0.019]	[0.018]	[0.016]**	[0.016]**	[0.016]**
Co-funding: number of funders > number of projects (1:yes, 0:no)	-0.171			-0.4	-0.3			-0.44	-0.233			-0.447
	[0.045]**			[0.040]**	[0.055]**			[0.046]**	[0.060]**			[0.053]**
Number of donor types involved		0.232	0.269	0.28		0.238	0.342	0.376		0.211	0.337	0.356
		[0.006]**	[0.019]**	[0.019]**		[0.009]**	[0.036]**	[0.036]**		[0.008]**	[0.035]**	[0.034]**
Number of donor categories squared			-0.009	-0.009			-0.021	-0.026			-0.025	-0.027
			[0.004]*	[0.004]*			[0.007]**	[0.007]**			[0.007]**	[0.007]**
Observations	5356	5356	5356	5356	1934	1934	1934	1934	2510	2510	2510	2510
R-squared	0.003	0.238	0.238	0.252	0.018	0.276	0.28	0.312	0.006	0.205	0.209	0.231

	SP				Private				Religious			
	(13)	(14)	(15)	(16)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Household consulted about project to do (1:yes, 0:no)	0.004	-0.002	-0.003	0	0.06	0.025	0.025	0.028	0.224	0.036	0.039	0.039
	[0.020]	[0.018]	[0.018]	[0.018]	[0.022]**	[0.019]	[0.019]	[0.019]	[0.161]	[0.138]	[0.143]	[0.143]
Co-funding: number of funders > number of projects (1:yes, 0:no)	-0.342			-0.486	-0.185			-0.41	0			0
	[0.083]**			[0.074]**	[0.075]*			[0.063]**	[0.000]			[0.000]
Number of donor types involved		0.202	0.322	0.331		0.235	0.396	0.417		0.191	0.251	0.251
		[0.009]**	[0.039]**	[0.039]**		[0.009]**	[0.039]**	[0.038]**		[0.057]**	[0.237]	[0.237]
Number of donor categories squared			-0.023	-0.024			-0.031	-0.034			-0.011	-0.011
			[0.007]**	[0.007]**			[0.007]**	[0.007]**			[0.040]	[0.040]
Observations	2050	2050	2050	2050	1643	1643	1643	1643	19	19	19	19
R-squared	0.008	0.19	0.194	0.21	0.008	0.289	0.297	0.315	0.103	0.476	0.479	0.479

	Community				Others				Unknown			
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
Household consulted about project to do (1:yes, 0:no)	-0.01	-0.011	-0.014	-0.003	0.113	0.159	0.091	0.091	-0.011	0.016	0.014	0.014
	[0.027]	[0.020]	[0.020]	[0.019]	[0.219]	[0.198]	[0.114]	[0.114]	[0.089]	[0.084]	[0.084]	[0.084]
Co-funding: number of funders > number of projects (1:yes, 0:no)	-0.189			-0.302	0			0	0			0
	[0.050]**			[0.036]**	[0.000]			[0.000]	[0.000]			[0.000]
Number of donor types involved		0.279	0.423	0.46		0.155	1.113	1.113		0.176	0.197	0.197
		[0.009]**	[0.037]**	[0.037]**		[0.079]	[0.202]**	[0.202]**		[0.040]**	[0.110]	[0.110]
Number of donor categories squared			-0.027	-0.033			-0.177	-0.177			-0.007	-0.007
			[0.007]**	[0.007]**			[0.036]**	[0.036]**			[0.034]	[0.034]
Observations	1232	1232	1232	1232	14	14	14	14	138	138	138	138
R-squared	0.012	0.454	0.461	0.49	0.022	0.275	0.784	0.784	0	0.128	0.128	0.128

Table 6.9. Estimated improvement by donor type

	Aid	Govt.	SP	Private	Community	Religious	Other	Unknown
Mean	1.046	1.105	1.126	1.051	0.983	1.072	1.157	0.885
Std. Dev.	0.454	0.454	0.451	0.452	0.436	0.359	0.394	0.519
Min	-2.4	-2.4	-2.4	-0.3	-2.4	0.6	0.5	-2.4
Max	2.5	2.5	2.4	2.5	2.3	2.1	1.7	2.1
Obs.	1,934	2,510	2,050	1,643	1,232	19	14	138

Figure 6.4. Estimated improvement by type of project

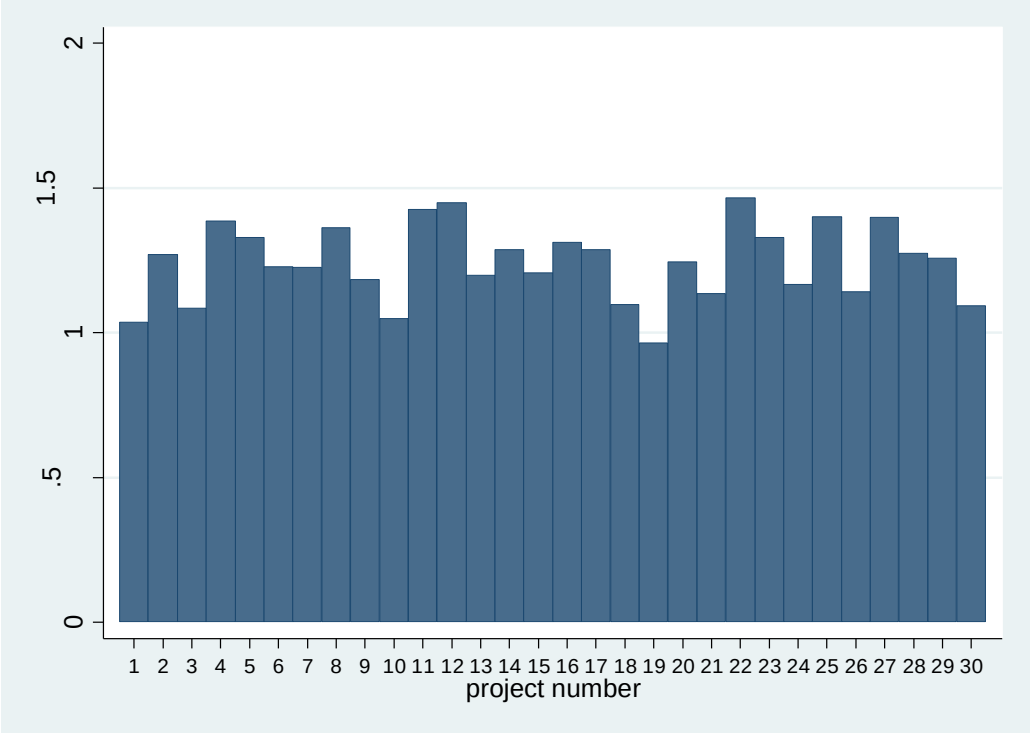


Figure 6.5. Estimated improvement by sector

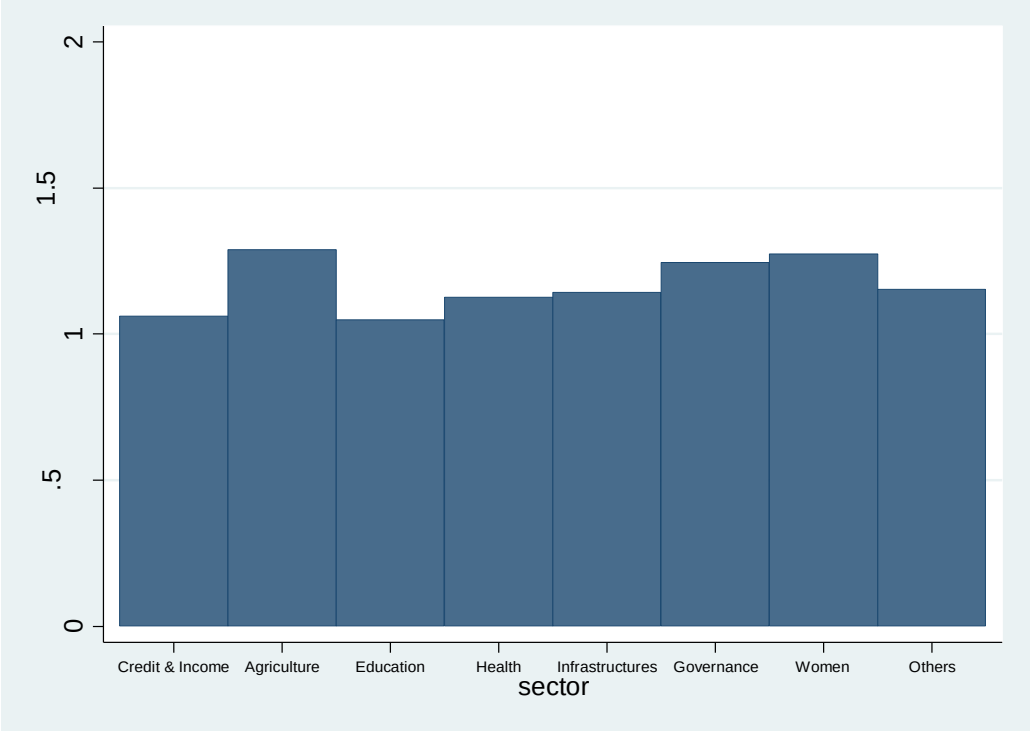


Figure 6.6. Estimated predicted improvement and number of funders, with quadratic fit

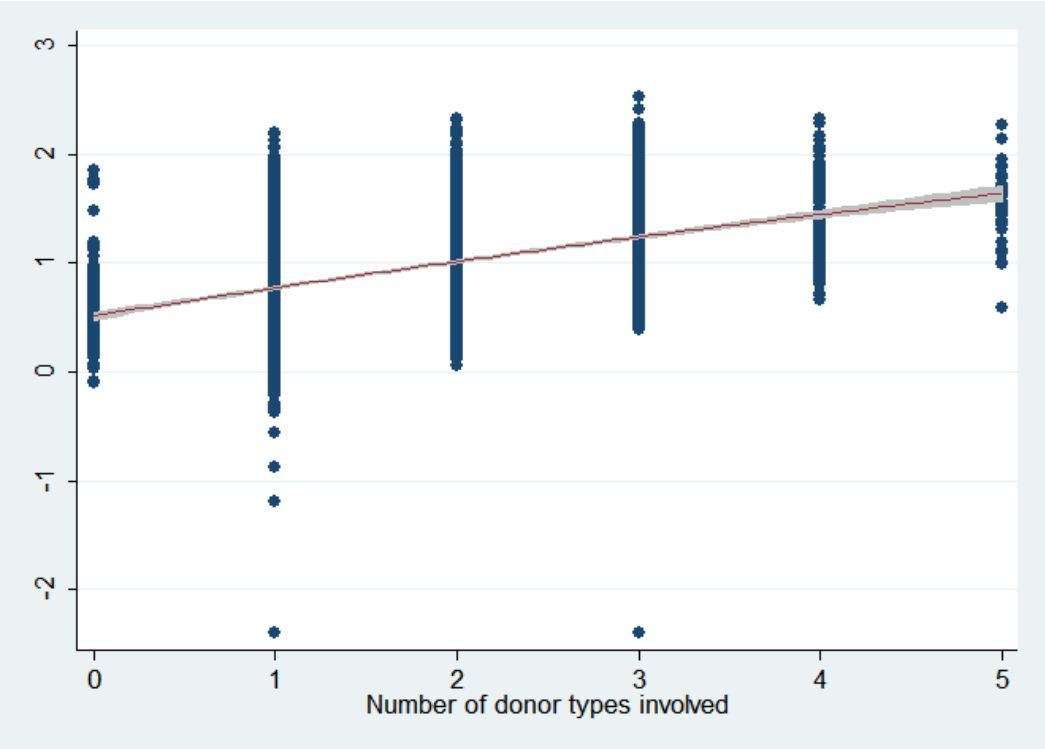
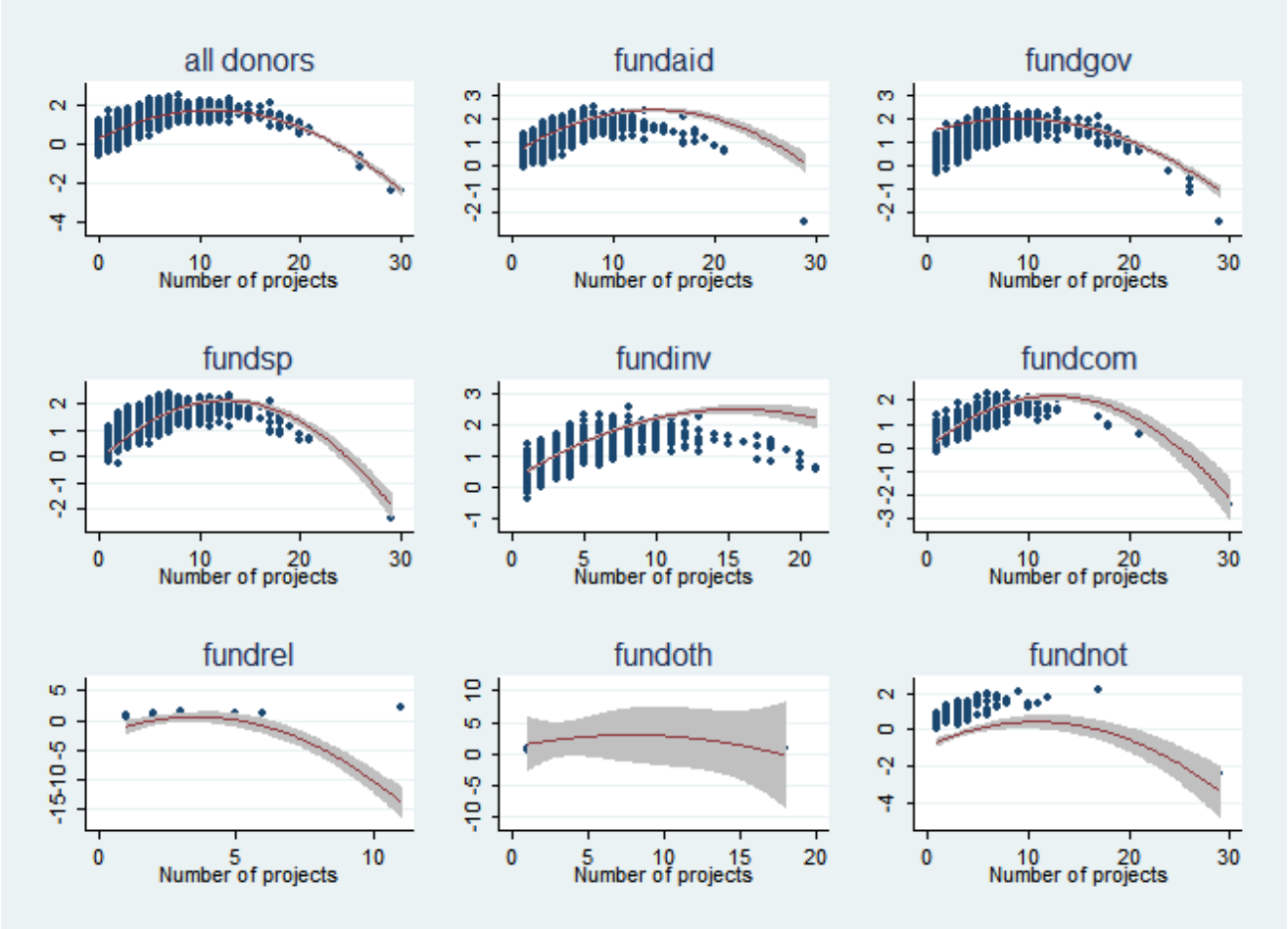


Figure 6.7. Estimated predicted improvement and number of projects, with quadratic fit



Chapter 7. Conclusion

"...practically every individual has some advantage over all others because he possesses unique information of which beneficial use might be made, but of which use can be made only if the decisions depending on it are left to him or are made with his active cooperation" (Hayek 1945).

As noted by Riddell (1987), there is no obvious theoretical framework linking aid and development, though this need not be the case. From the time of aid-growth regressions, research has gathered considerable knowledge on the intricacies through which aid can help. For example, international experience shows that if done well, aid can bring significant positive results at a micro level, especially in key sectors such as education or health.

Given the relevance of specific local conditions, it is worth evoking the "knowledge of the particular circumstances of time and place" (Hayek 1945, p.521). Aid research has moved away from universal truths and methods of analysis towards knowledge of the local context and tailored approaches. Indeed, having specific knowledge of the utility which households –given their specific characteristics– derive from public interventions, it is easier to tailor such interventions to provide those with the highest marginal utility. This approach to development planning, rarely used, has enormous potential and must therefore be highlighted as an innovative option.

Despite the tendency towards understanding the specific circumstances of time and place, few authors adopt middle-ground views – notable exceptions being Riddell (1987) or Krueger et al. (1989). In recent years, views on aid are certainly polarized: from economists who think it will end poverty (Sachs 2005), to others who blame it for countries' poverty in Sub-Saharan Africa (Moyo 2009). The reason for this conundrum may be that, despite the better understanding we have gained, we still know little about the mechanisms through which aid works, which leads to oversimplification. The consequences of this shortfall become more onerous at household level and in poor countries – especially if those countries cannot rely on international capital markets or other financial flows such as foreign direct investment. Another compounding factor is that the aid literature has largely neglected the coexistence of aid and other sources of development projects. Combined, these factors make it problematic to inform policymaking.

Against this backdrop, this dissertation has focused on Niger, and adopted an empirical perspective with the goal of shedding light on those gaps. Relatively infrequent in the literature, my idea is that instead of calls for more or for less aid, the emphasis should be on calls for better aid. What would better aid look like?

Drawing from lessons in the literature and the findings of this thesis, basic elements can be sketched for the three broad types of aid modalities: project-based aid, policy-based lending, and budget support (BS). Chapters 5 and 6 focused on project-based aid delivered to households, where poverty and its circumstances are taken as the goal (as opposed to growth). I find that in Niger, aid is correlated with higher levels of poverty, as expected when it is targeted at the poor. However, receiving aid projects is also associated with increases in poverty. To shed more light on this, households who benefited from aid projects are compared with those who did not benefit from any projects at all, and with those who benefited from non-aid funded projects. Relative to the first group, aid does not increase or reduce poverty. Considering the second, households who benefit from projects implemented by non-aid donors enjoy greater reductions in poverty than households who benefit from aid.

A minimum critical mass of projects should be undertaken so that synergies between them can arise and poverty can be reduced. That threshold coincides with the peak in utility which projects provide to households. This critical mass of projects is consistent with idea that a country may be in a poverty trap.

The issue can also be considered as: is aid the best method for improving people's lives – especially those of the poor? Understood as a means to improve people's lives, aid is one of the worst vehicles to channel development initiatives in Niger. A valuable insight from the findings is that information is vital, especially at the community level where political economy dynamics must be well understood. Information can be obtained through cooperation with other donors, which is more important than consultations with households. Despite coordination costs, aid initiatives do better when they associate with other donors. The more donors co-fund, the greater the projects' effectiveness, although at a decreasing rate. If it can be assumed that information is better disseminated in a State with a more decentralized structure, Niger should also boost progress on decentralization. Simultaneously, mechanisms to tailor aid to the needs of Nigeriens better should be improved.

These findings could be used to call for less aid, but several arguments may also counter such calls: first, aid in Niger is small relative to the size of the economy, not having reached a level at which it would allegedly have negative effects. Second, despite the high growth in its number of donors, current levels of ODA per capita are equivalent to those in the mid-1960s.

Third, even aid critics have recognized that in specific circumstances (e.g. for vaccines), aid can be very beneficial. Fourth, although aid is not associated with poverty reduction, aid projects do improve people's lives. And fifth, the models estimated suggest that the relationship between aid and poverty reduction is non-linear.

The chapter on the case study between the IMF and Niger pertains to a different modality of giving aid: policy-based lending. It becomes clear that Niger's requests for assistance are accompanied by promises to undertake reforms; however, once aid is disbursed, these undertakings rarely materialize. Despite this record of poor (and deteriorating) compliance, IMF aid continues to flow, engendering perverse incentives and moral hazard. Niger's Government gets aid flowing in, whilst avoiding the implementation of those political reforms which would create most resistance. As a counterpoint, the IMF gets that number of actions necessary required for its continued support of the country, support which it needs to provide if it is to demonstrate its relevance and thereby provide utility to its shareholders. It is in the interests of both parties that the reforms are those easiest to undertake. Thus, the outcome reforms implemented are unlikely to be the structural ones which may be clearly needed. It also seems clear that what is promoted are development inputs (e.g. PRSPs) instead of development results.

To improve the incentive systems in policy-based lending some recommendations can be made – not all of which are new. For instance, there may be a case for having less (but key) conditionalities, adopting reforms that embrace economic role of the State, or pursuing fiscal consolidation mainly through revenue side (Mosley, Harrigan & Toye 1991). An insightful recommendation would be to identify the stakeholders that lose with the planned reforms and find a way to compensate them (ibid). Continuous schemes, whereby growth rate in a result indicator leads to an equivalent growth rate in aid disbursed, are also preferable.

Based on these findings, it is recommended that aid donors stop doing development projects at the community level. To keep their aid flowing they have several options:

First, donors could redirect their project-based aid through other donors that are more efficient at implementing projects, recognizing the realities of the situation and therefore becoming more of a pure source of finance than of development interventions. (This may be unlikely, insofar as it would imply a recognition of inefficiency by donors).

Second, they could start giving their aid as policy-based aid (with loans or with grants) based on conditionalities à la IMF. Based on past evidence, however, ex-ante conditionalities do not work and although the incentive system could be restructured, a high number of donors taking this route would likely lead to high coordination costs.

Third, aid donors could channel their assistance through national systems, notably BS – which would be in line with the Paris Declaration. BS in Niger has not been analysed in this dissertation. However, its key features are well known, e.g. when countries with poor institutional systems receive substantial amounts of funds, mismanagement of funds is a possibility, and it can reduce recipients' incentives to undertake reforms or mobilize internal resources. On the other hand, BS can greatly reduce coordination costs incurred by recipient countries.

Overall, BS is recommended but two issues are central and should be addressed: its incentive structure (i.e. it should be designed to avoid BS's potential shortcomings), and the role of donors (i.e. whether they would be willing to accept the role of a mere funder instead of a development partner, which they like to boast). Most importantly, innovative approaches such as Cash on Delivery, i.e. aid is *only* delivered when ultimate results such as lower maternal mortality are achieved and proven (as opposed to development inputs) should be the cornerstone of BS foreign assistance. Some donors have recognized this and are already exploring how to implement it. Notably, in 2012 the World Bank developed the Program-for-Results (PforR), which consists in linking disbursement of funds to the achievement of specific results. Furthermore, the system should have performance indicators embedded as results (based on objectives to be negotiated and agreed between donors and recipient country's Government), e.g. when a country mobilizes more resources internally, donors should recognize and reward that achievement. Finally, BS should be well coordinated among donors.

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