Foreign aid is a highly contentious issue. Throughout its modern history since the Second World War, there have been varying views on whether, how, for what and by whom foreign aid should be delivered.

A central theme of the four essays in this volume is if changes in how foreign aid is given matter for the intended impacts. To what extent do donors use general budget support (GBS) as an aid instrument, to whom is it given and do we see any early impacts? What happens when donors use reformed ways of giving aid in parallel with traditional approaches? Is an NGO intervention successful in facilitating the take-up of government-provided farming techniques among subsistence farmers in Mozambique? Are cash or food transfers more effective in improving food security among households eligible for emergency assistance in Niger? These are some of the important questions studied in this volume.
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On the Effects of New Forms of Foreign Aid
On the Effects of New Forms of Foreign Aid

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To my mother and sister and in memory of my father
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Turku in October 2013

Susanna Sandström
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1

Introduction
1 Introduction

Foreign aid is a highly contentious issue. Throughout its modern history since the Second World War, there have been varying views on whether, how, for what and by whom foreign aid should be delivered. These views have been influenced by the evolution of development thinking, on the one hand, and by the evolution of geopolitics and the motives behind aid giving, on the other hand (Kanbur 2006; Hjertholm and White 2000; Thorbecke 2000).

The evolving role of aid and the increasingly sophisticated tools available to assess aid effectiveness motivate why economists have returned to this subject repeatedly. A central theme of this thesis is whether changes in how aid is given matter for the intended impacts. The essays relate to many themes and methods in the economic literature on foreign aid. The first essay is on the allocation and impact of general budget support (GBS), and builds on the literature on aid allocation and the macroeconomic impacts of aid on volatility and growth. The second essay uses an agency model to analyse the consequences of introducing new, reformed ways of giving aid, such as GBS, in parallel with traditional project aid. This essay uses analytical tools from the contract-theoretic literature. The third essay is a quasi-experimental evaluation of a rural development project in southern Mozambique, and the fourth is an experimental evaluation on the relative impacts of receiving cash versus food transfers in eastern Niger. These two relate to the microeconomic literature on programme evaluation and food security. The first of the pair also relates to the literature on technology adoption in agriculture, and the second to tools of social protection programmes.

In the reminder of this introductory chapter, I will provide a brief history of foreign aid to illustrate how aid delivery has evolved and discuss why aid effectiveness is such a challenging issue. This also provides a motivation for the thesis. In section 1.2, I review the literature on aid effectiveness, especially paying attention to themes relevant for the thesis. This spans the literature on the theory of aid effectiveness, and the macro- and microeconomic literature on the effects of aid. In section 1.3, the essays of the thesis are briefly presented.

1.1 A brief history of foreign aid and the new aid agenda

Foreign aid is defined by the Organisation for Economic Co-operation and Development (OECD) to be official financial flows to developing countries with the promotion of economic development and welfare as the main objective, and which are concessional in character with a grant element of at least 25 percent. Official development assistance (ODA) flows comprise contributions of donor government agencies, at all levels, to developing countries and to multilateral institutions. ODA receipts comprise disbursements by bilateral donors and
multilateral institutions (OECD Glossary of statistical terms).

Foreign aid flows can mostly roughly be classified as either project or programme aid. Project aid is defined as funds provided to implement a specific and predefined set of development activities over a specified period of time (Bandstein 2007). The forms of programme aid have shifted over the decades but can be divided into two main categories: financial programme aid and food programme aid. The Marshall Plan after the Second World War was largely programme aid. In the 1950s, food programme aid was already given and in the 1960s, sector programme lending existed to some extent. However, it was not until the 1980s that financial programme aid became a significant modality\(^1\) (Mosley and Eeckhout 2000).

Reflecting the dominant view in the 1950s and 1960s that the development problem essentially was a problem of lack of capital, foreign aid consisted of large scale infrastructure projects in power, transport and telecommunications. During these decades, bilateral donors dominated. In the 1970s, the focus turned to anti-poverty projects focusing on agriculture, rural development and social services directly benefitting the poor (Thorbecke 2000). In the 1980s, the growing debt problem in the developing countries after decades of borrowing, combined with higher interest rates and recessions in the creditor countries changed aid dramatically. This new form of aid came in different shapes with strong conditionalities attached: in the form of structural adjustment lending from the World Bank, in the form of the Enhanced Structural Adjustment Facility from the IMF and in the form of balance of payment support from bilateral donors (Mosley and Eeckhout 2000).\(^2\) The importance of multilaterals grew during this period. As a consequence of the strong belief in market-based adjustments and the rolling back of the state in the 1980s, non-governmental organisations (NGOs) and the private sector became central actors in implementing project aid, a trend that continued into the 1990s.

In the early 1990s, a reorientation of the adjustment related programme aid began. The 1990s can be described as a decade of aid fatigue with a large disillusion of the achievements of aid (Thorbecke 2000). There was a perception that inappropriate aid modalities had become part of the problem in aid-dependent countries. This was related, on one hand, to a growing awareness of the fragmentation that project aid had caused in aid-dependent countries and, on the other, to a discussion on whether the structural adjustment programmes in the 1980’s and early 1990s in fact had been effective. Was it really possible to use aid to buy good policies or was it only fuelling corruption? Donors converged on the idea that good governance was a prerequisite for aid effectiveness.

During the same period, the end of the cold war downplayed the strategic reasons for aid giving. Several international initiatives emerged to increase the effectiveness of aid. While the process started already in early 1990s, it is fair...
to say that it gained pace in the early 2000s only. The first initiative was the OECD/DAC Development Assistance Manual: DAC Principles of Effective Aid in 1992, emphasising cooperation between donors and a larger involvement of the beneficiaries (Bandstein 2007). In parallel to this, an international consensus emerged to form a comprehensive debt relief mechanism, the Heavily Indebted Poor Country initiative, to selected poor countries based on good policies (Bandstein 2007). In 2000, agreed outcomes were formulated in the Millennium Development Goals, accompanied by accelerated international effort to harmonize and align development assistance around national policies and strategies as formulated in national Poverty Reduction Strategy Papers. The Paris Declaration on aid effectiveness was signed by more than 100 development organisations and countries in 2005. It was followed up in the Accra High Level Forum (HLF) 2008 and in Busan HLF 2011.

While there is a degree of rhetoric in this process, the content of the aid agenda emerging from this process lies in increased recipient country ownership of their development process, increased harmonisation of donor activities and greater commitment to effectiveness and obtaining results (Bourguignon and Lepziger 2006). In practice, this aid agenda has been reflected in a partial move away from traditional project aid and strongly conditional programmes. Donors have tended to move from *ex ante* conditionality to *ex post* conditionality, meaning that aid is conditioned on the obtained level of policies rather than on promises of improvement (Collier 2007). Bilateral donors and international financial institutions, instead of primarily running their own projects and priorities separately, are supposed to increasingly deliver aid through sector wide approaches (SWAPs) or directly to partner country budgets in the form of general budget support (GBS).³ Multi-donor interactions with partner governments are replacing bilateral ones and dialoguing is taking place in sectoral or cross-cutting task forces.

Also, the nature of project aid has to some extent changed. There is a tendency to organise individual interventions under larger frameworks, such as social protection, moving from stand-alone projects to programmes. NGOs and UN organisations are increasingly serving as implementers and facilitators of government programmes.

The strong focus on governance and policy selectivity has been modified in recent years. If foreign aid mainly is to be channelled to relatively well governed countries, it means that it will, in fact, bypass most poor people (Collier 2007). After all, countries are often poor precisely because they are badly governed. This new focus on fragile states is also reflected in the World Development Report 2011 (World Bank 2011). The new consensus seems to be that aid should not bypass fragile states but that aid modalities have to be adopted according to the country situation.

Whether *intentions* to increase aid effectiveness actually do increase aid ef-

³ A SWAP is an organising framework for sector level development in which different aid modalities - such as sector budget support and basket funds - can be used.
fectiveness is an open question. Optimists would argue that the new aid paradigm is a step forward. In the words of Bourguignon and Leipziger (2006, p. 16), "the international aid architecture is now supportive of successful outcomes". Sceptics would argue that aid is so politicised and that there are so many fundamental problems inherent to foreign aid that reforms will not make aid more effective (Moyo 2009; Easterly 2006; Killick 2004).

1.1.1 The challenge of measuring aid effectiveness

The role of aid in development is a theme that economists have returned to repeatedly with increasingly sophisticated tools. Economists have a lot to say about aid effectiveness and why foreign aid might succeed or fail. A focus in the empirical literature over the last decade has been to take the question of causality seriously. This originates in the programme evaluation literature at the micro level and has its background in a concern about reliable causal identification, but has probably gained pace from a policy call for more evidence based aid. Now also macroeconomic questions on the impact of aid have been tackled with inspiration from the programme evaluation literature (see, for example, Arndt et al 2010).

While the tools are improving, the questions at hand are complex, making it difficult to reach conclusive results. First, foreign aid is given with different motives and for a wide range of purposes. The motives range from altruistic ones to political, military and commercial interests, the purposes from humanitarian disaster relief, peace-keeping, fight against terrorism, support to expand markets of private enterprises in donor country and promotion of culture or language, to various developmental objectives, mostly with the long-term aim to reduce poverty (Bourguignon and Leipziger 2006). Thus the question as to whether aid works has many interpretations and effects might not be picked up by indicators that economists typically use, such as, economic growth or human development.

Second, the causality chain is complex and it is not obvious what the appropriate time frame is for measuring results (Bourguignon and Sundberg 2007). Some types of aid have mostly short-term effects, such as humanitarian assistance, while other types, such as aid to health or education, might have more long-term effects with some impacts showing up with a long time-lag. Identification of impacts has to deal with issues such as endogenous selection, heterogeneous treatment responses and mismeasurement of treatment input (Arndt et al 2010). Randomised experiments can ease the severity of these issues for well-defined questions at the micro-level. Still, understanding the causal mechanisms is challenging. Bourguignon and Sundberg (2007) take child immunisation as an example. To determine whether an additional child being vaccinated is due to an immunisation aid project, improved health care, additional funding for the health care system, or something else, is next to impossible.

Finally, the perspective matters. It is not difficult to find studies that point to
positive results of aid at the micro level. However, the macro level literature is far more ambiguous. This suggests that there are distortions and spill-over effects created by foreign aid that cannot be captured by micro-level evaluations. Mosley (1987) referred to this phenomenon as the micro-macro paradox.

1.2 Overview of literature and methods
In this section, I review the literature on aid effectiveness, especially paying attention to parts relevant for the thesis. This spans the macroeconomic literature on aid, the theory of incentives in aid, and the empirical microeconomic literature on the effects of aid. The question as to whether aid works must necessarily be accompanied by the question why this is or is not the case. Roughly speaking, mechanisms that affect aid effectiveness can take place on three levels: in the recipient country, in the donor-recipient relationship and in the donor country (Paul 2006). This literature is so large that a comprehensive survey is not feasible. I will focus on the influential but thorny literature on aid and economic growth, on the main theoretical discussions on aid and incentives, and the fairly recent development on the microeconomic side, using randomised trials to evaluate aid. The literature that is specific to the individual essays will mainly be reviewed within them. Since some of the literature has had significant impact on policy, I will discuss the literature in the light of this.

1.2.1 Aid effectiveness in the macroeconomic literature
It is fair to say that the discussions on the macroeconomic effects of aid have been dominated by the relationship between foreign aid and economic growth. The original macroeconomic rationale for foreign aid is that it can help addressing gaps in savings and trade by supplementing domestic savings, foreign exchange and government revenue (Hjertholm et al 2000). The theoretical underpinning for this view is the Harrod-Domar growth model, in which physical capital formation is the central driving force behind economic growth. This view has later been modified, both because of empirical experience and advances in the literature. Beyond filling saving and trade gaps, there are several complicating factors at play, making the macroeconomic effects of aid complex. These include the effects of aid on government behaviour, debt problems created by aid and Dutch disease effects (Hjertholm et al 2000). Dutch disease effects are to say that large inflows of foreign currency may lead to currency appreciation, making the export sector less price competitive. As discussed below, some of these channels have also been explored to explain the aid – growth relationship, or more specifically, why aid does not necessarily have the growth effects that simple growth models would predict.

Aid can affect government behaviour by influencing government expenditure and financing patterns. This line of literature includes the literature on aid
fungibility, that is, how aid frees up resources elsewhere for the government (e.g. Singer 1965; Pack and Pack 1993; Feyzioglu et al 1998; McGillivray and Morrissey 2000; Pettersen 2007; Van den Sijpe 2012) and the fiscal response literature (e.g. Heller 1975; Mosley et al 1987; White 1993; McGillivray 2000; Gupta et al 2004; Mavrotas and Ouattara 2007; Cassimon and van Campenhout 2007). Problems related to political economy in government behaviour complicates issues further. This literature ascribes poverty to government failure and weak institutions. Foreign aid interferes with the domestic political process and may aggravate distortionary polices for the benefit of a local elite (Boone 1996; Adam and O'Connell 1999; Svensson 2000a).

The debt literature is vast including, issues such as debt capacity (e.g. Feder et al 1981; McDonald 1982), debt and economic performance (Warner 1992; Cohen 1993) and debt relief (Krugman 1998; Cohen 2001; Hepp 2005). The Dutch disease problem has been studied by e.g. van Wijnbergen (1985), Younger (1992), Nyoni (1998), and Rajan and Subramanian (2005).

Numerous studies have been undertaken on the aid − growth relationship, ranging from early studies based on the Harrod-Domar growth model to more recent ones inspired by modern growth theory (Hansen and Tarp 2000). However, as the contradictory results from this literature shows, the relationship between aid and growth is not easy to establish. The shortcomings of the general empirical literature on economic growth, including problems such as parameter heterogeneity, outliers, omitted variables, model uncertainty, measurement errors and endogeneity, have been widely acknowledged (Rodrik 2005) (see for example Durlauf et al 2004; Easterly 2004).

Before reviewing the results of this literature, it can be helpful to ask what kind of relationship we should expect to find between aid and growth. This question is addressed by e.g. Rajan and Subramanian (2008). The point of departure of the authors is that aid primarily should work by increasing public investment. Using a standard Solow-Swan growth model and taking the most optimistic scenario when all aid is invested rather than consumed, would yield a regression coefficient of 0.16. That is, a 1 percentage point increase in the ratio of aid to GDP would raise the long-run growth rate by 0.16 percent. Assuming that some aid is wasted or consumed, a regression coefficient of around 0.1 is to be expected. While this is a rough benchmark, it is nevertheless useful in the discussion of different studies. One implication of this small coefficient is that noise in the data may make it hard to establish a relationship even when it exists (Rajan and Subramanian 2008).

In the literature on aid and growth, three main results are cited and debated (Clemens et al 2012; Arndt et al 2010; Bourguignon and Lepziger 2006; Kanbur 2006). The first is a result pointing to conditional aid effectiveness, saying that aid has a positive effect on growth, but only in certain contexts. The most influential study – also from a policy perspective - is that of Burnside and Dollar (2000). The authors find that aid causes growth in countries that maintain
low inflation, do not run large budget deficits and are open to trade. The point estimate evaluated at a ‘good’ policy level is in the range of 0.6-0.7. A number of studies, with slightly different specifications and definitions of good institutions or policies, followed suit, including Collier and Dehn (2001), Guillamont and Chauvet (2001), Collier and Dollar (2002) and Collier and Hoefller (2004). However, results pointing to policy conditionality have been shown to be sensitive to outliers, and extensions of the data (Easterly 2003; Easterly et al 2004; Roodman 2007).

A second result points to an unconditional positive impact of aid on growth but with diminishing returns. Here the most influential study is that of Hansen and Tarp (2001), but also Lensink and White (2001) reach similar results. Allowing for non-linearity in the aid – growth relationship by including aid squared, Hansen and Tarp (2001) do not find any support for the finding that aid only affects growth in good policy environments. However, when investment and human capital are included in the regression, aid has no positive effect on growth. This is taken as a sign that aid affects growth via capital accumulation so this relationship is further investigated. The authors find that in a majority of aid recipients there is a one-to-one link between aid and investments. In other words, the positive aid – growth relationship is explained by the aid – investments link.

Finally, there are studies pointing to a ‘null result’, that is, no significant relationship between aid and growth, particularly Rajan and Subramanian (2008), but also earlier and influential results by Boone (1996). The theoretical framework in Boone’s (1996) paper argues that aid failure is related to political-economy problems that will depend on political regimes. The empirical results do not suggest that aid effectiveness varies according to whether the recipient governments are democratic or repressive, however. Regardless of regime, aid appears to increase consumption rather than being used for investments.

In one companion paper to Rajan and Subramanian (2008), the null result is explained by Dutch disease effects (Rajan and Subramanian 2005) and in another by effects on governance (Rajan and Subramanian 2007). In the first paper, the authors find that in countries that receive more aid, labour-intensive and exportable sectors grow slower than capital-intensive and non-exportable sectors. They also find a positive correlation between aid and overvaluation of the real exchange rate. The authors conclude that even if aid is delivered with the best intentions and used responsibly by recipient governments, there are adverse impacts on competitiveness that in turn off-sets positive impacts on growth. In the second paper, they test if aid reduces the quality of governance. The point of departure is that poor governance might affect growth in manufacturing. They test if countries that receive more aid see different growth rates in governance sensitive industries. The finding is that the growth rates in such industries are significantly affected by aid in a negative direction.

Both the conditional literature and the null-result literature argue that go-
vernance is at work in the aid – growth relationship. In the first mentioned literature, aid does not affect governance but has a positively significant effect on growth in countries with relatively good governance. In the null result literature, aid has a negative effect on governance and thus no effect on growth.

The results from the macro literature seem perhaps daunting given its diverse findings, but are not surprising given the nature of the aid – growth relationship, as discussed above. This endogenous relationship has almost exclusively been addressed with instrumental variables such as political ties, lagged aid flows or size of the recipient country (Clemens et al 2012). However, concerns have been raised that these instrument are either so weak that the estimates are biased towards their unadjusted counterparts, or invalid (Clemens et al 2012; Arndt et al 2010).

The most recent literature has attempted to find new ways out of these dilemmas. A recent contribution is that by Clemens et al (2012), that reanalyses data from Boone (1996), Burnside and Dollar (2000), and Rajan and Subramanian (2008). They claim that the failure to consider the time lag with which aid might affect growth, poor-quality instruments and inappropriate aid concepts have caused inconclusive and contradictory results. Instead of treating aid as one single resource, the authors use an aid concept that they call “early impact aid”. They remove aid flows that are not intended to affect productive capacity, such as humanitarian assistance or donor's administrative / overhead costs, and aid flows that might affect growth with a very long time lag, such as investments in the social sector. By using first-differencing to remove effects of time invariant omitted variables, and adding time lags, the authors find that the results across the studies are similar: “... aid causes some degree of growth in recipient countries, although the magnitude of this relationship is modest, varies greatly across recipients and diminishes at high levels of aid”. The magnitude is around 0.1-0.2 percentage point in growth of real GDP per capita.

There are also other attempts to move the literature forward. Arndt et al (2010) take inspiration from the programme-evaluation literature and estimate the average treatment effect of aid on growth using an extended doubly-robust estimator. This estimator combines an inverse probability weighting estimator, which uses propensity scores to estimate treatment effects, with a linear regression to control for covariates. The authors find a positive relationship between aid and growth. The point estimate of the long run elasticity of growth with respect to the share of aid in recipient GDP is 0.13 using their most preferred strategy.

The direction of the literature is likely to be in the spirit of Clemens et al (2012) and Arndt et al (2010), that is, disaggregating aid flows and taking inspiration from the programme evaluation literature. In their comment of an earlier version of the Clemens et al paper, Mavrotas and Nunnekamp (2007) and Bourguignon and Leipziger (2006) call for more studies that disaggregate aid flows. The former authors note that the level of aggregation in the data still is
fairly high in Clemens et al and that it subsumes different aid categories. Bourguignon and Leipziger (2006) conclude that disaggregating aid flows “appear to be a promising line of investigation”. Why has not this been undertaken earlier? One reason, probably the main one, is that aid data have been of notoriously bad quality, with major differences in donor reporting. This is starting to change, but researchers still have to accept to work with very short time series in order to have reliable data, which is problematic given the earlier discussion on aid impact and time frames. Another is fungibility issues, which is to say that it does not really matter how aid is given as it frees up resources elsewhere for the government.

Why has the focus in the macro literature been so much on aid and growth rather than aid and poverty? Ultimately, most aid programmes strive to reduce poverty. An important answer lies in data availability. Comparable data on poverty rates are simply not there for a sufficient number of countries and years. Still, growth is not necessarily a good proxy for poverty reduction. On the other hand, growth is in most contexts a prerequisite for poverty reduction, even if not all growth reduces poverty (Shepherd and Bishop 2013). Poverty can decrease because of reductions in inequality, but ultimately the resources for redistribution have to come from growth. Macro- and meso studies have to some extent been undertaken on outcomes related to poverty reduction. There are studies on aid and infant mortality (Masud and Yontcheva 2005; Mishra and Newhouse 2007; Pettersson 2007), aid and the MDGs (Thiele et al 2007), and, aid and public service delivery (Wolf 2007) to mention a few.

1.2.2 Aid and incentives

Foreign aid involves a large number of actors: taxpayers in the donor country, donor and recipient governments, bilateral and multilateral aid agencies, international financial institutions, line ministries and agencies in the recipient country, civil society organisations, implementation partners and beneficiaries. Between the taxpayers in the donor country and the intended recipients there is therefore a chain of delegation involving actors with potentially very different objectives. The donor may care about the poor, but also wants the aid to be attributable to its own activities (Knack and Rahman 2007). The recipient country may care about the poor, but also answer to its own constituency and interest groups (Svensson 2006). The aid agency may also care about the poor, but also has the maximisation of the aid budget as one of its objectives (Knack and Rahman 2007). That is, actors will optimise given the incentives and constraints that they face. If incentives are not aligned, the outcomes might be quite far from what was intended. Also, those who pay for the aid and those who are supposed to benefit from it live in different countries with different political constituencies (Martens et al 2001).

While the theoretic models on aid effectiveness are diverse, the incentive problems in aid are at the core of the literature. Delegating a task to someone
with potentially different objectives than the principal, and whose actions are not completely observed by the principal is one source of incentive problems. This act of delegation, involving conflicting objectives and decentralized information, create two types of informational or agency problems: those on actions (moral hazard) and those on the characteristics of the actors (adverse selection) (Laffont and Martimort 2002). However, also motivational problems may arise in any collective-action situation (Ostrom et al 2002). Such problems arise when there is inadequate motivation to contribute to the production of joint benefits even with complete information, for example, the production of public goods. In fact, poverty alleviation in itself can be considered as a public good (Torsvik 2005). In the aid context, these motivational and informational problems may be encountered at many levels: on the level of the citizens, in the policy processes of both donor and partner countries, in the relationships between donors and partners and within aid agencies themselves.

The donor-recipient relationship has resulted in a large theoretical literature. Much of this literature is contract-theoretic (Svensson 2000b; Svensson 2003; Azam and Laffont 2003; Bourguignon and Platteau 2011), some underlying the non-contractibility in donor-recipient relationships (Murshed and Sen 1995; Pedersen 2001; Torsvik 2005; Murshed 2009) and some incorporating institutional features (Ostrom et al 2001; Martens et al 2002).

The issue from a contract-theoretic perspective is, on the one hand, to write effective contracts under asymmetric information, and on the other, to make these contracts credible given the incentives present in aid (Azam and Laffont 2003). The basic contract-theoretic answer to the aid effectiveness problem seems straightforward – if aid is conditioned on the consumption of the poor, it is more effective than if it is unconditional (Kanbur 2006). Donor-driven projects and conditional aid are manifestations of attempts from the donor side to resolve the agency problem (Kanbur et al 1999). But for the contract between the donor and the recipient to be credible, donors must withhold aid if the conditions are not met. However, as documented by numerous studies, conditionality is not enforced (Killick 1997; Collier 1997; World Bank 1998; Kanbur 2000; Dollar and Svensson 2000; Svensson 2003). For example, Svensson (2003) studies 200 structural adjustment programmes and finds that disbursements were uncorrelated with whether or not the recipient government had implemented the agreed reforms.

This indicates that the situation is more complicated than what the simple principal-agent framework between the donor and recipient government suggests (Kanbur 2006). Solutions to the aid-effectiveness problem are far more challenging when considering the incentives in the aid-delivery process whereby aid money keeps flowing despite of reform efforts.

The commitment problem of the donor is modelled in Svensson (2000b, 2003). He analyses a two-stage game in which the recipients choose their reform efforts in the first period. Given the outcomes in the second period, the
donor chooses the amount of aid to disburse. Since the donor is driven by altruism, it disburses aid despite of reform efforts. In anticipation of this, the recipients have little incentives to carry out reforms in the first period. This problem is often referred to as the Samaritan’s dilemma and was first formulated by Buchanan (1977). In this game, the highest pay-off for the Samaritan occurs when giving aid regardless of the effort of the recipient, while the highest pay-off for the recipient occurs when exerting low effort. One solution that Svensson (2000b) proposes is to delegate aid to an agency with less poverty aversion to assure that aid conditionality is enforced. Another is to separate the allocation and disbursement decision by committing aid to a group of countries and disburse aid depending on their relative performance (Svensson 2003).

A seemingly straightforward prescription to the conditionality problem – put forward by for example Azam and Laffont (2003) – is that donors simply should avoid giving aid to badly governed countries. This solution has been reinforced by the influential results in the empirical literature, which I reviewed above, saying that aid only has a positive effect on growth in countries that are relatively well governed. But not only that. Also the new aid agenda which emphasizes country ownership over their development process and the need to reduce the role of conditionalities and donor attempts to buy reform tend to favour relatively well-governed countries (Bourguignon and Platteau 2011). Since conditional aid does not seem to work, some studies suggest that donors should move from conditionality to country selectivity (see for example Collier 1997; Azam and Laffont 2003). However, what this prescription disregards is that most poor people live in fragile states (Collier 2007).

This trade-off between needs and governance has been modelled explicitly by Bourguignon and Platteau (2011). Their model goes beyond earlier analysis by making it possible for the donors to make decisions regarding the precision of monitoring and the degree of punishment. The donors are thereby able to influence the quality of governance in recipient countries. The authors show that if monitoring and punishment efforts can be country-specific, so that the donor chooses to concentrate its monitoring efforts on the worst-governed countries, then both richer and poorer countries will receive aid. However, aid to the best-governed countries will cost less. If the monitoring and punishment efforts on the other hand are uniform, then a wider range of scenarios are possible. The lesson is that if the aid-delivery parameters are tailored to the governance situation in the recipient countries, then the interests of the poor are best assured.

Some authors point out that the aid effectiveness problem cannot properly be understood with models that assume enforceable contracts. Murshed (2009) also underlines the importance of departing from models where poverty alleviation is the sole motivation for aid giving. This is the case in Murshed and Sen (1995), who characterise the non-cooperative interaction between donors and recipients in a model of double moral hazard. The double moral hazard comes about since the effort level of the recipient is not known by the donor and the
action of the donor is not known by the recipient. The model is applicable to situations where donors promote different conflicting actions, creating moral hazard in their own behaviour. Donors promote disarmament at the same time as they are tying aid projects to arms sales causing insufficient action by themselves to promote demilitarization. Non-cooperative behaviour on both sides results in aid being used in a non-effective way. The cooperative equilibrium under complete information would be Pareto-optimal but is infeasible given informational constraints and the absence of a global institution to enforce cooperation.

In his paper on the effects of donor cooperation, Torsvik (2005) stays in the world of altruistic donors but doubts that enforceable contracts are available. In this situation, can donors gain anything from cooperation or is the recipient able to strategically exploit the poverty aversion of the donors? The point of departure in the paper is two potentially countervailing features of aid in the presence of many donors. On one hand, poverty alleviation becomes a public good which would lead to under-provision of aid under non-cooperation. On the other hand, cooperation between donors might intensify incentive problems in the recipient country and crowd out domestic support to the poor. Torsvik (2005) show that, in a simultaneous move game where the recipients cannot strategically exploit the donors’ altruism, the crowding-out problem is intensified and cooperation is not beneficial for the donors. In a sequential game, however, where the Samaritan’s dilemma is present, cooperation is beneficial, since it makes donors less responsive to changes in domestic transfers. This mitigates the crowding-out effect of aid. The analysis of Torsvik (2005) shows that outcomes can become quite different when the donor-recipient interaction is assumed to be non-contractible. Under enforceable contracts, donor cooperation would always unambiguously be beneficial. Without contracts, however, the benefits of donor cooperation become less obvious.

Some branches of the institutional literature tackle the aid effectiveness problem in a slightly different way. While using principal-agent models as a tool, this literature also considers the institutions surrounding complex principal-agent relationships and motivational issues that arise in collective-action situations. According to this literature aid effectiveness can only be understood if the analysis goes beyond the relationship between the donor and recipient governments. When aid fails, it is the result of the incentives in different parts of the aid delivery chain and concerns both donors and recipients (Ostrom et al 2002; Martens et al 2002). It takes away the focus from recipient-country performance only, to incentives in the aid delivery process.

Martens et al (2001) point out that the nature of foreign aid is characterised by the nature of public administrations combined with a unique feature of foreign aid: the intended beneficiaries of foreign aid are not the same as those who pay for it and thus they have no political leverage. Meanwhile, tax-payers in the donor country do not benefit from the tangible results of foreign aid,
nor are they able to observe them. Common agency and multiple competing tasks that characterise public administrations typically lead to weaker incentive contracts and lower efforts by the agent (Holmström and Milgrom 1990, 1991; Dixit 1996). The broken feedback loop in foreign aid induces strong incentive biases in aid delivery on tasks that are easily monitored (Seabright 2001). This leads to, among other things, a disproportionate focus on the volume of aid, both in public discussions and within aid organisations.

This literature gives an additional dimension to the Samaritan's dilemma. The reason for why this game is being played lies in the presences of institutional problems on both the donors and the recipient side (Ostrom et al 2002). On the donor side, the problem of aid budget maximisation results in a situation where the ultimate goal is to keep aid money flowing. Imposing long-term sanctions due to violation of terms is simply not in the interest of aid agencies. The problem on the recipient side relates to that of missing or weak institutions: if the leading officials are interested in private gain and institutions to prevent this are weak or missing, the risk that this game is being played is high. Further, the availability of aid results in moral hazard since it creates incentives for governments to postpone reforms and weakens their incentives to take ownership of the development process. When this game is repeatedly being played the donors may be creating a situation where the recipient's skills and motivation fall over time.

The reading of the theoretic literature on aid effectiveness shows the complexity of the issues and highlight why aid effectiveness is not easily achieved despite of good intentions. When all actors optimise given the incentives and constraints that they face, the final outcome might be far from what was intended.

1.2.3 Randomised experiments in the micro-economic research on aid effectiveness

Randomised experiments have become widely used in development economics, also in the evaluation of aid at the micro-level. This has its background in a concern about reliable identification of causal effects in the presence of complex and multiple channels of causality, but also, from a policy perspective, in a call for more evidence-based aid (Banjeree and Duflo 2009). In their review of developments in programme evaluation, Imbens and Wooldridge (2009) point out that some of the most interesting and innovative experiments in recent years have been conducted in development economics. The deworming study in Kenya by Miguel and Kreamer (2004), the flipchart study – also in Kenya – by Glewwe et al (2004) and the study of women as policy makers in Indonesia by Duflo and Chattopadhyay (2004) are classical examples of some early studies.

While some experiments have been carried out on nation-wide programmes, such as the conditional cash transfers programmes PROGRESA/Oppor-
tunidades in Mexico and Bolsa Familia in Brazil, most experiments are carried out in collaboration with small NGOs. This seems perhaps a bit paradoxical in the face of the aid effectiveness agenda, calling for less focus on individual projects. This is no coincidence, however. The randomisation movement is not just about methodological improvements in project evaluations, but about a whole different view of what development means. Its primary advocates do not believe in universal answers to development questions and one-size-fits-all solutions. In order to learn what works and what does not, it is necessary to shift from broad questions to narrower ones. According to this view, incremental progress is the only way forward (Banerjee and Duflo 2011).

The discussion on the pros and cons of randomised trials in the evaluation of aid is not purely scientific but mainly focussed on feasibility and learning (see for example Banerjee 2007; Ravallion 2008; Rodrik 2008). While there might be worries about compliance and contamination, most researchers would agree that experimental studies, in cases when they are feasible, are the gold standard when it comes to internal validity.

However, the enthusiasm around randomised experiments has led some researchers to warn against potential pitfalls. Although experimental researchers are able to provide reliable results, they might measure effects that are not of any real interest (Ravallion 2008). Differently put, there is a risk that there is too much focus on identification rather than on asking meaningful questions that emerge from our knowledge gap. Also, experiments are as “soft” as other types of evidence when it comes to the real questions at hand (Rodrik 2008).

Banerjee and Duflo (2009) and Heckman (1992) discuss some methodological issues in experimental research. Concerns raised against experimental studies include environmental dependence, that is, without assumptions, results from experiments cannot be generalised beyond their context or even beyond their implementing organisation. Critics also argue that locations where experiments take place are not chosen randomly. Replication studies can counteract this concern. For example, the conditional cash transfer programme PROGRESA/Opportunidades in Mexico has been replicated and evaluated in several other Latin-American countries, with broadly similar results (Banerjee and Duflo 2009).

A second major issue is that of partial or general equilibrium effects. This includes on the one hand effects that an intervention might have due to spillover effects that are not properly captured by the evaluators, and, on the other hand, effects that an intervention would have if it was scaled up. This takes us back to the micro-macro dilemma referred to earlier. Some studies that evaluate market equilibrium effects include Hsieh and Urquiola (2006) on the effects of a school voucher programme in Chile and Acemoglu and Angrist (2000) on human capital externalities.

The criticisms against experimental research have not passed unnoted. The strong emphasis on assumption-free inference that characterised the early lite-
Literature appears to have taken a step back. One direction of the literature seems to be to introduce more assumptions and use experimental data in structural models (Banjeree and Duflo 2009). In other words the research seems to go in a direction where the experimental design is viewed to be helpful in relaxing concerns about selection effects. A similar development can be noted in relation to theory. While theory is not needed for identification of basic effects, the results can still be used to inform theory. One example put forward by Banjeree and Duflo (2009) is that of demand theory. Several independent evaluations suggest that the elasticity of demand for health protection products, such as deworming drugs or bed nets, is extremely elastic, especially around zero. This points to some type of hyperbolic preferences rather than the types of preferences predicted by standard economic theory.

1.3 Overview of essays, data collection and results

In this section, I present the essays of the thesis. I provide a short motivation for them, describe the data collection and review the results.

1.3.1 The first essay: General budget support as an aid instrument – allocation and impact

The first essay, co-authored with Kaisa Alavuotunki, studies general budget support (GBS) as an aid instrument from a cross-country perspective. It is concerned with both the use and allocation pattern of this modality and some early impacts. This is in line with the recommendations of Bourguignon and Leipziger (2006, p.16) stating that “Disaggregating aid flows...appears to be a promising line of investigation” and the recent work of Clemens et al (2012) referred to above.

Assembling reliable data was an important part of the study. Due to inconsistent reporting of aid modalities in the Creditor Reporting System (CRS) data of OECD-DAC, we used several other sources. The move towards new programme based modalities has been monitored in the Paris declaration monitoring survey (PDM) undertaken by the OECD. The baseline data from this monitoring are from 2005 and follow-up data from 2007 and 2010. Cross checking the CRS-data with the Paris declaration monitoring survey (PDM), national data and operations data from multilateral institutions revealed many inconsistencies in the reporting. This concerned especially the PDM survey where the definition of ‘direct budget support’ was loose, leading donors – eager to portraying themselves in a good light – to over-report budget support disbursements. As a result of this data exercise, we have fairly reliable data on GBS for the years 2005, 2007 and 2010. Our descriptive results show that only a small number of countries receive a substantial part of their aid allocations in the
form of GBS, indicating that donors use this modality sparingly.

Taking year 2000 as the treatment year, we examine if (i) changes in aid allocation patterns can be identified since the introduction of GBS, (ii) what the characteristics are of countries receiving the modality, (iii) if aid volatility has decreased, and (iv) if any growth impacts can be identified due to the use of GBS. We find a structural break in aggregate aid allocations between the late 1990s and 2000s. The importance of recipient needs has increased and donor commercial interests decreased, but results on recipient merits are mixed. Compared to other aid, GBS is allocated to poorer countries with a history of high indebtedness, stronger recipient merits and stronger political ties as measured by former colonial status. The volatility of aid shows a statistically significant decrease between the 1990s and 2000s, but is not found to be a specific characteristic of the GBS recipients. The growth performance of GBS recipients has outperformed that of non-recipients, but these results are sensitive to excluding some of the top recipients.

Our results point to a partial move towards the new aid model discussed above. This concerns both the extent to which GBS is used as well as the allocation patterns. The reluctance of donors to move to these modalities comes as no surprise, given the incentives present in aid.

1.3.2 The second essay: The use of budget support and project aid in parallel – an agency analysis

The second essay, co-authored with Johan Willner, analyses the consequences of introducing new, reformed ways of giving aid, such as GBS, in parallel with traditional project aid. This is done within the conceptual framework of a principal-agent model. The motivation for the paper lies in the partial move to new forms of aid, as a consequence of the new aid paradigm, while also maintaining more traditional approaches. We examine the consequences of this phenomenon. We are concerned with how the agency problems related to different aid modalities affect effort levels, wages and output in the production of a good at the sector level in an aid receiving country.

Most of the literature has analysed either the use of budget support or project aid but not their parallel use (see, for example, Cordella and Dell’Arriccia 2007 and Jelovac and Vandeninden 2008). We examine the effect of the parallel use on the production of a good at the sector level in an aid receiving country. We do this in a model with two principals, namely the donor and the central government of the recipient country. With project aid, donors fund a project directly at the sector level, whereas the aid funds are channelled through the central government, which decides about their use, in the case of budget support. The two groups of agents are on one the hand those hired to work for the donor projects and on the other hand the civil servants hired by the central government. We have a situation in mind where the leading employees/civil servants can have different qualifications, or more precisely where the different
funding channels can attract civil servants with different disutility of effort. Because of less donor control, it is reasonable to assume that risks are higher in budget support. As a consequence, a parameter that reflects the severity of the agency problems is higher in the case of budget support.

We find that more severe agency problems under budget support might favour the use of project aid, unless the recipient country is strongly oriented towards development, and/or possible long-run impacts of budget support are taken into consideration. Combining the use of the two modalities is usually not optimal, save for some special circumstances. While more severe agency problems would suggest higher wages under budget support, we actually find reasonable conditions under which the wages under project aid are higher. This helps explain why project aid might attract the most productive civil servants and may therefore result in low effort levels in activities financed by budget support.

While the donor agency do maximise the output in the recipient country, distortions on the donor side may come about through the fact that it only has limited ability to decide on the proportion of budget support versus project aid. This reflects the fact that the allocation decision will be driven by forces that are partly exogenous to the model. This is a consequence of the multiple motivations that donors have for giving aid.

1.3.3 The third essay: Technology adoption and food security in subsistence agriculture: Evidence from a group-based aid project in Mozambique

The third essay, co-authored with Milla Nyssölä and Jukka Pirttilä, evaluates the impact of an integrated rural development programme on farming techniques and food security in the Gaza area of rural Mozambique. The study was a part of a larger research project under the name “The effects of Finnish foreign aid on recipient countries’ economic performance, inequality, poverty and well-being”. This larger project was carried out over the years 2007-2010 and was funded by the Academy of Finland. The aid intervention was carried out by local staff at the Lutheran World Federation (LWF) in Mozambique, but entirely funded by the Finn Church Aid. The evaluation was carried out in cooperation with LWF and the National Health Research Institute of the Ministry of Health in Mozambique (NHI). In cooperation with NHI, our research team planned the evaluation design, survey instruments and the three rounds of data collection, 2008-2010. We were also actively involved in both the training and fieldwork stages. It is the first study to apply statistical impact-evaluation methods to evaluate a project that is a part of the Finnish development cooperation. In addition to the present paper, it also resulted in a paper on HIV/AIDS awareness and attitudes by Alavuotunki and Heikkilä (2012).

This essay explores the impacts of the part of the intervention that aimed to facilitate the adoption of improved technologies made available by the government of Mozambique, but which did not reach the farmers. To improve subsis-
tence farming yields, the intervention focused on creating groups of farmers, training these groups and setting up shared farms as a medium for technology transfer, potentially better commitment and benefits of social learning.

We use a quasi-experimental approach with data from two treatment villages and four control villages. We examine the impact of the aid programme on people living in the treatment villages, using the difference-in-differences statistical approach, and on participants of the farming groups, using instrumental-variables techniques. The outcome variables concentrate on the adoption of new farming practices, including the use of improved seeds and fertilisation, as well as food security that could partially be a result of the successful adoption of these practices.

The results indicate that while participation in farmers’ groups was high, the adoption of new technologies was only limited to the first year of the intervention. The impacts on farming techniques appear to dissipate in the second aid year. While the intervention was successful in encouraging vulnerable households to participate, it appears that it did not succeed in relaxing constraints that hinder farmers from taking up new technologies. This was particularly the case in the second year when the drought got worse in the treatment villages. The impact on food security is mixed across indicators, but similar in both treatment years. Thus, the results on food security cannot be attributed to whether or not households adopted new technologies. The fact that those farmers who adopted new technologies in the first year dropped them in the second year suggests that they were not found to be profitable enough in the face of severe drought. This is in line with findings from Ghana and Ethiopia where farmers switch in and out of fertilizers in response to (expected) profitability (Dercon and Christiaensen 2011; Conley and Udry 2010).

1.3.4 The fourth essay: The impact of cash and food transfers: Evidence from a randomised intervention in Niger

The fourth essay, co-authored with John Hoddinott and Joanna Upton, assesses the relative impact of cash versus food transfers in eastern Niger using a randomised design. This study is one of four impact evaluations based on a pilot initiative carried out by the UN World Food Programme (WFP), and evaluated in collaboration with the International Food Policy Research Institute (IFPRI). The initiative aimed to study the use of cash/vouchers for food assistance by generating rigorous evidence on key impacts and costs. The evaluation design and survey instruments were planned by the authors. The authors also undertook enumerator training. The data collection was planned and implemented in collaboration with WFP’s country office in Niger.

This study contributes to filling a gap in the literature when it comes to providing rigorous evidence on the comparative impacts of cash and food transfers

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4 The other studies, all using randomized designs, were undertaken in Yemen, Uganda and Ecuador.
on food security and food related outcomes. The intervention took place in 92 villages eligible for emergency assistance as identified by the government of Niger. Due to the nature of the intervention, involving public works, the randomization took place at the worksite level, leaving us with 52 randomization units. The project was implemented in two phases over a six month period, from April through September 2011. The first phase involved public works, and the second phase unconditional transfers for the most vulnerable households. The work requirements were dropped during the second phase out of concern that they would interfere with the planting and weeding of crops during the agricultural season. The first survey was implemented in July, at the conclusion of the public works but before the roll-out of the unconditional transfer, and the second survey in October at the conclusion of the unconditional transfers. Results on food security are available for 2268 households in July and 2209 households in October.

With respect to the short term food security objectives of this intervention, the food basket had clear advantages. Households in localities randomised to receive the food basket experienced larger, positive impacts on measures of food security and dietary diversity than those receiving the cash transfer. One reason that the cash recipients had less diverse diets lies in their choice of purchasing grains in bulk, a reflection of both the extreme poverty found in this area and uncertainty regarding future food prices. While these differences held in both periods, other outcomes showed greater variation by season. Households receiving food resorted to fewer coping strategies, and this effect was more pronounced during the height of the lean season (first phase) than during the growing season (second phase). Food recipients did not trade their transfers to any large extent; less than five percent of food was sold or exchanged for other goods. Households receiving cash spent more money repairing their dwellings during the lean season, prior to the start of the rains, but spent more on agricultural inputs during the growing season. Both food and cash were delivered with the same frequency and timeliness, but the food transfers cost 15 percent more to implement.
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Svensk sammanfattning

Huruvida utvecklingsbistånd är motiverat, i vilken form de ska ges, och till vem, är frågor som ofta debatteras. Ett centralt tema i avhandlingen är om nya former av utvecklingssamarbete har betydelse för de resultat som eftersträvas.


Den andra uppsatsen som är samförfattad med Johan Willner granskar biståndsproblematiken från ett teoretiskt perspektiv med en principal-agent-modell. Dessa modeller används bl.a. när man vill studera problem som uppkommer vid delegering av uppgifter där parterna kan ha olika mål för verksamheten. Vi analyserar konsekvenserna av att parallellt med traditionella biståndsformer introducera nya former av bistånd, såsom GBS. Vi studerar hur agentproblem i olika former av bistånd påverkar produktivitet, löner och output av en vara på sektornivå (t.ex. hälso- eller utbildningssektorn) i ett land som parallellt erhåller olika biståndsformer. Vi utvecklar en modell där projektbiståndet kanaliseras från givarlandet direkt till sektorerna medan budgetunderstödet kanaliseras till mottagarlandets regering som sedan beslutar om hur medlen skall användas. Våra resultat visar att större agentproblem i GBS tenderar att leda till att givarländerna föredrar projektunderstöd om inte mottagarlandet är mycket reformvänligt eller potentiella långsiktiga effekter av GBS beaktas. Att kombinera olika biståndsmodaliteter är i regel inte optimalt eftersom det leder till lägre output. Högre lönor inom projektbistånd lockar de mest produktiva tjänstemännerna i mottagarlandet och kan därigenom leda till lägre produktivitet i aktiviteter som finansieras av GBS. Det här kan på lång sikt göra att effektiviteten av GBS ytterligare urholkas.

Projektet genomfördes av Lutherska världssamfundet men finansierades med finska biståndsmedel. Syftet med projektet var att lära bönderna att använda nya jordbrukstekniker såsom gödsel och nya mer resistenta och produktiva grödor som tillhandahålls av Moçambiques myndigheter. Utbildningen i dessa nya tekniker gjordes framförallt genom jordbruksgener och gemensamma provodlingar. Vi studerar i vilken mån dessa de facto används av de geografiskt utspridda och avsides belägna jordbrukarna. Studien baseras på data från projekt- och kontrollbyar. Resultaten visar att interventionen var framgångsrik i att få de fattigaste bönderna att delta i jordbruksgener, men att bönderna endast det första året av interventionen använde de nya jordbrukstekniker. Huruvida bönderna använder nya teknologier eller inte påverkade inte nämnvärt deras matsäkerhet. Detta tyder på att de nya teknologier inte uppfattades som tillräckligt produktiva för att implementeras då torkan slog till under det andra interventionsåret. Att få jordburkare att använda nya teknologier är utmanande i fattiga områden där jordbrukare är utsatta för många typer av risker (såsom torka och översvämningar) och där tillgång till försäkringar och kredit är begränsad. För att en intervention ska vara effektiv måste den beakta dessa risker och begränsningar.

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Foreign aid is a highly contentious issue. Throughout its modern history since the Second World War, there have been varying views on whether, how, for what and by whom foreign aid should be delivered.

A central theme of the four essays in this volume is if changes in how foreign aid is given matter for the intended impacts. To what extent do donors use general budget support (GBS) as an aid instrument, to whom is it given and do we see any early impacts? What happens when donors use reformed ways of giving aid in parallel with traditional approaches? Is an NGO intervention successful in facilitating the take-up of government-provided farming techniques among subsistence farmers in Mozambique? Are cash or food transfers more effective in improving food security among households eligible for emergency assistance in Niger? These are some of the important questions studied in this volume.