UPPSALA
UNIVERSITET

Working Paper 2008:6
Department of Economics

Do Protestant Aid Organizations Aid Protestants Only?

Niklas Bengtsson

Department of Economics
Uppsala University
P.O. Box 513
SE-751 20 Uppsala
Sweden
Fax: +46 18 471 14 78

Working paper 2008:6
September 2008
ISSN 1653-6975

Do Protestant Aid Organizations Aid Protestants Only?

Niklas Bengtsson

Do Protestant Aid Organizations Aid Protestants Only?*

Niklas Bengtsson†

September 10, 2008

Abstract

We estimate the impact of a village-level assistance program run by the Evangelical Lutheran Church of Tanzania on literacy and schooling. The programs are partly funded by official development assistance from the US and EU. Villages in northwestern Tanzania are economically isolated but are still characterized a non-trivial degree of religious diversity. This setting allows us to study whether development assistance can spill over within villages, across religious affiliation, while maintaining that treatment externalities between villages are marginal. We find that the program increased literacy by 15-20 percent and primary schooling by 10-15 percent, but only among Protestant children. Catholic children living in the same targeted villages were virtually unaffected.

Keywords: Faith-based foreign aid, Impact evaluation, Religion, Sub-Saharan Africa

JEL: O2, O12, F35

*I thank Per Engström and Bertil Holmlund for helpful comments.

†Department of Economics, Uppsala University. Part of this research was made while visiting the Department of Economics, UC Berkeley. Contact: niklas.bengtsson@nek.uu.se

1 Introduction

Despite the great variety of religions in the developing world, the distribution of so called "faith-based foreign aid" is biased towards evangelical organizations. In the United States, almost a fifth of all non-governmental organizations receiving funding from USAID are Christian, whereas other religious organizations receive virtually nothing (Stockman et al. 2006). The issue is controversial. President George W. Bush has openly supported public funding of Christian aid organizations, but Democratic representatives in the House of Representatives contend that such initiatives could imply that "taxpayer funds are being used to help gain converts" (quote from Kranish 2006). Development practitioners appear to be aware of the ideological dispute. Former World Bank president James D. Wolfensohn has on several occasions remarked that partnership with local Churches is crucial for achieving the Millennium Development Goals, yet maintained that the Bretton Woods institutions are "necessarily nonconfessional" (see e.g. Wolfensohn and Carey 2001). In an internal memo, the Swedish Agency for International Development and Cooperation (Sida) noted that an "important group" of partner organizations are Christian, but that "there is an understanding that the organizations' religious work should be separated from the Sida funded activities" (Sandberg 2005).

In this paper, we ask whether the use of evangelical partner organizations matter for the benefit incidence of foreign aid. We do this by looking at one particular partner organization in northwestern Tanzania: the Evangelical Lutheran Church of Tanzania (hereafter ELCT). For the last twenty years, the ELCT has rapidly expanded its development activities, largely due to an inflow of foreign aid from bilateral and multilateral donors. This expansion provides us with the opportunity to test whether Protestants benefit more from an evangelical aid program compared to Catholics living in the same targeted area. We find that this is indeed the case, and that the difference is stark. The average ELCT village program increased literacy by 15 to 20 percent among Protestant school children. Catholic children living in the same villages were virtually unaffected.

Faith-based aid programs have received little attention from economists concerned with the benefit incidence of foreign aid.[1] Research in related fields has documented the activities of Christian NGOs, but has not focused explicitly on the question of impact (e.g. Bornstein 2005 and Occhipinti 2005). This gap in the literature is perhaps not surpising. The northwestern part of Tanzania is unique in that even though its villages are remote and isolated, they are still characterized by a great degree of religious diversity, and this is key to our identification strategy. More specifically, it allows us to hypothesize that assistance can spill over within villages, across religion, while maintaining that treatment externalities between villages are marginal. Such econometric opportunities arise very seldom, and both past and future research is constrained by the fact that it is difficult to impose such settings in a controlled randomized experiment. However, the estimates presented here need to be verified using other sets of data before more general conclusions can be drawn.

The paper is organized as follows. Section 2 is a background chapter on faith-based aid. Section 3 is a brief introduction to the region of study. The sample and empirical strategy is discussed in Section 4. Section 5 contains the results and Section 6 concludes.

2 Background

2.1 The size of faith-based foreign aid

Marshall and Saanen (2007) cite figures suggesting that faith organizations hold up to ten percent of the world's financial assets, and closer to fifteen percent of all land assets. These are considerable amounts. However, the policy relevant question is how much assets religious organizations would harbor in a world without foreign aid. This question is counterfactual in nature and difficult to answer. In order to get a sense of the nature and size

[1] An emerging economic literature studies the relationship between economic and religious variables in other contexts, however. See Gruber and Hungerman (2006, 2007), Guiso et al. (2003), and McCleary and Barro (2006).

of faith-based foreign aid, we present figures from two donor countries, the United States and Sweden (Table 1).

The United States is the largest single donor of foreign aid in absolute terms, and Sweden is one of the largest relative its own GDP. Our source of the USAID assistance is based on the Stockman et al. (2006) survey; the figures for Sida are collected from the department's official documentation.[2] In the survey conducted by Stockman et al., an organization is defined as faith-based if it "referenced God, Allah, another deity, prayer, faith or other overtly religious terms" in their missions. We adopted the same criteria for Sweden.

For the United States, the share of foreign aid going to faith-based organizations grew from 10 percent of all NGO support in 2001 to 20 percent in 2005. Whereas over 150 Christian groups received assistance from USAID during the survey period, amounting to 1.7 billion dollars, only two Jewish groups and two Muslim groups received assistance. In total, Christian organizations received more than 98 percent of all faith-based foreign aid the US (Stockman et al. 2006).

In Sweden, foreign aid to NGOs is distributed via a handful of umbrella organizations. All of these organizations are evangelical (Evangelical-Lutheran or Pentecostal). The share of tax-funded aid going through Christian organizations in Sweden is about 40 percent. Swedish ODA to faith organizations increased between 2000 and 2005, but not as fast as the foreign aid given to other NGOs.

2.2 Background to faith-based foreign aid

A simple rationale for using religious organizations for aid delivery is that they are present in remote and inaccessible areas that other NGOs reach only sporadically or not at all ("the Church is where the poor are", to quote Samuel 2001). Church historian Bengt Sundkler estimates that 90 percent of African village education was provided by missionaries during the colonial era, and this educational infrastructure is still present in many parts of Africa

[2]The figures for Sweden are available online, at www.sida.se/ngodatabase.

(Sundkler and Steed 2000). But there is a deeper story as to why Christian organizations might succeed where others have failed. At a joint conference between the World Bank and the Anglican Provinces of Africa, Amoa (2001) conveyed the following message:

> The Church has been in Africa since its foundation. It knows the terrain and has firm roots on the continent. It has networks for communication and social action that usually reach the remotest corners of society. The Church, as an institution, has time-tested hierarchical structures with clear lines of ethical and social authority. Its values are well respected as are its disciplinary processes and sanctions. The Church has a large following in Africa to the extent that the continent is now regarded as the epicenter of the Christian faith in the world. The Church in Africa has a strong, distinct voice. It has influences; it commands attention; it is credible. (Amoa 2001)

Not only are Christian denominations perceived to be less tainted by corruption than African governments or secular organizations, they also live among and recognize the needs of the very poorest households. The Church can thus both assert accountability *and* local participation – "local ownership" – in the development process. Among policymakers, "lack of ownership" typically means that a local community may be reluctant to implement a policy someone else has dictated and funded. This leads to waste, coordination problems and additional monitoring costs. Among many Christian NGOs, however, involving local communities in the development process appears to be a goal *per se.* Bornstein (2005) quotes a Ghanaian field worker saying that his NGO (World Vision) should "establish cordial relationships with the village folks [in order to] come down to their level." Not because that would increase the efficiency of foreign aid, but because "Christ did that. Christ did not impose."

Many faith-based NGOs claim to be "evangelical" organizations. The the term *evangelicalism* is not easily defined. It is typically interpreted as Protestantism or non-Catholicism; in continental Europe, the term is more narrowly defined and often understood as Lutheran. *Evangelism* (Greek for

good news or "gospel") is the act of spreading the Christian faith, with an emphasis on the personal experience. The link between evangelism and Christian ministry has become even more pronounced in recent years, as a result of the International Congress on World Evangelization in Lausanne in 1974 (also called the Lausanne Movement) and its creed to take the "whole gospel to the whole world". The targeting of faith-based aid is made accordingly. As Bornstein (2005) puts it: "In the work of faith-based NGOs, the landscape of need is determined through a synthesis of relative development and exposure to Christianity."

Development practitioners use the term "holism" to describe the broad agendas of faith organizations. In a World Bank publication on faith organizations, Marshall and Saanen (2007) explain that "these organizations contend that development activities cannot occur at the expense of either spiritual or traditional cultural values. Economic development programs will be sustainable only if they address the cultural, spiritual, political, social, and environmental dimensions of life." Marshall and Saanen appear to subscribe to this viewpoint, and conclude that education, for instance, should not only enable people to "get jobs and earn money but also to open their minds and 'understand the world'".

One might wonder how that works in practice. Bornstein (2005) provides a case in point. She finds that the evangelical NGOs in Zimbabwe actively sought to combat "backward" beliefs such as witchcraft and demon spirits. Bornstein argues that such aid activities are motivated even if one is mainly interested in increasing income. In rural Zimbabwe, as in many other parts of Sub-Saharan Africa, an individual who does economically well is often met with suspicion and envy, and accusations of witchcraft is a way of articulating such disapproval. By underscoring the evils of poverty – inequality and destitution – Christianity provided a "language" for appreciating material change:

> Christian NGOs, with their explicit religious agendas, gave voice to moral forces of economic development – to teleological striving for progress, and to the malevolent forces of demon spirits. Unlike so-

> called "secular" agencies, religious NGOs offered a language to discuss conflicts such a jealousies and witchcraft, and they offered the possible resolution of these conflicts through Christianity. (Bornstein 2005)

Bornstein's analysis departs from the widespread notion that economic development is intrinsically linked to Christianity, and in particular to Protestantism (following the classical work of Max Weber 1905; see also Goody 2003). This view was prevalent among scholars and missionaries at the beginning of the 20th century. For example, David Livingstone asserted the salvation of Africa lied in "Commerce and Christianity", and according to Thomas Fowell Buxton, an abolitionist, Africa would be "redeemed by the Bible and the Plow". The quotes are from Charles Pelham Groves (1969), who explains that the colonial missionaries had a great interest in improving material welfare in Africa, but "as long as any successful and wealthy African might be accused of witchcraft, there could be no progress, spiritual or material."

2.3 Historical background of Kagera, Tanzania

The Kagera region is situated on the western shore of Lake Victoria in northwestern Tanzania. Bukoba is the regional capital. The region is comprised of two dioceses of the Evangelical Lutheran Church of Tanzania: the North Western Diocese and the Karagwe Diocese.

The colonial conquest of northwestern Tanzania was characterized by an "indirect rule", a form of imperialistic laisse-faire that characterized a number of political systems in colonial Africa. To Germany (the first colonial ruler), the strategic value of the region was simply too small and its distance from Dar es Salaam was too far. However, missionary activity was considerable. The first non-Africans in Kagera were Arab slave and ivory traders, and there is written documentation that one such merchant – Ahmed bin Ibrahim – actively spread Islam in Kagera in 1844. The first Christian missions came around the turn of the century to what was then the Kingdom of Karagwe in northwestern Kagera. The Catholic "White Fathers" arrived in 1882, and the Bethel Lutheran Mission arrived in 1909.

As education was the main tool spreading the faith, competition between Protestants and Catholics accelerated the construction of schools in the region (Hydén 1968). Kagera was relatively more exposed to missionary schooling than other parts of Tanzania (Samoff et al. 1999). Stevens (1991) notes that among the Haya (the largest ethnic group in Kagera) education became so intimately associated with Christianity that they used the word "reader" to describe a convert. The missionaries' schooling agenda reflected the economic transformation of the region. The White Fathers felt that the Haya people had to learn the "proper Christian pursuit of material benefits" so that the they could "appreciate the values of effort over gain" (Weiss 2002). This was to be achieved through both secular and Christian schooling.

Today, religious adherence is openly exercised. Many Protestants in Kagera are named after one of the first Protestant missionaries, Ernst Johanssen (Sundkler 1980). Stevens (1991) narrates his observations from a Kageran village in the following way:

> Almost all households bore physical evidence of religious adherence in the form of visible symbols: mass-produced Catholic devotional items such as rosaries, pictures of the Virgin, the Pope, or Cardinal Lugambwa (a Haya of royal lineage and the first African cardinal), the Swahili Bible and pictures of the local Lutheran bishop in Protestant households, and Koran verses or pictures of Mecca in Muslim households. Religious images were the only form of decoration aside from a small number of family photographs in some households. All households reported specific amounts of money given as sadaka (offerings) to church or mosque weekly.

2.4 Lutheran assistance in Kagera

Although primary school fees were abolished in 2001 by the Tanzanian government, Mogensen (2002) cites an employee of the ELCT saying that education services in Kagera would "collapse completely", had it not been for the ELCT. It is certainly true that the ELCT has ambitious plans regarding the provision of social services in the region. According the Kagera Health and

Development Survey (Beegle et al. 2006), the Evangelical Lutheran Church manages village development programs in about 50 percent of Kageran villages. The activities range from income generating projects to overtly religious education.[3] Direct assistance to households exists but is rare.

Scandinavian donors are directly involved in ELCT's village service programs.[4] Other partners to the ELCT include Lutheran Relief Services (United States) and the World Lutheran Federation (funding primarily from Sweden, Denmark, Norway, Germany and the United States). This selection of donor countries is not happenstance. During World War II, the German Protestant missionaries were detained and the official responsibility of Kageran Protestant missions was given to the American Augustana Church (a Lutheran Church formed by Swedish settlers in North America) and the Church of Sweden.[5] In 1961, the Lutheran Church in Bukoba merged with six other regional churches in Tanzania – all of which were off-springs to mission organizations in Germany, Scandinavia and the US – and became part of the Evangelical Lutheran Church of Tanzania.

In 2002, Sida carried out a management audit of the Church of Sweden, including a field audit of the North Western Diocese of ELCT. According the audit, the total budget of the North Western Diocese was 1 724 million TSHS in 2001 (about 17 million dollar). In 1999 (the last year a complete budget was available) ELCT received about 557 million TSHS from bilateral and multilateral aid donors (SIDA, 2002, page 61). Although the quality of this documentation is not perfect, it suggests that between a third and half

[3] As laid out in ELCT's ten-year plan regarding the North Western Diocese in 1996. Quoting Mogensen (2002), the priorities were: "1. Education (Theological Education and General Education), 2. Health care (Primary Health Care and Curative Services and Institutions), 3. Self-reliance Drive (Stewardship in Parishes and Income Generating Projects), 4. Education for Democracy (Civic Education and Human Rights), 5. Mission and Evangelism (Mission Frontiers in the Diocese and Mission Areas Outside the Diocese) 6. Environment Protection (Tree Planting and Awareness Creation and Education)."

[4] The Sida funded activities are summarized at www.sida.se/ngodatabase. Search for the Evangelical-Lutheran Church of Tanzania (ELCT) under the heading "local implementing organization".

[5] A Swede, Bengt Sundkler (1909-1995), became the first bishop of Bukoba in 1942. Sundkler later held a chair in Church History and Mission History at Uppsala University, and much of our knowledge about the ELCTs work in the region emanates from his work. See Sundkler (1980).

of ELCT's activities in Kagera are funded by foreign aid directly.

3 Empirical strategy

3.1 Model specification

A priori, it appears difficult for the ELCT to separate its religious work from its foreign aid sponsored programs, but this realization alone is not enough to conclude that Protestant children will benefit more from an ELCT program. An inflow of resources targeted towards Protestants could release resources for non-Protestants as well, via general equilibrium effects (the aid will "trickle-down"). Another possibility is that the village community shifts its collective expenditure towards other religious affiliations if Protestants are rewarded from other sources. Finally, given the statements cited in Section 1 and 2, policymakers seem to expect that faith-based foreign aid will have a broad impact on development.

As will be discussed shortly, the households in our sample are observed twice. Our identification strategy is of the difference-in-difference variety. As outcome variables, we will consider literacy and educational attainment (completed years of schooling and school enrollment) among children and adolescents. We define treatment as living in a village where an ELCT program was established between the two periods of observation. The difference in impact across religion is assessed by running regressions for each religion separately. Consider the following model:

$$literacy_{ivt} = \beta ELCT_{vt} + \gamma_r T_t + \theta \mathbf{X}'_{ivt} + \alpha_v + \varepsilon_{ivt}$$

where $literacy_{ivt}$ is a dummy variable equal to one if child i living in village v at time t can read, zero otherwise; T is a time effect and α represents a fixed village effect. $\mathbf{X}$ is a vector of exogenous controls, most notably the individual's age.[6] $ELCT_{vt}$ equals one if an ELCT program existed in the

[6] We will leave out the exogenous controls in our baseline regressions, but add controls in the robustness analysis. The additional controls include missing value of enrollment, literacy of head of household, gender, access to electricity and a village-level control for

village at the date of observation *and* it was established at least one year prior to the date of observation. By running the above regression separately across religion, we thus allow for religion-specific time, village and program effects.

Although all programs followed the same broad agenda, they were not identical in implementation. This makes our explanatory variable somewhat crude, and it raises questions about extrapolation and replication. What we wish to study is whether the "average ELCT village program" contributed to increase literacy and educational attainment among children in Kagera, allowing for different effects across religion. This hypothesis could, in principle, be tested in other settings.

3.2 Sample selection

The data source is the Kagera Health and Development Survey (the KHDS; see Beegle et al. 2006). Throughout the analysis, we will restrict our attention to Catholic and Protestant children aged 7 to 17. This implies that no individual is observed twice: the first round represents children born between 1974 and 1984 and the second round represents children born between 1987 and 1997. The two cohorts will be related, however, as they belong to the same original selection of households. The second sample restriction regards migrants. Many of the original household members had formed new households between the two rounds, and some of these new households had migrated out of the original village. Although these households were traced and included in the 2004 survey, we will restrict the sample to non-migrants for our baseline estimates. Finally, we restrict the sample to households for which the survey interview language was either Kihaya or Swahili, the two main languages in the region (this meant reducing the sample by 3 percent).

In Table 2, "religion" refers to the affiliation of the head of the household in which the child resides. The stability of the distribution suggests that very few households changed religious affiliation over time. Catholics are represented in all villages and the representation of Protestants is also high.

refugee settlements.

Muslim children are represented in three fourths of all villages; this underrepresentation is the main reason for focusing on Catholics and Protestants only. In Table 3, we present the distribution of ELCT programs across the six main districts of Kagera. Exposure to an ELCT program is highest in Bukoba and Karagwe (in the north of Kagera). No households in the KHDS dataset living in Ngara were exposed to the program.

Information about the village assistance program is derived from the village questionnaires. Depending on category, the most knowledgeable person answered the questions. Two questions were posed regarding the programs. These were: "Is there currently an ELCT assistance program in this village?" and, given a positive reply, "What year was it established?".[7] The existing information about ELCT programs is censored; we do not know the history of ELCT programs in villages without a current program. Some programs could have started after 1990 but ended before 2004. As seen in Table 2, however, the median length of the existing ELCT programs was six years in 2004, indicating that ELCT's activities expanded rapidly during this period and that once established, a village was likely to be exposed to the program for quite some time. The censoring, if important, would bias the DID estimates towards zero.

Three ELCT programs ended between 1991 and 2004. We chose to remove these villages from the baseline analysis. If kept, the ending programs would have contributed to the identifying variation as negative program changes. It is not obvious how to interpret such variation, and the most policy relevant effect is the effect of going from non-treatment to treatment. We will, however, include these villages in the robustness analysis.

An important question is whether the placement of ELCT programs is dependent on the outcome variable, and if so, in what way. One way to study this issue is to compare treated and non-treated villages *prior* to treatment (i.e. in 1991). As seen in Table 4, literacy is higher in villages that would eventually get treatment (when taking the mean literacy rate of the entire

[7] In a handful of cases, the date of establishment reported in the 2004 questionnaire was different from the one reported in the 1991 questionnaire. In these cases, the date given in the 2004 questionnaire, which was more comprehensive, is used. We address this issue in the robustness analysis (Section 4.3.4).

cohort aged 7-17 in 1991). Again, how ELCT target village assistance is a complex question. The message of Table 4 is that a regression with fixed village-religion effects is a minimum requirement for obtaining valid estimates of the program effect.

To sum up: our study focuses on Protestant and Catholic children aged 7 to 17. We exclude households not living in the same village as ten years back, and households that do not speak Kihaya or Swahili. Finally, we exclude three villages with a negative program change. Henceforth, when we in tables and text refer to the "baseline sample", we refer to this selection of households.

3.3 A closer look at the outcome variable

Our main dependent variable, child literacy, is reported by the respondent (often the head of the household). Specifically, the interviewer asked the respondent whether the child could "read a newspaper". More than 99 percent of the respondents answered "yes" or "no" to this question. The respondent's knowledge about the child's reading ability may still be limited, of course, and possibly biased – especially if the respondent is illiterate. We do not deny that test scores would have been preferable, but note that the measurement error in literacy needs to be systematically correlated to changes in program exposure to bias our regression estimates.

In Table 5, we present literacy rates across educational attainment and religious affiliation (for completeness, we also include Muslims in Table 5 even though these children are excluded from the regression analysis). The literacy rate varies across religion and time at the lower levels of educational attainment, but is close to a hundred precent at the higher levels of schooling. Virtually everyone with more than three years of completed schooling is literate.

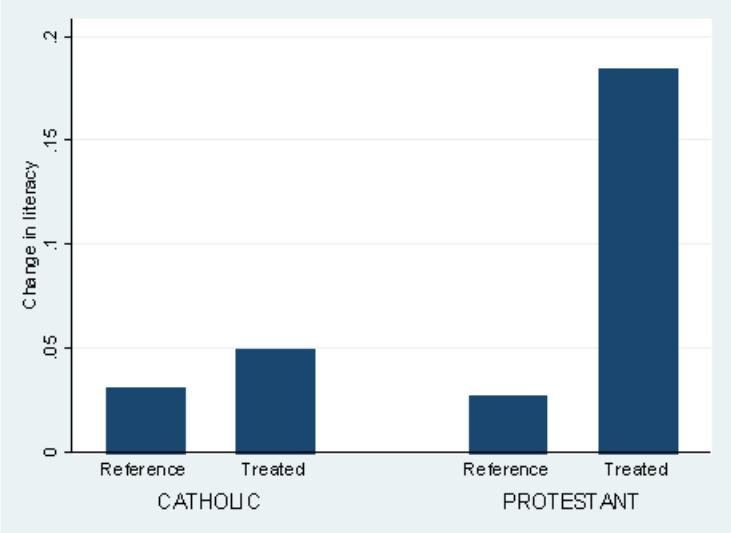

Figure 1: The impact of the ELCT program on village literacy rates.

4 Results

4.1 Graphical evidence

In Figure 1, we compare the change in literacy across villages with and without a change in program exposure. The first bar and the third bar from the left represent the change in literacy in villages that had no change in program status (i.e., the "reference" villages); the second and fourth bar represent the change in literacy in villages in which an ELCT program was established between 1991 and 2004 (i.e., the "treated" villages).[8]

Our difference-in-difference approach implies that the estimated program effect will be roughly equal to the difference between the second and first bar for Catholics, and the fourth and third bar for Protestants. The graphical evidence thus suggest that the program effect was about sixteen percent for Protestants and about two percent for Catholics.

[8] The bars in Figure 1 represent unweighted village means.

4.2 Regression evidence

Our main results are presented in Table 6. In Model 1, we include a village specific effect and a time effect, each interacted with religion, but no other covariates. This regression amounts to the same thing as comparing weighted averages across villages with and without a program change. In Model 2, Table 6, we include age dummies, interacted with time and religion, in order to increase efficiency. In Model 3 and 4, we study the impact on educational attainment and school enrollment.

The regression evidence restate the pattern depicted in Figure 1. The ELCT programs increased literacy among Protestant children but not among Catholic children. Educational attainment follows a similar pattern. However, school enrollment appears to be invariant to the program, both among Catholics and Protestants.

In Table 8, we disaggregate the sample across gender and age. Perhaps surprisingly, the program effect is quite similar across females and males. Dividing the sample by to age turned out to be problematic because not all ages were represented in all villages. In order to maintain the original selection of villages, we therefore chose to disaggregate the sample across somewhat broad age categories. As it turns out, the program effect on literacy is zero for both Protestants and Catholics aged 14 to 17 years (Table 8, Model 6).

The fact that only young children appear to be affected is noteworthy, but not surprising. As seen in the descriptive statistics presented in Table 5, most school children eventually learn to read in Kagera. The heterogeneity analysis thus suggest that the program allowed Protestant children to become literate earlier in life. Knowing how to read in early primary school does of course increase an individual's ability to acquire more skills later in life, so this particular result does not imply that the estimated effects have no real economic meaning. However, it does imply that literacy might not be a useful proxy for human capital and skill among older children and adults. For older children, completed years of schooling is more suitable. Looking back at Table 6, this intuition holds true: the ELCT program has a significant effect on educational attainment among the older Protestant children (aged 11 to

17), but not among Catholics.[9]

4.3 Supplementary results

4.3.1 Migrants

In the last column of Table 8, we consider a sample that includes households that migrated to a site in close proximity to their original homestead (that is, to a "neighboring village"). The treatment variable is then defined as living in a village in which an ELCT program was established, *or* in a neighboring village. This alternative approach had only a trivial impact on our baseline point estimate.

4.3.2 Controlling for exogenous material progress

A second concern is that certain omitted variables are confounding the effect of the ELCT program. Hypothetically, the contrast between Protestants and Catholics in Table 6 could be driven by time-varying variables that are correlated to both religion and program placement. It is possible that ELCT programs are placed in villages in which Protestants are already expected to improve their living standards relative Catholics. One way to address this issue is to include controls for economic and social development that are uncorrelated to program placement. Such variables are hard to come by, given the all-encompassing social responsibility of the Evangelical Lutheran Church in the region. However, one variable struck us as appropriate, at least as a robustness control: the household's access to electricity. This variable is observed on the household level and will thus explain some of the within-village variation in literacy, as well as variation across time. As seen in Table 7, Model 3, the program effect is unchanged when we control for this development.

[9] We would have prefered to use even more sophisticated measures of human capital to study this issue further (like earnings). Unfortunately, the constructed variables of income and expenditure in the KHDS dataset are not comparable across time in the long-run panel.

4.3.3 Measurement of the dependent variable

A third issue is that the main dependent variable – child literacy – is potentially measured with error. As discussed in Section 4.2, households may respond "yes" or "no" when asked about the child's literacy even when they are not sure about the answer. In Model 3 and Model 4, we are able to increase efficiency by including a proxy for the respondent's knowledge about the child's literacy. These proxies are a dummy indicating whether the household head can read (Model 2) and a dummy indicating non-response in the child's school enrollment status (Model 4).[10]

4.3.4 Measurement of the treatment variable

In Table 9, we address the measurement of the main explanatory variable – the ELCT program. This is potentially more problematic because even a zero-mean error term will bias the results. A first issue is that some programs ended between 1991 and 2004, and these villages were removed from the baseline sample (as discussed in Section 3.2). In Models 2, 3, 5 and 6, we include all villages. The estimates using this sample are fairly similar to our baseline estimates. Our results are not driven by the fact that we exclude villages with a negative program change.

A second issue is the use retrospective information on the year of program establishment. Retrospective information is not perfect. In a handful of cases, the date of establishment reported in the village questionnaire was not consistent across the two rounds (see Footnote 7). In Models 3 and 6, we therefore completely disregard year of establishment and define an alternative program effect: a dummy equal to one if a program existed in the village on the date of observation. The results appear insensitive to whether we use the retrospective information to lag the program effect or not.

[10] It could, of course, be argued that these variables are potential outcome variables and therefore endogenous. We see them mainly as robustness controls that explain a large fraction of the variation in child literacy. Also, as seen in Table 6, the program seem to have no effect on the school enrollment rates.

4.3.5 First differencing over aggregated variables

The standard errors reported in Table 3 are robust to correlated observations within villages. Recent research on inference with difference-in-difference estimation has shown that cluster-adjusted standard errors perform poorly when the number of groups is small. In our baseline sample, we have 42 villages with Protestant representation and 48 villages with Catholic representation. Although several techniques have been proposed to deal with a small number of group observations (Donald and Lang 2007; Bertrand et al. 2004), the most conservative approach is to ignore the individual-level information altogether and focus on variable aggregates. The results from such an approach are presented in Table 10.

By collapsing the data into village-year-religion averages and running separate regressions for each religion using first differencing, we reduce the sample to the number of representative villages per religion. As it turns out, the heterscedasticity-robust standard errors obtained using this technique are only slightly higher than those obtained using the individual dataset with cluster-robust standard errors (as shown in Table 10).

4.3.6 Unrest following the Rwanda refugee crisis

A final concern is the fact that Kagera went through a short episode of turmoil after the Rwandan genocide. It is quite possible that both ELCT placement and child schooling was affected by the so-called Great Lakes Refugee Crisis (see Baez 2007). Fortunately, the village questionnaire included questions regarding the impact of nearby refugee settlements ("Where there any refugee-related robberies in this village?"). We used this information to create a proxy for local civil unrest, which we included in the village-level regression. As seen in Table 10, Model 4 and 8, our main results appear robust this control.

5 Concluding remarks

We have found that a faith-based development initiative run by the Evangelical Lutheran Church of Tanzania does indeed increase the living standards of the poor, but that its services mainly benefit its followers. In a way, this result is not surprising. The Evangelical Lutheran Church of Tanzania is just that – a church – and it is not difficult to imagine that non-adherents may feel reluctant to participate in its activities. Nor is it implausible that church personnel have less contact with households of different faith. On the other hand, the difference in impact across Catholics and Protestants is striking, and it does seem genuinely surprising that Lutheran assistance have no effect at all on Catholic children. The results suggest that the selection of religious partner organizations matter for the benefit incidence of foreign aid.

The fact that the ELCT targets aid in a complex manner imposes a challenge to our identification strategy. However, the results are robust to a number of sensitivity checks. Moreover, even though the assistance could be targeted towards relatively poor villages that are expected to catch up materially, it seems implausible that such natural growth would *only* affect Protestant children. Mean reversion and similar mechanisms are simply not sufficient explanations for this pattern.

However, the ELCT is but one particular faith-based partner organization, operating in one particular environment. Since this is the first study of its kind, our results need to be supplemented using other sources of data before more tangible policy implications can be outlined.

References

Amoa, Jeboa. 2001. Public and Private Sector Initiatives to Combat Poverty. In *Faith in Development*, ed. Deryke Belshaw, Robert Calderisi & Chris Sugden. Regnum Books International, Oxford, UK.

Baez, Javier E. 2007. "Civil Wars Beyond their Borders: The Human Capital and Health Consequences of Hosting Refugees." IZA Discussion Paper 3468.

Beegle, Kathleen, Rajeev H Dehejia & Roberta Gatti. 2006. "Child Labour, Crop Shocks and Credit Constraints." *Journal of Development Economics* 81(1):80–96.

Bertrand, Marianne, Esther Duflo & Sendhil Mullainathan. 2004. "How Much Should We Trust Differences-in-Differences Estimates?" *The Quarterly Journal of Economics* 119(1):249–275.

Bornstein, Erica. 2005. *The Spirit of Development: Protestant NGOs, Morality, and Economics in Zimbabwe.* Stanford University Presss, Stanford CA.

Donald, Stephen G. & Kevin Lang. 2007. "Inference with Difference-in-Differences and Other Panel Data." *Review of Economics and Statistics* 89(2):221–233.

Goody, Jack R. 2003. "Religion and Development: Some comparative considerations." *Development* 46(4):64–67.

Groves, Charles Pelham. 1969. Missionary and Humanitarian Aspects of Imperialism from 1870 to 1914. In *The History and Politics of Colonialism 1870-1914*, ed. L. H. Gann & Peter Duignan. Vol. 1 Cambridge University Press chapter 14, pp. 462–496.

Gruber, Jonathan & Hungerman, Daniel M. 2007. "Faith-based charity and crowd-out during the great depression." *Journal of Public Economics* 91(5-6):1043–1069.

Gruber, Jonathan & Daniel M. Hungerman. 2006. "The Church vs the Mall: What Happens When Religion Faces Increased Secular Competition?" NBER Working Papers 12410, National Bureau of Economic Research, Inc.

Guiso, Luigi, Paola Sapienza & Luigi Zingales. 2003. "People's opium? Religion and economic attitudes." *Journal of Monetary Economics* 50(1):225–282.

Hydén, Göran. 1968. *Tanu Yejenga Nchi: Political Development in Rural Tanzania*. Vol. 8 of *Lund Political Studies* Scandinavian University Books, Lund.

Kranish, Michael. 2006. "Democrats inspect faith-based initiative." The Boston Globe.

Lassibille, Gerard, Jee-Peng Tan & Suleman Sumra. 2000. "Expansion of Private Secondary Education: Lessons from Recent Experience in Tanzania." *Comparative Education Review* 44(1):1–28.

Marshall, Katherine & Marisa van Saanen. 2007. *Development and faith: where mind, heart and sould work together*. The World Bank, Washington, D.C.

McCleary, Rachel M. & Robert J. Barro. 2006. "Religion and Political Economy in an International Panel." *Journal for the Scientific Study of Religion* 45(2):149–175.

Mogensen, Morgen S. 2002. "Danmission in Africa and Asia: An Analysis of the Work of Danmission iin Tanzania, Cambodia and Pakistan." mimeo, Christiansfeld, Denmark.

Occhipinti, Laurie A. 2005. *Acting on Faith: Religious Development Organizations in Northwestern Argentina*. Lexinton Books, Lanham MD.

Pels, Peter. 1997. "The Anthropology of Colonialism: Culture, History, and the Emergence of Western Governmentality." *Annual Review of Anthropology* 26:163–183.

Samoff, Joel. 1987. "School Expansion in Tanzania: Private Initiatives and Public Policy." *Comparative Education Review* 31(3):333–360.

Sandberg, Svante. 2005. "Sidas beslut om fördelning av bidrag för år 2006 ur EO-anslaget till svenska enskilda organisationer för utvecklingssamarbete." Mimeo, SEKA-EO.

Sida. 2002. "Styrning och kontroll inom Svenska Kyrkan." Systemrevision 2002:2, SEKA.

Stevens, Lesley. 1991. "Religious Change in a Haya Village, Tanzania." *Journal of Religion in Africa* 21(1):2–25.

Stockman, Farah, Michael Kranish, Peter S. Canellos & Kevin Baron. 2006. "Exporting Faith." The Boston Globe Special Report.

Sundkler, Bengt. 1980. *Bara Bukoba: church and community in Tanzania*. Hurst, London.

Sundkler, Bengt & Christopher Steed. 2000. *A history of the church in Africa*. Cambridge University Press, Cambridge, UK.

Weber, Max. 1905. *Protestantism and the Spirit of Capitalism*. History of Economic Thought Books McMaster University Archive for the History of Economic Thought.

Weiss, Brad. 2002. "A Religion of the Rupee: Materialist Encounters in North-West Tanzania." *Africa: Journal of the International African Institute* 72(3):391–419.

Wilber, Charles K. & Kenneth P. Jameson. 1980. "Religious Values and the Social Limits to Development." *World Development* 8(7).

Wolfensohn, James D. & George Carey. 2001. Foreword. In *Faith in Development*, ed. Deryke Belshaw, Robert Calderisi & Chris Sugden. Regnum Books International, Oxford, UK.

A Table Appendix

Table 1: Official development assistance (ODA) to faith-based organizations in the US and Sweden. Mean annual funding 2001-2005. US Dollars.

US based organizations. Support from USAID. Top-ten faith organizations.	
Catholic Relief Services	127 646 000
World Vision Incorporated	74 957 000
Mercy Corps International	33 706 000
Adventist Development and Relief Agency	17 079 000
Food for the Hungry International	9 853 000
International Relief and Development	9 062 000
Samaritan's Purse	6 251 000
Concern Worldwide USA, Incorporated	5 523 000
World Relief Corporation	4 503 000
Opportunity international, Incorporated	4 495 000
Swedish based organizations. Support from Sida. All faith organizations.	
The Swedish Mission Council	16 590 000
PMU Interlife	13 123 000
Diakonia	10 431 000
The Church of Sweden	10 239 000

Source: Stockman et al. (2006) and www.sida.se/ngodatabase. Exchange rate: 7 SEK/1 Dollar.

Table 2: Distribution of religious affiliations and ELCT programs in Kagera. Baseline sample.

	1991	2004
Distribution of religious denominations		
Protestants	25 %	26 %
Catholics	60 %	60 %
Muslims	14 %	12 %
Villages with...		
Protestant representation	92 %	92 %
Catholic representation	100 %	100 %
Muslim representation	75 %	73 %
Number of villages with ELCT program	11	29
Percent of villages with ELCT program	23 %	60 %
Median years since establishment	2	6
ELCT villages with...		
Protestant representation	100 %	92 %
Catholic representation	100 %	100 %
Muslim representation	82 %	69 %

Table 3: Number of households in KHDS sample living in a village with an ELCT program. By district.

	1991			2004		
	Number	Total	Percent	Number	Total	Percent
Karagwe	100	213	47%	330	330	100%
Bukoba Rural	231	650	36%	498	791	63%
Muleba	146	261	56%	231	375	62%
Biharamulo	0	107	0%	42	177	24%
Ngara	0	171	0%	0	233	0%
Bukoba Urban	66	363	18%	291	419	69%
Total	543	1 765	31%	1392	2 325	60%

Table 4: Literacy across religion, observed prior to treatment (1991). Age 7-17.

	No program in 2004	Program in 2004
Muslim	0.6429	0.5054
Catholic	0.5449	0.5944
Protestant	0.4565	0.5692

Notes: Literacy rates indicates the share of children in each group who can "read a newspaper", according to the head of the household.

Table 5: Literacy across Muslims, Catholics and Protestants grouped by educational attainment. Kagera, 1991-2004. Age 7-17.

	1991			2004		
	Musl.	Cath.	Prot.	Musl.	Cath.	Prot.
None	0.2593	0.1917	0.1750	0.1429	0.1280	0.1100
One	0.6000	0.6154	0.4318	0.4390	0.4730	0.3333
Two	0.8077	0.9020	0.8750	0.8136	0.7963	0.7075
Three	1.0000	0.9479	0.8810	0.9762	0.9195	0.9186
Four	0.9600	0.9770	0.9231	0.9583	0.9328	0.9787
Five	1.0000	0.9855	0.9730	1.0000	0.9892	0.9697
Six	1.0000	1.0000	1.0000	1.0000	0.9861	1.0000
Finished primary	0.9615	0.9732	1.0000	1.0000	0.9826	1.0000

Notes: Literacy rates indicates the share of children in each group who can "read a newspaper", according to the head of the household.

Table 6: The impact of ELCT village assistance. Linear probability models. Baseline sample.

	(1) Can child read a newspaper?	(2) Can child read a newspaper?	(3) Has child completed primary school?	(4) Is child enrolled in school?
Protestant x ELCT	0.180***	0.199***	0.163***	-0.0241
	(0.0541)	(0.0536)	(0.0593)	(0.0654)
Catholic x ELCT	-0.0326	-0.00425	0.0509	-0.0348
	(0.0544)	(0.0450)	(0.0421)	(0.0337)
Age-time-religion controls	No	Yes	Yes	Yes
Observations	2822	2822	1606	2269
R^2	0.008	0.373	0.400	0.341

Fixed effects estimation at the religion-village level. Cluster-robust standard errors in parenthesis (clustered at the village level). Baseline sample is restricted to non-migrants and children aged between 7 and 17 years; in Model 3 only children aged 11 to 17 is included.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: The impact of ELCT village assistance on literacy across Protestants and Catholics. Linear probability models. Baseline sample.

	Protestants				Catholics			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ELCT	0.201***	0.206***	0.200***	0.231***	−0.00445	0.00337	0.00334	0.0352
	(0.0540)	(0.0521)	(0.0525)	(0.0403)	(0.0451)	(0.0465)	(0.0460)	(0.0419)
Male	−0.0317	−0.0280	−0.0300	−0.0359	−0.0259	−0.0270	−0.0266	−0.0378**
	(0.0250)	(0.0245)	(0.0249)	(0.0219)	(0.0227)	(0.0220)	(0.0220)	(0.0188)
Can head of household read?		0.165***	0.162***	0.130***		0.123***	0.123***	0.0666***
		(0.0524)	(0.0531)	(0.0396)		(0.0286)	(0.0286)	(0.0252)
Lightning: Electricity			0.0937	0.0857			0.0728*	0.102***
			(0.0766)	(0.0554)			(0.0411)	(0.0371)
Missing value enrolment				−0.508***				−0.552***
				(0.0317)				(0.0214)
Observations	842	842	842	842	1980	1980	1980	1980
R^2	0.380	0.396	0.397	0.518	0.370	0.380	0.380	0.524

Fixed effects estimation at the village level. Dependent variable equals one if the child can read, zero otherwise. All models include age-time interaction controls. Cluster-robust standard errors in parenthesis (at village level). Sample is restricted to non-migrants and children aged between 7 and 17 years.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: The impact of ELCT village assistance on literacy across Protestants and Catholics. Linear probability models. Baseline sample.

	(1) Basline sample	(2) Males	(3) Females	(4) Age 7-10	(5) Age 11-14	(6) Age 14-17	(7) Migrant sample
Protestant x ELCT	0.199***	0.176**	0.201***	0.287**	0.211**	0.0203	0.213***
	(0.0536)	(0.0752)	(0.0746)	(0.133)	(0.0871)	(0.0765)	(0.0519)
Catholic x ELCT	-0.00425	-0.0538	0.0460	0.0417	0.00714	-0.0530	-0.0330
	(0.0450)	(0.0561)	(0.0606)	(0.0662)	(0.0848)	(0.0622)	(0.0375)
Observations	2822	1409	1408	1026	808	980	3290
R^2	0.373	0.397	0.374	0.180	0.052	0.028	0.362

Fixed effects estimation at the religion-village level. Cluster-robust standard errors in parenthesis (clustered at the village level). Dependent variable is equal to one if child is literate, zero otherwise. All models include religion, time and age dummies (and their interaction terms). Baseline sample is restricted to non-migrants and children aged between 7 and 17 years. Migrant sample is baseline sample plus households that moved to neighboring village.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: The impact of the ELCT program on literacy, educational attainment, and school enrollment. Alternative program variable specifications.

	Literate			Finished primary school		
	(1)	(2)	(3)	(4)	(5)	(6)
ELCT	0.199***	0.192***		0.163***	0.144***	
x Protestant	(0.0536)	(0.0412)		(0.0593)	(0.0488)	
ELCT	−0.00425	−0.0183		0.0509	0.0392	
x Catholic	(0.0450)	(0.0277)		(0.0421)	(0.0364)	
Alt. ELCT			0.166***			0.180***
x Protestant			(0.0361)			(0.0409)
Alt. ELCT			−0.0302			0.0298
x Catholic			(0.0208)			(0.0282)
Including ending programs	No	Yes	Yes	No	Yes	Yes
Observations	2822	2993	2993	1606	1700	1700
R^2	0.373	0.381	0.380	0.400	0.390	0.391

Fixed effects estimation at the religion-village level. Cluster-robust standard errors in parenthesis (clustered at the village level). Both dependent variables are discrete, and equal to one if the argument in the relevant column title is true, zero otherwise. The alternative program variable is equal to one if there is currently a program in the village. Ending programs refers to the three (3) villages that had a program in 1991 but not in 2004. All regressions include religion-age-time effects.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: The impact of the ELCT program on literacy. Collapsed sample. First-differences estimation.

	Protestants					Catholics			
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)
ELCT	0.169**	0.180***	0.208***	0.214***	-0.0157	-0.0137	0.0240	0.0144	
	(0.0671)	(0.0642)	(0.0550)	(0.0531)	(0.0515)	(0.0440)	(0.0441)	(0.0445)	
Mean age		0.0732***	0.0600***	0.0575***		0.0953***	0.0929***	0.0996***	
		(0.0205)	(0.0139)	(0.0132)		(0.0280)	(0.0231)	(0.0207)	
Percent male			0.0460	0.0458			0.0386	0.0772	
			(0.100)	(0.0985)			(0.126)	(0.130)	
Percent with literate head of hh.			0.207***	0.214***			0.0610	0.0225	
			(0.0599)	(0.0589)			(0.143)	(0.139)	
Percent with accesss to electricity			0.264***	0.261***			0.376***	0.434***	
			(0.0872)	(0.0777)			(0.119)	(0.127)	
Percent missing value enrollment			-0.643***	-0.636***			-0.425**	-0.471**	
			(0.115)	(0.112)			(0.209)	(0.204)	
Refugee-related robberies in vlg.				0.0311				-0.0762	
				(0.0489)				(0.0483)	
Observations	42	42	42	42	48	48	48	48	
R^2	0.101	0.296	0.624	0.627	0.002	0.260	0.387	0.416	

First differencing estimation at the village level. Standard errors robust to heteroscedasticity (in parenthesis). Dependent variable is equal to the village literacy rate, based no the KHDS sample. Sample is restricted to non-migrants and children aged between 7 and 17 years. All regressions are weighted by the number of observations in each village.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

WORKING PAPERS*
Editor: Nils Gottfries

2007:7 Sören Blomquist and Vidar Christiansen, Public Provision of Private Goods and Nondistortionary Marginal Tax Rates. 17pp.

2007:8 Marcus Eliason and Henry Ohlsson, Living to Save Taxes. 13pp.

2007:9 Åsa Ahlin and Eva Mörk, Effects of decentralization on school resources: Sweden 1989-2002. 31pp.

2007:10 Henry Ohlsson, The equal division puzzle – empirical evidence on intergenerational transfers in Sweden. 20pp.

2007:11 Daniel Hallberg and Mårten Lagergren, Moving in and out of public geriatric care in Sweden. 26pp.

2007:12 Per Engström, Wage Formation and Redistribution. 22pp.

2007:13 Henry Ohlsson, Tax avoidance – a natural experiment. 21pp.

2007:14 David Kjellberg and Erik Post, A Critical Look at Measures of Macro-economic Uncertainty. 27pp.

2007:15 Mikael Carlsson and Andreas Westermark, Optimal Monetary Policy under Downward Nominal Wage Rigidity. 52pp.

2007:16 Robin Douhan and Anders Nordberg, Is the elephant stepping on its trunk? The problem of India´s unbalanced growth. 33pp.

2007:17 Annika Alexius and Bertil Holmlund, Monetary Policy and Swedish Unemployment Fluctuations. 27pp.

2007:18 Meredith Beechey and Pär Österholm, The Rise and Fall of U.S. Inflation Persistence. 23pp.

2007:19 Henry Ohlsson and Donald Storrie, Long term effects of public policy for displaced workers in Sweden – shipyard workers in the West and miners in the North. 26pp.

2007:20 Niklas Bengtsson, How responsive is body weight to transitory income changes? Evidence from rural Tanzania. 38pp.

2007:21 Karin Edmark, Strategic Competition in Swedish Local Spending on Childcare, Schooling and Care for the Elderly. 38pp.

2007:22 Fredrik Johansson, How to Adjust for Nonignorable Nonresponse: Calibration, Heckit or FIML? 25pp.

* A list of papers in this series from earlier years will be sent on request by the department.

2007:23 Henry Ohlsson, The legacy of the Swedish gift and inheritance tax, 1884–2004. 25pp.

2007:24 Ranjula Bali Swain and Fan Yang Wallentin, DOES MICROFINANCE EMPOWER WOMEN? Evidence from Self Help Groups in India. 26pp.

2007:25 Bertil Holmlund and Martin Söderström, Estimating Income Responses to Tax Changes: A Dynamic Panel Data Approach. 34pp.

2007:26 N. Anders Klevmarken, Simulating the future of the Swedish baby-boom generations. 60pp.

2007:27 Olof Åslund and Oskar Nordström Skans, How to Measure Segregation Conditional on the Distribution of Covariates. 17pp.

2007:28 Che-Yuan Liang, Is There an Incumbency Advantage or a Cost of Ruling in Proportional Election Systems? 20pp.

2007:29 Stefan Eriksson and Jonas Lagerström, Detecting discrimination in the hiring process: Evidence from an Internet-based search channel. 31pp.

2007:30 Helge Berger and Pär Österholm, Does Money Growth Granger-Cause Inflation in the Euro Area? Evidence from Out-of-Sample Forecasts Using Bayesian VARs. 32pp.

2007:31 Ranjula Bali Swain and Maria Floro, Effect of Microfinance on Vulnerability, Poverty and Risk in Low Income Households. 35pp.

2008:1 Mikael Carlsson, Johan Lyhagen and Pär Österholm, Testing for Purchasing Power Parity in Cointegrated Panels. 20pp.

2008:2 Che-Yuan Liang, Collective Lobbying in Politics: Theory and Empirical Evidence from Sweden. 37pp.

2008:3 Spencer Dale, Athanasios Orphanides and Pär Österholm, Imperfect Central Bank Communication: Information versus Distraction. 33pp.

2008:4 Matz Dahlberg and Eva Mörk, Is there an election cycle in public employment? Separating time effects from election year effects. 29pp.

2008:5 Ranjula Bali Swain and Adel Varghese, Does Self Help Group Participation Lead to Asset Creation. 25pp.

2008:6 Niklas Bengtsson, Do Protestant Aid Organizations Aid Protestants Only? 28pp.

See also working papers published by the Office of Labour Market Policy Evaluation http://www.ifau.se/

ISSN 1653-6975