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## MODE OF DELIVERY AND THE EFFECTIVENESS OF FOREIGN AID: THE EXAMPLE OF MISSIONARY WORK

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**Abstract:** Conventional development aid, typically a service from government to government, has been a relatively poor determinant of economic growth or human development in developing countries. In this paper we test whether a distinctly grass-roots delivery mode, as is the case with missionary work, leads to a more effective dispersion of foreign aid. In addition to its mode of delivery, missionary work is also of interest as there is a known positive correlation between the growth rate of Christianity and economic development. We estimate the economic growth impacts of development aid versus missionary work variables by using empirical data from 119 countries and discuss several explanations for our empirical results.

JEL Classifications: C31, F35, O11

Keywords: Development, foreign aid, grass-roots aid, missionary work

"I do think missionaries create the kind of respect for the individual  
who then can participate more fully ... within a government structure."

—Former US Secretary of State Madeleine Albright<sup>1</sup>

### INTRODUCTION

During his first presidential campaign in 2000, Texas Governor George W. Bush made a promise to open federal funding for faith-based groups. This faith-based initiative was put into practice in 2002 when the then-elected president Bush established the Center for Faith-Based & Community Initiatives (CFBCI) with his executive order. Among the aims of the initiative was to further improve the social service delivery systems for international aid and development. By partnering with the faith and community based organizations, the USAID would get access to new "[...] extensive social networks and infrastructure, tremendous resources, and vital trust in communities around the globe [...]," effectively creating a higher return on aid outlays.<sup>2</sup>

The above motive is part of the recent general discussion in development circles suggesting that in order to improve the effectiveness of foreign aid, it may be beneficial to redirect some of the aid funds from the government level towards more grass-roots levels of the recipient countries. Many consider this type of aid – funding national and international NGOs, for instance – to be among the most promising future avenues for aid delivery. One aim behind this focus on grass-

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roots activity is to side-step those recipient governments with a very poor track record in using aid, due to corruption, aid absorption capacity, etc., and to move aid closer to the individual level of economic activity. After all, with the exception of a few public types of goods provided by government, it is the people at the local level who know the best use for scarce resources in their circumstances.

Whether the grass-roots strategy, including the faith-based initiative, in foreign aid works or not is still largely an open question. On the one hand, there would seem to be definite theoretical benefits in allocating resources to the lowest level of economic activity. This is particularly true, if due to systemic shortcomings, the federal level lacks the capability to allocate resources efficiently. On the other hand, this argument presupposes that, in bypassing the recipient governments, international donors are better than recipient governments in distributing and using resources. Naturally, if a donor is equally incapable of efficient aid resource allocation – due to lacking information, cultural misconceptions, political constraints, or the overall situational complexity - changing the recipient level may not be much help in increasing the effectiveness of aid.

Interestingly, the faith-based grass-roots approach is not as new as it may seem. A large scale NGO type of grass roots activity – missionary work - has existed outside the official development establishment already for decades.<sup>3</sup> Christian missionary work has several characteristics, which separate it in a positive way from conventional development aid work. First of all, missionary workers are less dependent on the government sources of funding than standard aid workers and NGOs, enabling them more freedom in choosing what to do and how to do it. Furthermore, missionary workers are also usually situated in their target countries for a long time, even for an entire lifetime. This enables a strong social bond between missionaries and local people, which fosters local institutions, normative values, and society as a whole.<sup>4</sup>

In this paper, using a cross-section of up to 119 countries and averaged data for nine recent years (1996-2004), we test empirically whether grass-root development aid (missionary work) affects the target country's economic development, as measured by income per capita changes, the single most important goal of development aid. If the above NGO type of grass roots activity is found to be a predictor for economic growth, this would further strengthen the rationale for the creation of faith-based programs of the type of CFBCI by the US government, and more generally, for increasing the grass-roots delivery of aid.

This paper begins with a brief introduction to the connection between foreign aid, religion and economic development. Next, the empirical strategy is outlined and the empirical results presented and discussed. In particular, this section looks into the effects of the level of missionary work and of foreign aid on economic growth between the years 1996-2004 and whether effect of the grass-roots delivery of foreign aid (as measured by missionary work) is different from the government based delivery form. Finally, the findings of the paper are summarized, and some policy recommendations made.

## FOREIGN AID, RELIGION AND ECONOMIC DEVELOPMENT

There is a serious disagreement in academia on the exact long-term effectiveness of past foreign aid (see Boone 1996, Burnside and Dollar 2000, Easterly 2001, Ovaska 2003, McGillivray 2005, Rajan and Subramanian 2005, and Djankov, Montalvo and Reynal-Querol 2006). In

addressing the common occurrence where the per capita GDP numbers have remained stagnant or decreased in the past thirty years, the discussion has considered whether the numbers would have been even worse without outside help. Unfortunately, due to the sensitivity of empirical results to modeling techniques, data coverage and quality and underlying model assumptions, no clear agreement has arisen on the effectiveness of foreign aid. The only safe generalization, based on past research, is that foreign aid of the last decades has not lived up to its original promise. Most poor countries are nowhere near the income levels that were imagined a few decades ago.

Why should aid not work? First, in the early era of development aid many poorer countries were either socialist, or believed, as the West did, in the Keynesian view of government. In particular, it was argued that market economies largely failed to self-correct after changes in economic environment, with adverse effects on both growth and employment. On the other hand, the argument goes, governments possessed the necessary macroeconomic tools – careful planning, regulation, taxation, and spending – to fix market failures that prevented economies from reaching their potential output level. Accordingly, government bureaucracies and central direction in general have historically played a large role in the economies of poor countries.<sup>5</sup>

However, the Keynesian view of the government as a successful mastermind behind the aggregate demand management policies was seriously challenged by the world events of the 1970s. Indeed, later studies, such as Gwartney, Lawson and Holcombe (1998), have shown that after a relatively low threshold value, increasing government size and regulation, as measured by a percentage of GDP, stifles economic growth. Thus, the poor economic showing of less developed countries could be partially attributed – with and without aid – to an above-optimal role of government in economic activity.<sup>6</sup>

Von Hayek (1944) was in the forefront of modern economists who argued that sound institutional structures, such as property rights, law and order, and commitment to good policies, are a necessary precondition for economic growth. Since poor countries generally lack well-developed institutions, the disappointing economic growth can then be explained through a partially misplaced focus of aid on quantitative changes in the levels of inputs and technology. As current knowledge on development suggests, see for instance Olson (1982, 1996, 2000) and North (1990), increased inputs and technology are necessary but not sufficient condition for economic growth in the least developed nations. A deficient institutional environment will negate or greatly dampen any gains from new investments stemming out of increased foreign aid.

Yet another explanation on aid ineffectiveness deals with the incentive structure economic agents face in both developing and developed countries. For instance, Devarajan, Dollar and Holmgren (2001) note that donor countries have kept the levels of aid to individual countries constant over the years regardless of the economic policies of the recipients. Both positive and negative economic behavior has been rewarded equally. This has created little extra incentive for countries to improve. In essence, aid may support corrupt and inept governments and keep them from collapsing, prolonging the needed shift to better policies.<sup>7</sup>

Vasquez (1998) suggests that bureaucrats in donor agencies also face the moral hazard problem of aid. Namely, effectively allocated aid eventually makes itself unnecessary, shrinking the size of a donor agency, eventually driving the agency out of business. This would be against

the interest of bureaucrats in charge of disbursing aid if they are, as Niskanen (1968) suggests, budget or slack maximizers.

One additional issue that has been largely overlooked by the previous literature on aid effectiveness is the complexity of the entire aid structure, and the resulting coordination problem. The current set-up of foreign aid has clear parallels to central planning, as outlined in Ovaska (2006). This planning element in foreign aid is associated with several problems. Firstly, almost all foreign aid is currently disbursed by governments (or organizations) thousands of miles away from target locations. What this means is that critical resource allocation decisions are made away from the unique circumstances of the aid recipients, and are frequently based on historical knowledge and understanding that is deficient, non-existent, or plain wrong (see Easterly, 2003). Furthermore, even if a “faultless project” were created and put into practice, that itself would not guarantee good economic results. Success will only materialize if the project is coordinated with the projects of hundreds of other donors who are simultaneously drafting and executing their own plans.

As rigorous project coordination is so difficult to achieve in foreign aid, there is a very high likelihood of diseconomies of scale, extensive duplication of results and of tying up the scarce bureaucratic resources of the recipient countries with too many projects. This severely reduces the pay-off from aid. Unfortunately, the current aid disbursement system involving hundreds of countries and organizations and tens of thousands of simultaneously running projects is so complex that individual effort to coordinate it is doomed to fail. What is even more alarming, rather than becoming simpler, the development cooperation system seems to be getting more complex every decade.<sup>8</sup>

The above also highlights the fact that the blame for the failure of aid cannot be attributed solely to the recipient side. It is clear that the donors often have a strong vested interest when dispersing funds. For the donors, aid is also way to buy loyalty and friends internationally, and further ones political philosophy and economic goals. The content of aid is often fine-tuned to serve these purposes. In addition, tied aid is frequently used to bolster donors’ domestic industries, with at times only the most modest consideration to cost-efficiency or even to the need for a particular type of aid. Given everything, it is fair to say that the blame for aid’s failure resides on both sides of the fence.

If the current aid system is not the solution to the problem of underdevelopment, what is? First of all, it seems that any inter-governmental effort ought to be focused to building an environment that enables the working of markets. One must try to help the developing countries to create themselves an institutional setting based on the rule of law and well-defined property rights.<sup>9</sup> Furthermore, any effort to steer clear of the fundamental problems of aid, as outlined in this section, are likely to have a beneficial effect on results. The complexity is a by-product of one’s trust in planning. Many of the perverse incentives stem from governments’ central role in the system: corrupt politicians, budget-maximizing bureaucrats, rent seeking industry around governments, etc. The problem of deficient information is severe at the central decision-making level, but eases up when moving closer to the grass roots level. Worse yet, corrupt governments may stay in power only because of a financial lifeline in the form of aid handed to them by foreign governments.

In addition to the grass-roots delivery, missionary work has many other positive attributes missing from current development aid. Several scholars note that Christian religion overall has enabled rapid economic growth.<sup>10</sup> One of the founding writings on the economic consequences of religion is Max Weber's "Die Protestantische Ethik und der Geist des Kapitalismus," in which he argues that the Protestant Reformation made possible the advance of modern capitalism. Protestantism promoted a previously uncommon emphasis on individual responsibility, personal diligence, approved risk-taking, financial self-improvement and looked favorably on the accumulation of material wealth, perhaps in conjunction with rewards obtained in an after-life (Weber 1904). Weber argued that the Protestant ethic is inherently about applying religious meaning to economic behavior, as for example labor was seen as a moral duty.

Adam Smith (1759) noted in his *Theory of Moral Sentiments* that religious beliefs provide strong incentives to follow moral structures, which support economic growth. Religious behavior serves as a communicating and signaling device of the individual's identity and commitment. Iannaccone (1998) finds religious effects on economic behavior to be substantively large and statistically significant. Anderson (1988) argues that the concept of a judgmental supreme-being constitutes internal moral enforcement mechanism and a system of internalized moral monitoring. Millendorfer (1984) and Hanssmann (2000) have argued that especially the Christian value system produces serious labor involvement and economic efficiency, deriving from an ethic of discipline, self-denial, hard work and systematic planning for the future. Conversion to Christianity has meant a profound cultural revolution. The logic of the assumed positive effect mechanism is that a cultural trait affects certain values and beliefs, and those beliefs in turn influence one's economic decision-making and thus economic outcomes. Missionary work's main target is to change those values and mindsets.

It has also been found that at the microeconomic level of individuals and households, economic behavior and outcomes do correlate with religion. Religiosity is positively correlated with education, health and incomes, as found empirically in Great Britain by Sawkins, Seaman and Williams (1997). Also Guiso, Sapienza and Zingales (2003) find that religious beliefs, in particular the Christian religion, are positively associated with attitudes conducive to economic growth, free markets and better institutions. McGregor, Thanki and McKee (2002) have previously noted the significant impacts of religiosity on the labor market behavior. A large empirical literature exists on the relationship between religion and different forms of sociological deviance (including crime, suicide, divorce, illicit drugs, extra-marital sex, etc.).<sup>11</sup> Typical result from these analyses is that youth raised in highly religious homes are less likely to engage in criminal activity, use drugs or alcohol, or engage in premarital sex. Empirical studies also consistently find that high rates of religious activity and commitment are linked with mental health, reduced stress and increased life satisfaction.

#### DATA AND MODEL

The study is cross-sectional and covers up to 119 countries. Each observation is an arithmetical average of nine years, 1996-2004. By averaging the data, we control to some extent for the effects of business cycles and exogenous shocks. In contrast to the other variables in the study, the missionary work data is solely for the year 2000, which is the first year of internationally comparable data on missionary work. Descriptive statistics and the correlation matrix of the

variables is presented in the appendix. Missionaries usually work in environments with low GDP per capita growth and investments (like sub-Saharan Africa), as seen in the correlation matrix in Appendix B. Nevertheless, missionaries are also situated in highly prosperous, but non-Christian, countries (like Japan).

A diverse group of data sources was used. The economic variables (income, income growth, investment) come from the World Bank's World Development Indicator (WDI) database. The development aid data is compiled both from the WDI and the OECD Development Assistance Committee (DAC) database. The data sources for the economic and press freedom are The Heritage Foundation/Wall Street Journal and The Freedom House, respectively. Finally, the data for missionary work was retrieved from the World Christian Trends by Barrett and Johnson (2001).

The cross-sectional regression model for the study is built based on the standard components of the economic growth theory. A good discussion of the general modeling strategy is found in Levine and Renelt (1992). Examples of some recent economic growth regressions that include foreign aid as an independent variable are Rajan and Subramanian (2005), and Djankov, Montalvo and Reynal-Querol (2006). Due to the potential endogeneity of the aid and missionary terms, a two stage least squares modeling technique was used, the instruments being listed at the bottom of Table 2.

It should also be noted again that we do not test the efficiency of Christian missionary work in terms of Christian conversion, but economic development. Therefore, we are not analyzing the effects of missionary work as a realization of religious capital, but rather as an example of grass-root level development aid. Our general model using averaged data covering years 1996-2004 is formulated as:

INCOME GROWTH PER CAPITA (annual % change in GDP per capita) =

$$\begin{aligned}
 &\beta_0 \text{ Constant} + \\
 &\beta_1 \text{ Missionary Work} \\
 &\quad [\text{Missionaries per 1,000,000 inhabitants}] + \\
 &\beta_2 \text{ Development Aid} \\
 &\quad [\text{Aid, aid squared, aid interacted with economic freedom}] + \\
 &\beta_3 \text{ Control Variables} \\
 &\quad [\text{GDP per capita, investment, economic freedom, geographic} \\
 &\quad \text{location dummies}] + \\
 &\text{The Error Term}
 \end{aligned}$$

## EMPIRICAL FINDINGS

The empirical findings are presented in Table 2 on the next page. In regressions, several variables turn out to be consistently significant both statistically and economically. Their robustness to a change in a model is also quite good, an inclusion or exclusion of variables only having marginal effects on the main findings.

Interestingly, the findings with respect to the foreign aid and -missionary work variables are quite similar, and irrespective of the model specification, neither variable had a statistically detectable effect on per capita income growth. While foreign aid – both with and without

Table 1  
Variable Descriptions

	Variable	Description	Expected effect
Variable Descriptions	GDP Growth per Capita	Real income growth per capita, averaged for the period 1996-2004	Dependent variable
	Missionary Work	Missionaries (measured per 1 million people) perform valuable services in health, schooling, and provide direct monetary assistance to the needy, among other things. In addition, missionaries teach values that are known to be consistent with fostering economic growth.	Positive
	Foreign Aid	Foreign aid (as a % of GNI), according to neoclassical growth theory, is expected to raise the level of savings in society, and through investment increase the level of economic growth. However, foreign aid may also crowd out domestic investment, decrease work effort, and if tied to unproductive projects, may actually lead to slower growth.	No Clear Hypothesis
	Investment	Investment (as a % of GDP) is one of the principal components of the neoclassical growth theory. A higher investment ratio increases the amount of capital per worker and, therefore total productivity and economic growth.	Positive
	Economic Freedom	The Heritage Foundation Economic Freedom index (on a scale of 1-high to 7-low) approximates the level of freedom in a society as measured by the levels of personal choice, voluntary exchange, competition, and protection of person and property. A lower index number is associated with better governance and potentially higher economic growth. Note: In regressions, a negative coefficient implies a positive effect.	Positive
	GDP per Capita	Initial level of GDP per capita (in real \$) measures the conditional rate of convergence of the economy to its long-run position. Based on the neoclassical growth model, the coefficient of the initial GDP should be negative, that is, the higher the initial income level, the slower the growth.	Negative

emergency aid - didn't seem to contribute to economic growth, in a few model specifications its effect on growth was found to be statistically significantly different from zero. In all those cases the sign of the regression coefficient for aid was negative, implying development aid having a negative effect on growth. The latter finding of no or minor negative effect is consistent with the most recent results in development literature. This result held also when aid was interacted with economic freedom – a result contrary to that by Burnside and Dollar (2000). The missionary work coefficients were found to be positive, although very small in absolute values and statistically insignificant. This was true in all but one specification – missionary work interacted with press freedom - an interesting result which will be discussed at the end of this section.

Of the other variables in regressions, three in particular were found to be consistently significant, and always of the expected direction. Change in institutional quality, as measured



by the change in economic freedom, was positively correlated with income growth. In a typical regression, a one percentage point increase in institutional quality was associated with about 0.08 percentage point increase in per capita income. For instance, if a country at the sample mean of income managed to improve its level of economic freedom permanently from 3.00 to 2.85 (scale: 1 high, 7 low), this would result in a \$1,726 increase in the income per capita over 30 years. Thus, even relatively small improvements in economic environment seem to have a meaningful positive effect on overall economic activity. Investment also had the predicted effect on growth. For every 1% point increase in investment's share in GDP, income growth accelerated by 0.1% points. In terms of return on investment, this implies about 10% rate of return. Finally, consistent with the standard neoclassical growth model, income growth was found to be increasing with a decreasing rate in income, i.e., income growth slows gradually when incomes rise. As is to be expected, poorer countries can grow at a potentially faster rate than wealthy countries simply by eliminating known gross inefficiencies in their economies. In addition to the change in institutional quality, investment, and initial income, no other variables tried exhibited a robust relationship with economic growth.

What explains the divergence between the theoretical expectations and our empirical findings in the case of missionary work? In addition to the theories outlined in the literature section, one potential explanation is that the averaged nine-year time horizon used in the study is – while long - not long enough to allow for the truly time-dependent effects to be captured. For instance, the improved health and education levels and changes in ethical standards may be detectable only in time periods longer than a decade. Unfortunately, given existing data, it is not yet possible to estimate the model with a long time horizon.

Another additional explanation could be that the grass-roots level missionary workers in countries with strong and corrupt governments may face a situation very similar to that of foreign reporters in Soviet Russia in the 1930s, as described, for instance, in Conquest (1968) and Cowl (1981). If a foreign reporter wanted to keep working in Soviet Russia, he/she was expected to comply with the expectations set forth by the government. As a consequence, any reporter that decided to stay also decided to comply with these constraints, or steer the reporting to areas of non-controversy.

For a missionary to keep working in a host country, he/she may also have to shy away from activities that are deemed undesirable by the host government. The undesirable activities potentially include anything - such as espousing economic and political freedom, and the rule of law - that could prevent the ruling elite from using the government for their personal benefit. In many cases the lesser evil from the missionary's, or for that matter, any aid worker's point of view may be to comply. Unfortunately, through this compliance many economic benefits are foregone.

The above hypothesis was put to test in our regression specification number 10 by interacting the missionary variable with a press freedom measure. This was the only specification where the missionary variable had any statistical significance. While the size of the coefficient was too small to be economically meaningful, it was nevertheless of the expected direction. This lends some credence to the above conjecture that grass-roots activity is affected by the potential negative sanctions of the host governments.

Table 2  
2SLS Estimates of the Missionary Work Equations  
Dependent Variable: GDP Growth per Capita (Annual Mean, 1996-2004)

Equation	1	2	3	4	5	6	7	8	9	10
Constant	5.20 (1.25)	4.96 (1.08)	10.0** (2.33)	10.7** (2.06)	10.6** (2.46)	8.03 (1.19)	6.88 (1.61)	0.49 (0.12)	-0.32 (0.08)	13.3** (2.01)
Missionaries	0.00 (0.73)	0.00 (0.01)	0.00 (0.66)	0.00 (1.00)	0.00 (0.40)	0.00 (0.81)	0.00 (1.51)	0.00 (0.88)	0.00 (0.09)	0.002* (1.73)
Missionaries X Economic Freedom	—	—	—	—	—	—	-0.00 (1.14)	—	—	—
Missionaries X Press Freedom	—	—	—	—	—	—	—	—	—	-0.000* (1.71)
Aid of GNI	-0.16 (0.41)	-0.29 (0.85)	-1.05** (2.12)	-0.74 (1.26)	-1.31* (1.95)	-0.21 (0.49)	-0.24 (0.64)	-0.03 (0.07)	0.08 (0.16)	-0.36 (0.91)
Aid of GNI squared	0.01 (0.53)	0.01 (0.92)	0.07** (2.20)	0.05 (1.07)	0.10 (1.37)	0.01 (0.60)	0.01 (0.78)	0.01 (0.44)	0.00 (0.06)	0.01 (0.76)
Log GDP per Capita (constant 2000 \$)	-0.77 (1.41)	-0.65 (1.16)	-1.27** (2.27)	-1.43** (2.01)	-1.24** (2.24)	-0.94 (1.60)	-1.00* (1.84)	-0.11 (0.28)	0.06 (0.14)	-1.88** (2.07)
Economic Freedom (Change)	-0.05*** (2.17)	-0.08*** (2.87)	-0.07** (2.57)	-0.06** (2.41)	-0.07*** (3.46)	-0.05*** (2.48)	-0.05*** (2.70)	-0.05*** (3.31)	-0.05** (3.43)	-0.03 (0.94)
Economic Freedom (1-high) to (7-low)	—	—	—	—	—	-0.45 (0.62)	—	—	—	—
Investment (Gross, % of GDP)	0.14*** (3.38)	0.13*** (3.20)	0.14*** (2.99)	0.14*** (3.45)	0.13*** (3.82)	0.14*** (3.28)	0.14*** (3.42)	0.09** (2.36)	0.08** (2.27)	0.15*** (2.87)
Tropical Dummy	-0.93* (1.78)	-0.70* (1.19)	-1.26* (1.75)	-1.05* (1.82)	-1.03* (1.79)	-0.92* (1.88)	-0.73 (1.45)	-0.97* (1.84)	-0.98* (1.73)	-1.00* (1.87)
Sub-Sahara Dummy	-1.97 (1.35)	-1.39 (1.25)	-2.79 (1.37)	-2.63 (1.24)	-1.50 (1.00)	-1.97 (1.57)	-1.91* (1.74)	-1.62* (1.80)	-1.17 (1.29)	-1.44 (1.17)
Observations	119	95	112	108	99	119	119	78	70	119

Notes: Newey-West heteroscedasticity corrected estimates. Absolute t-statistics in parenthesis. \*\*\*, \*\*, \* denotes significance at the 1%, 5%, and 10% levels respectively. Instruments for Aid: GDP per Capita, Economic Freedom (change), Investment, Tropical (Dummy), Sub-Sahara (Dummy), Life Expectancy, Secondary School Enrolment, Population, CFA Zone (Dummy), Revolution (Dummy).

Equation (1, 6, 7, 10): Full sample.

Equation (2): Sample excluding countries that received no aid.

Equation (3): Sample of countries with [Aid of GNI] < 20.

Equation (4): Sample of countries with [Aid of GNI] < 15.

Equation (5): Sample of countries with [Aid of GNI] < 10.

Equation (8): Sample of countries with [Missionaries] > 500.

Equation (9): Sample of countries with [Missionaries] > 500, and [Economic Freedom] < 3.5 (i.e., the high scores)

## CONCLUSION

Using a cross-section of up to 119 countries and averaged data for the period 1996-2004, we tested empirically whether a distinctly grass-roots delivery of development aid (missionary work) would increase the effectiveness of foreign aid, as compared to the more traditional government to government type of aid. Based on our empirical results, neither type of aid leads to long term income growth, while the level of investment and the change in economic freedom had a strong positive effect on income.

The finding on aid is of particular interest, because missionary work would seem to possess a definite advantage over conventional foreign aid in terms of its mode of delivery – missionary workers deliver their goods at the grass-roots level of economic activity, bypassing the politics and bureaucracy of central governments. In addition, the positive effect of religious values on economic growth has previously been well documented in the economics of religion literature. Thus, while the idea of steering the delivery mode of aid more towards the grass-roots level is attractive, it seems to lack merit in practice as far as income growth goes. Even the aid delivered at the grass-roots level cannot escape the forces that work against it.

The evidence presented in this paper raises some interesting questions, and answers some. For more conclusive results, a study with a decades worth of observations would have to be conducted. Data availability at this point does not allow for this. However, our findings create a reasonable working hypothesis for further studies on the field, in particular when it comes to the delivery mode of aid and the role of host governments and faith-based organizations in the process. To what extent the results of foreign aid are contingent upon the degree of constraints put in place by host governments, and to what degree, if to any, the aid mode of delivery can overcome this handicap, is the question we would like to see answered in future research.

### Notes

1. Christianity Today, August 2006.
2. Letter from the Director (Terri Hasdorff, USAID Center for Faith-Based and Community Initiatives). [http://www.usaid.gov/our\\_work/global\\_partnerships/fbci/](http://www.usaid.gov/our_work/global_partnerships/fbci/) (accessed Oct. 3, 2007).
3. According to Meredith (2005), the number of missionaries in Sub-Saharan Africa in 1910 amounted to approx. 16,000. The current estimate of the number for the year 2000 is 90,463.
4. For a discussion, see Delfendahl (1981).
5. The tendency of, for instance, many African rulers to strong state direction and ownership is well documented in, for example, Meredith (2005).
6. When the over 200 countries of the world are ranked by their purchasing power adjusted income using data from the World Development Indicators 2002, the general government final consumption expenditure (% of GDP) for the bottom half of all countries is not considerably different from the top half of countries, even though the income difference between these groups is fivefold. It seems clear that one of the costs for the bottom half of countries that kept their governments large is simply slower economic growth. The relatively low growth rates of third world countries can unlikely be explained through their different choice of policy targets. For instance, there is no evidence of any particular preference on their part for income redistribution measures (as measured by Gini-coefficients) rather than for economic growth.
7. For a personal account of the devastating effects of corruption, see Richburg (1998), and for a more general account, Meredith (2005).
8. See Ovaska (2006).
9. DeSoto (2001).
10. Mangeloja (2005), Barro and McCleary (2002, 2003), Greif (1994), Chiswick (1983).
11. For a good survey on literature, see Iannaccone (1998) and Lipford, McCormick and Tollison (1993).

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## Appendix

Table A  
Descriptive Statistics and Data Sources

	Data Source	Mean	Median	Maximum	Minimum	Std. Dev.
GDP Per Capita Growth (%)	B	2.35	2.08	8.45	-2.92	2.09
Missionaries (per 1 million people)	A	1286	783.2	8313	6.00	1545.85
Press Freedom (1-high to 100-low)	D	41.77	40.60	81.40	6.30	21.52
Aid of GNI (%)	B, E	3.90	0.81	28.66	-0.03	6.21
GDP Per Capita (constant USD)	B	6926	2096	42615	102.42	9711.15
Economic Freedom Change (%)	C	-6.11	-7.42	33.20	-36.52	12.82
Economic Freedom (1-high to 7-low)	C	2.99	3.03	4.56	1.76	0.64
Investment (% of GDP)	B	21.95	21.96	46.52	8.89	5.28
Secondary School Enrolment (%)	B	72.36	78.16	157.25	5.87	33.62
Population (in millions)	B	44.59	10.26	1260	0.25	150.00
Life Expectancy (years)	B	66.98	70.51	81.06	38.09	11.54
Number of Observations	n.a.	119	119	119	119	119

## Data Source Codes and Citations:

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|---|--|
| A | Barrett, D.B. and Johnson, T.M., (2001), World Christian Trends. AD 30-AD2200. Interpreting the Annual Christian Megacensus. Pasadena, California: William Carey Library.  |
| B | The World Bank (2008):<br>World Development Indicators 2008.<br>Washington, DC: The World Bank.  |
| C | Gwartney, James and Robert Lawson with Seth Norton (2008):<br>Economic Freedom of the World: 2008 Annual Report.<br>Vancouver, BC: The Fraser Institute.<br>Data retrieved from <a href="http://www.freetheworld.com">www.freetheworld.com</a> . |
| D | Freedom House (2008):<br>Freedom of the Press 2008.<br>Washington DC: Freedom House.<br>Data retrieved from: <a href="http://www.freedomhouse.org">www.freedomhouse.org</a> .  |
| E | Organization for Economic Co-operation and Development (2008):<br>International Development Statistics.<br>Paris: OECD.<br>Data retrieved from: <a href="http://www.oecd.org/dac/stats/data/idsonline">www.oecd.org/dac/stats/data/idsonline</a> |
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Table B  
Correlation Matrix (Full Sample)

	GDP Per Capita Growth	Mission- aries	Press Freedom	Aid of GNI	GDP Per Capita	Economic Freedom Change	Economic Freedom	Investment	Sec. School Enrolment	Popula- tion Expectancy	Life Expectancy
GDP Per Capita Growth	1.00	-0.04	-0.07	-0.02	-0.05	-0.43	-0.04	0.45	0.21	0.22	0.19
Missionaries	—	1.00	-0.50	-0.21	0.50	-0.10	-0.45	-0.06	0.36	-0.06	0.24
Press Freedom	—	—	1.00	0.19	-0.58	0.24	0.69	-0.02	-0.55	0.14	-0.44
Aid of GNI	—	—	—	1.00	-0.40	-0.21	0.42	-0.10	-0.60	-0.12	-0.67
GDP Per Capita	—	—	—	—	1.00	0.05	-0.74	-0.05	0.65	-0.04	0.57
Economic Freedom Change	—	—	—	—	—	1.00	0.04	-0.11	-0.03	0.05	0.02
Economic Freedom	—	—	—	—	--	—	1.00	0.05	-0.67	0.13	-0.59
Investment	—	—	—	—	--	--	—	1.00	0.12	0.18	0.17
Sec. School Enrolment	—	—	—	—	—	--	--	—	1.00	-0.05	0.80
Population	—	--	—	—	--	—	—	—	--	1.00	0.02
Life Expectancy	—	—	--	--	—	—	--	—	—	—	1.00