

Results- Based Financing:

A Cross Sector Comparison in Education and Health

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Senior Honors Thesis

Organizational Studies Program

University of Michigan

March 13, 2015

ACKNOWLEDGEMENTS

I would like to thank all the people who made this thesis possible and have played a part in fueling my passion for seeing the quality of life improved for those living in the developing nations of the world.

First, I would like to thank my parents, the rest of my family, and Jason Anderson for their continuous encouragement throughout my life. Without their support, I would not be where I am today, pursuing my dreams and passions. Thank you for always challenging me, believing in my success, and especially for loving me well.

Next, I thank Dr. Prashant Yadav and Dr. Jane Banaszack-Holl for their support as my research advisors. Dr. Yadav, thank you for your wisdom, expertise, and guidance. Dr. Yadav, you expanded my knowledge on research and more importantly the realm of global development. I cannot fully express how thankful I am for your support and mentorship throughout this past year. Dr. Banaszack-Holl, I appreciate your willingly taking on the role of advisor and for generously meeting with me to help me develop my ideas for my thesis.

Additionally, I would like to thank Dr. Michael Heaney, the Honors Coordinator for the Organizational Studies Department for helping guide me through the thesis process. I would also like to thank the whole Organizational Studies faculty and staff, especially Cathy Philbin, Melissa Eljamal, and Tiffany Purnell, for their support and friendship. My experience at the University of Michigan would not have been the same without this department and its people.

I would also like to thank all the organizations and individuals who volunteered their time and knowledge for my thesis. Thanks to Rena Eichler, William Savedoff, Luis Crouch, and to the people at Twaweza and ASER Centre. I appreciate the time taken out of your days to share with me your work and expertise. This thesis would never have been complete with you.

Lastly, I would like to thank Doug Kee, Dr. Victor Strecher, and the many others who have supported and encouraged my passions for serving others, global improvement, and public health. I know all these things will forever play a role in my life, and I thank each person who helped and will continue to help me develop a life and career from these passions.

ABSTRACT

There is controversy over the effectiveness of the billions of dollars given in foreign aid each year to developing countries. To remedy this, Results-Based Financing (RBF), a method of giving money based on performance, was invented and has been greatly implemented. This study investigated whether RBF was used more in the Health sector than the Education sector and some of the possible reasons for this occurrence. A case study analysis of RBF schemes in Health and Education was conducted and complemented by literature and expert interviews. The findings show that there were more RBF schemes in Health than in Education. The main reason is the Education sector resisted measuring and tying incentives to educational outcomes for a longer period of time. There also seemed to be more money and human resources promoting RBF schemes in the Health than the Education sector. Lastly, the translation from outputs to outcomes in Education was much weaker, creating another limitation. Future investigation should be conducted to see if RBF will become more visible in Education, as most research predicts. More research also is needed to explain the lack of supply-side Education RBF schemes in Latin America.

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INTRODUCTION:

Definition & History of Foreign Developmental Aid

According to the Organization for Economic Cooperation and Development (OECD), foreign aid is defined as: financial and technical support along with commodities supplied as subsidized loans or grants for the sole purpose of endorsing economic development and welfare.¹ The concept of foreign aid is very well known and deemed an important priority for many governments, non-governmental organizations (NGOs), and large foundations. Although seemingly common in today's world, giving foreign aid is a somewhat recent phenomenon in history.

Foreign developmental aid started in the late 19th and early 20th as more wealthy European countries, such as Britain, France, and Germany, regularly providing additional funds their colonies in Africa, the Americas, and Asia in order to build-up infrastructure and the economy.² It was not until after World War II and the beginning of the Cold War that other high-income countries, such as the United States (US), started getting more involved in the development of low- and middle-income countries. The trend started in order to rebuild parts of the Europe after the war but continued in order to assist former colonies that recently gained independence from imperial authority.³ It was not until the 1960s that the importance of foreign development really started influencing countries. This was the decade the US founded the United States Agency for International Development (USAID), and likewise, other European nations not known for historically having colonies, such as Sweden, created similar aid programs.

¹ Steven Radelet . "A Primer on Foreign Aid." *Center For Global Development*. July 1, 2006. Accessed March 8,

² Michael Seear. "Chapter 2: A History of Foreign Aid." In *An Introduction to International Health*, Toronto: Canadian Scholars' Press, 2007, 21-2.

³ Ibid.

Present-day Foreign Development & Its Importance

Business Growth Imperative

Over the past 50 to 60 years, the need for foreign development has been continuously recognized for many reasons. From an economic and political standpoint, assisting another country is a return on investment by promoting a donor country's own investment interests in a developing market. Economists Alfred Maizels and Machiko K. Nissanke, in a regression analysis, found that donors were significantly influenced to fund developing countries where they already had substantial economic investments, thus ensuring more profitability on their international enterprises.⁴ Subsequently, there was also a slight correlation between the amount of aid money given to developing countries and their status as a major trading partner of the donor country.⁵

Global Security Imperative

Along with economic interests, donor countries also use foreign aid as a way to ensure political security. In a study done on motivations for providing foreign aid, researchers found that many countries were more likely to reward democratization of developing countries by giving more aid money.⁶ This can be explained by the fact that donor countries with strong democratic beliefs deem other democratic nations as political allies and, therefore, are lesser threats to the national security of donor nations.

Not only do political allies help ensure national security, but alleviating poverty and increasing education in developing countries can also indirectly increase security. In

⁴ Alfred Maizels, and Machiko K. Nissanke. "Motivations for aid to developing countries." *World Development* 12, no. 9 (1984), 884.

⁵ Ibid.

⁶ Alberto Alesina, and David Dollar. "Who gives foreign aid to whom and why?." *Journal of economic growth* 5, no. 1 (2000), 49.

developing countries, the gross national product (GDP) per capita and secondary school enrollment for male citizens male are both inversely related to the likelihood of civil war.⁷ In countries such as Afghanistan and Sudan, it has been shown that civil wars have created a refuge for international terrorists.⁸ Thus, by decreasing civil wars in low-income countries through alleviating poverty and increasing education donor countries can also eliminate spaces for international terrorists to gain strengthen and power.

Beyond political security, donors also have an interest in bettering health to prevent the spread of diseases into their own countries. Both recent examples of the SARS and Ebola viruses spreading from low- and middle- income countries into high-income countries display how fast deadly sicknesses can spread across the world. Well-developed mechanisms and infrastructure to respond to epidemics are necessary to reduce the spread of diseases. By providing necessary funds for said mechanisms and infrastructure donor nations can bolster the health systems of developing countries, thereby lowering the chance of deadly disease spreading into their countries.

Moral Imperative

Although economics and national self-interest present reason for investing in foreign development, one can also argue there is a component of moral responsibility and a belief in human dignity that also play a role. According to the World Bank database, the gross national income (GNI) per capita in the world's high-income countries in 2013 was \$39,819.80 USD, where as in low-income countries the GNI per capita in 2013 was only

⁷ Alan B. Krueger, and Jitka Malečková. "Education, poverty and terrorism: Is there a causal connection?." *The Journal of Economic Perspectives* 17, no. 4 (2003), 141.

⁸ Ibid.

\$708.80 USD.⁹ Not only is the inequality in income stark between countries across the globe, but the differences seen in health also follow a similar pattern. Compared to countries in the developing world, high-income countries have a much higher life expectancy and quality of life. As of 2013, people in low-income nations only have an average life expectancy of 61.6 years compared to 79.3 years for those living in high-income countries.¹⁰ Unlike low-income countries, high-income countries also enjoy the luxury of having very low prevalence rates of many deadly communicable diseases. For example, the prevalence of tuberculosis was 282 per 100,000 people in low-income countries compared to only 22 cases per 100,000 people in high-income countries in 2013.¹¹

For many, it is alarming to look at these statistics and even harder not to question the fairness in the type of life one will live decided by mere chance of birth location. This belief and line of thinking translates into more privileged individuals sharing some of that with others. On a larger scale, this can take the form of foreign aid or, in other words, nations with more success and opportunity giving to countries with fewer resources. Whether one believes more strongly in the economic, moral, or security reasoning for its existence, it is clear that foreign development is important. The amount of money and resources invested in developing countries and organizations working within those countries each year is a testimony to the growing importance of foreign aid.

⁹ "GNI per Capita, Atlas Method (current US\$)." The World Bank. Accessed March 9, 2015. <http://data.worldbank.org/indicator/NY.GNP.PCAP.CD/countries/XM-XD?display=graph>.

¹⁰ "Life Expectancy at Birth, Total (years)." The World Bank. Accessed March 10, 2015. <http://data.worldbank.org/indicator/SP.DYN.LE00.IN/countries/XM-XD?display=graph>.

¹¹ "Incidence of Tuberculosis (per 100,000 People)." The World Bank. Accessed March 10, 2015. <http://data.worldbank.org/indicator/SH.TBS.INCD/countries/XM-XD?display=graph>.

The Importance of Healthcare & Education as Part of Developmental Aid

Seen in the OECD definition, the overall purpose of foreign development is to boost the economy of other countries. As previously addressed, many donor countries also find purpose in foreign aid for their own economic growth and national security. Although it may initially seem obvious that strengthening an economy and protecting invested interests means focusing on industry, job markets, and politics, there are many other intertwining factors that play a role. Two of the important factors are education and health.

A well-structured healthcare system is an essential part of any successful community, most importantly because to be in good health is a necessary requirement for any person to not only survive but also thrive. When people are sick they are limited in their capacity to keep a job, go to school, or take care of a family. Even if they can go to work or school, they will perform and learn at a lesser rate. Additionally, an economy and a family in a population with a shorter average life span also suffer because of declined human capital and expertise in any given field. Overall, there is a clear link between poor health and greater poverty within communities. On a country scale, poor health has also been linked to decreased GDP per capita.¹² Without access to healthcare and medications, people, and more so a community, cannot fully function, thus lowering economic and personal gains.

There is no debate that education is a determining factor in the options a person has to participate in the global market. Education allows people to learn other languages, gain literacy, acquire essential mathematical skills, and to develop into more productive

¹² David E. Bloom, David Canning, and Dean T. Jamison. "Health, wealth, and welfare." *Finance and development* 41 (2004), 15.

citizens. It has even been linked to better health and more stable politics within a country.¹³ No matter the status of a country, it is common knowledge that more education is synonymous with more opportunities for advancement. Education not only helps individuals, but also benefits countries as a whole. A Harvard University economist, Robert Barro, found that the average years of schooling attained by males aged 25 and over was significantly linked to the economic growth rate in a given country.¹⁴ Without a quality education system, people within a country, and thus the country itself, cannot sustain a highly sophisticated workforce and economy.

Healthcare and education are not only important for people's livelihood, the economy, and donor-invested interests, but are also considered to be basic human rights. According to the United Nations (UN), education is not only a human right but also a means in which people can realize other human rights.¹⁵ The UN also states that it is the right of all humans to enjoy a high standard of both physical and mental health.¹⁶ Since the UN is an international organization that is made up of many powerful countries, it can be inferred that the countries that have signed these declarations also view health and education as basic human rights.

Although important for both economic and human rights reasons, the comparison of the quality and quantity of education and healthcare in developing versus developed countries displays massive inequalities. While the US population had a secondary school

¹³ "Education and the Developing World." Center For Global Development. June 12, 2006. Accessed March 8, 2015, 1. http://www.cgdev.org/files/2844_file_EDUCATON1.pdf.

¹⁴ Robert J. Barro "Education and economic growth." *The contribution of human and social capital to sustained economic growth and well-being* (2001), 30.

¹⁵ "Special Rapporteur on the Right to Education." United Nations Human Rights. Accessed March 8, 2015. <http://www.ohchr.org/EN/Issues/Education/SREducation/Pages/SREducationIndex.aspx>.

¹⁶ "Special Rapporteur on the Right to Health." United Nations Human Rights. Accessed March 8, 2015. <http://www.ohchr.org/EN/Issues/Health/Pages/SRRightHealthIndex.aspx>.

graduation rate of 93.7% and the country had eradicated or had minimal cases of communicable diseases in 2012, some developing countries were still dealing with polio and primary school completion rates of less than 50%.^{17,18} Based on this inequality, along with their importance, NGOs and governments alike continue to invest billions of dollars each year in the Education and Health sectors of developing countries.

The Debate Surrounding Developmental Aid and a Possible Remedy

Even with decades of NGOs and governments investment, foreign aid is far from perfected. Decades of imperfection have led to a constant debate over the effectiveness of foreign aid. The big question at hand is: does foreign aid actually produce the desired outcomes for the amount of money and time invested into it?

Although evident that progress has been made in education and health around the globe, there are still millions, if not billions, of people who still do not have access to basic education, healthcare, clean water, and many other essentials necessary to survive and escape poverty. This leads many, if not the majority of people to believe that the amount of time and money put into developing countries thus far should have yielded more advancements than are currently observed. Some argue that the lack of substantial progress means foreign aid is, and always will be, an unsuccessful endeavor, and thus, money given to foreign countries should be cut from government budgets. However, others believe there is still significant importance in continuing to provide foreign aid, but believe the current system requires improvement in order to see more sustainable results.

¹⁷ "School Enrollment, Secondary (% Gross)." The World Bank. January 1, 2012. Accessed March 8, 2015. <http://data.worldbank.org/indicator/SE.SEC.ENRR/countries/1WXMZF%20%20%20%20%20%20%20%20%20%20US?display=default>.

¹⁸ "Primary Completion Rate, Total (% of Relevant Age Group)." The World Bank. January 1, 2012. Accessed March 8, 2015. <http://data.worldbank.org/indicator/SE.PRM.CMPT.ZS/countries/1W-XM?display=default>.

Since the main debate on foreign aid is about its effectiveness, those interested in changing the system and convincing others of foreign aid's importance have been pushing for new methods that are focused on achieving desirable outcomes. A program that systematically measures and makes payments based on results would theoretically make aid more effective by ensuring achievement was linked to the aid. Such a program would also be able to demonstrate the positive impact of foreign aid to those who are not convinced of its value or effectiveness. Through this push to focus on outcomes, a method of providing foreign aid called Result-Based Financing (RBF) has been proposed and is starting to be implemented by aid-giving organizations, especially the World Bank and the United Kingdom's Department for International Development (DFID). RBF is a funding model, which instead of financing inputs, the traditional focus of funding structures, it focuses on outputs, outcomes or measurable goals.

Thus far, RBF has been implemented in several different sectors and has promising preliminary results. However, having only been implemented within the past 10 to 15 years, there has not been a lot of cross-sector comparison of RBF. Without this type of comparison, there is little evidence to support whether RBF works for all sectors or if it is more effective in certain sectors. To further the research on RBF, I will be exploring a cross-sector comparison of RBF's uses in Education and Health since these two sectors are not only vital to development, but also a significant portion of aid money is spent in these two sectors.

RESEARCH QUESTIONS:

At first glance, it seemed that RBF is being used more in the health sector than in education. There was a larger amount of publications on RBF pertaining to the health

sector, and the World Bank had a trust fund dedicated to RBF programs in health (HRITF).

To more fully assess the use and capabilities of RBF in Health and Education, I ask the following research question:

- Is Result-Based Financing (RBF) used as a funding mechanism more in international health programs than in international education programs?

To answer this question, there are many aspects of the sectors, programs, and funding organizations that need to be assessed and analyzed. Thinking through the different factors that may influence where and how RBF is used, I proposed the following more specific research questions:

- Is external financing the main driver of greater RBF use?
- Is there more external (donor) money going into health over education? Is the funding for health and education coming from different sources (internal government funding v. international funding)?
- Are outputs/outcomes not as easily measured in Education as in Health?
 - Does that have an effect on choosing a funding method to implement?
- Are there significant differences in the technical capacity to support and help implement RBF in the Education and Health sectors?

An essential component of RBF schemes, that will be discussed in greater detail later on is that these programs focus on rewarding outputs and outcomes, such as vaccines administered or children passing exams, instead of solely funding inputs, such as buildings and supplies, like most aid programs. Since focusing on outputs and outcomes is the core of RBF, it also seemed appropriate to investigate and evaluate the relationship between inputs and outputs and/or outcomes in both Health and Education. Knowing the way in

which inputs translate into outputs and outcomes in each sector could provide some explanation as to why RBF is used more in one sector than the other if that is the case. Finally, for any new project to be implemented and successful it requires personnel with knowledge and experience to develop and execute it. With this in mind, I decided it was worthwhile to explore the extent to which people in both the Health and Education sectors knew about and had experience with RBF programs.

METHODOLOGY:

This research project was a qualitative study that focused on comparing the uses of RBF in the Education and Health sectors. In order to address the research questions posited, this study focused on the analysis of case studies of current or past RBF programs in the two sectors. The case study analysis was complemented by interviews with RBF program design experts in the two fields. Without much current research in the comparison of RBF in Education and Health, the goal of this study was to use the case studies supplemented by interviews to build a theory of why RBF is used the way it is in Education and Health.

To allow for the case study analysis to be turned into a more generalizable theory that speaks for the sectors as a whole, the case studies were selected based on a set of factors. I followed a sampling approach in which I analyzed case studies in the main aspects of program design, financing, and evaluation until no significantly new information could be learned from the addition of another case study. I initially estimated that I would need five to six case studies per sector. In both sectors, I attempted to have case studies that varied in geographical location and were based in developing countries since this study concentrated on RBF schemes used as a means of providing foreign aid. Finally, as

explained further in the Results-Based Financing chapter below, the case studies chosen were supply-side and not demand-side interventions.

Based on the research questions stated above, the case studies were analyzed systematically based on five different factors of the RBF program. These five factors were:

- Location
- Funding organization
- Intervention level
- Incentive payment
- Measurements used for incentive indicators.

These factors would be seen in every case study and thus make for a strong comparison.

Also, the last three factors, intervention level, incentive payment, and measurement, coincide with important components of any RBF agenda. Comparing these crucial factors in RBF schemes led to an inclusive evaluation of RBF's uses in both sectors, helping me answer and build a theory on the main research question. Analyzing the RBF programs based on these dimensions is in agreement with DFID's report that stated schemes should be defined by funding source, contracting party, recipient party, measurable goals, and payments linked to achieving said goals.¹⁹

Explained in more detail in the Results-Based Financing chapter, RBF schemes are focused on outputs and outcomes versus inputs. In this study, to better analyze the cases, I made the distinction between outputs and outcomes. For the purpose of the study, I defined inputs as materials, people, and infrastructure needed for the system or organization to operate. I define outputs as the direct services or tangible effects produced

¹⁹ Mark Pearson, Martin Johnson, and Robin Ellison. "Review of major Results Based Aid (RBA) and Results Based Financing (RBF) schemes." *Final report. DfID Human Development Resource Centre* (2010), 13.

by an operating organization. An outcome then is the desired big-picture result that ideally occurs because of the activities and actions, or outputs, of the organization. For example, in Education, an output would be high student attendance that would hopefully lead to an outcome of more learning achievement. In Health, an example would be giving more children vaccines to achieve the outcome of lower child mortality. In alignment with my definitions, Figure 1 and Figure 2 below classify elements as an input, output, or outcome and also depict the process of going from inputs to outcomes in both Health and Education.

Figure 1: Health Inputs, Outputs, and Outcomes

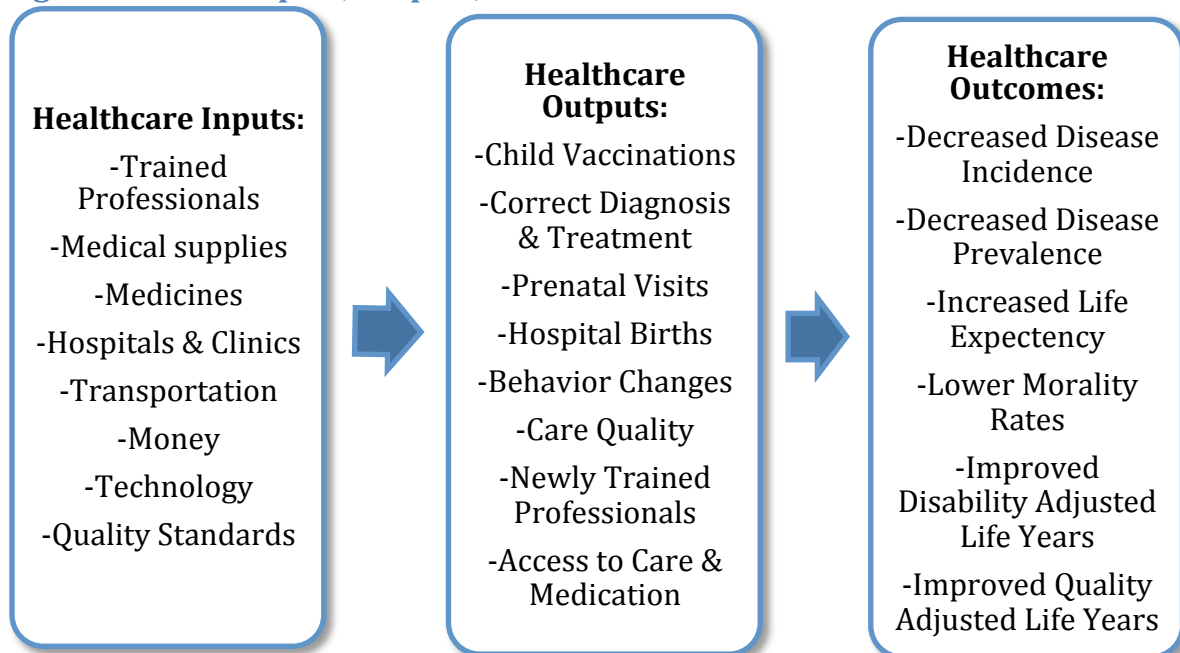
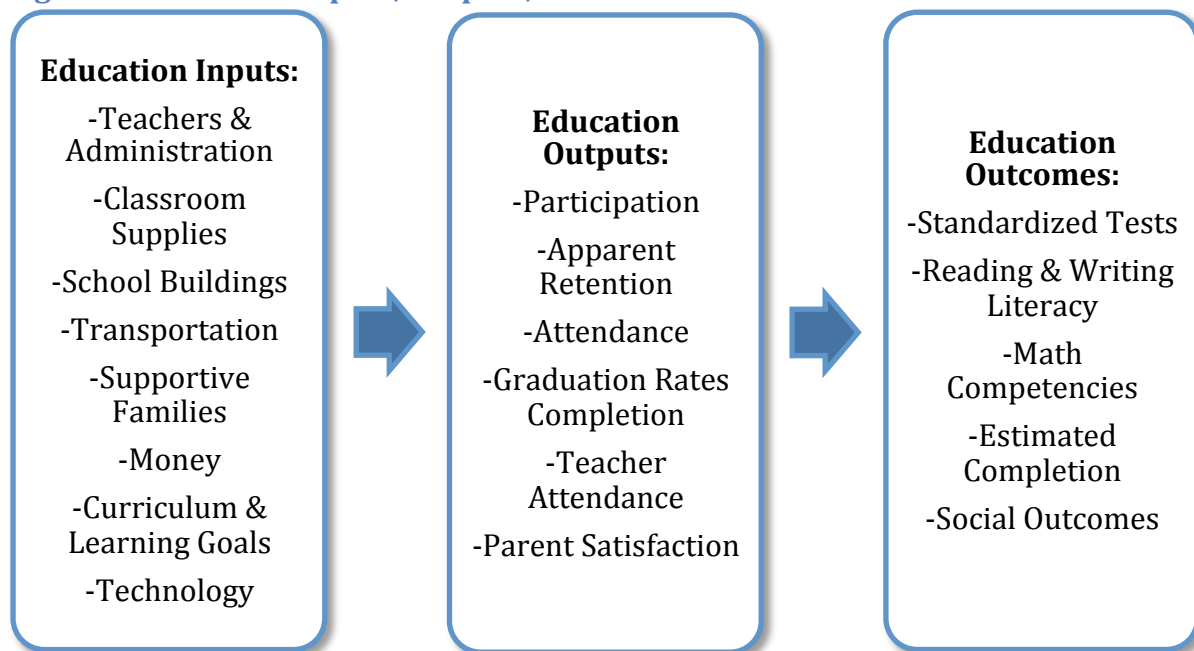


Figure 2: Education Inputs, Outputs, and Outcomes

Along with the case study analysis, interviews with subject matter experts from the two sectors were conducted. Five interviews were conducted in this study. Limited by location differences, the interviews were conducted either via email or over the phone. All who were interviewed were respected leaders in the nonprofit sector in the fields of Education or Health. There was some heterogeneity in the nature the interviewed experts' work. A few of the experts focus on measuring education, some work directly on evaluating RBF schemes in general or in a specific sector, and some worked more generally in a sector, but have had experiences with RBF. The purpose of the interviews was to gain further insight into the uses of RBF in each sector. Beyond its uses, the interviewees were asked about the potential reasoning and opinions behind why RBF is being used the way it is in each sector. All interviewees were kept anonymous in this study.

RESULTS-BASED FINANCING (RBF):

As stated in the Introduction chapter, RBF is the term used to describe all types of

funding programs that pay on some sort of result instead of input. Although RBF has also been classified as Output-Based Financing, or Payment for Performance. Under the RBF umbrella, however, there are several more specific types of programs being implemented. Some are on the demand-side, meaning they are paying out to families or individuals receiving services while other programs pay to the supply-side such as governments or organizations providing the services. For the purpose of this study, I solely focused on RBF schemes that were supply-side focused since in the Health and Education sectors the major necessary improvements needed are, arguably, on the supply-side. As previously stated, only RBF schemes that were used as a form of foreign aid were studied, even though RBF schemes have also been used for domestic programming.

The main RBF schemes used in the case studies analyzed are Cash on Delivery (COD), Results-Based Aid (RBA), and Output-Based Aid (OBA). COD is more specifically defined as a fixed payment to a recipient government “for each additional unit of progress toward a common agreed goal”.²⁰ RBA can be defined similarly but differs in that it still utilizes the traditional aid relationship meaning both the funder and recipient are governments.²¹ OBA is also similar, but is paid out to a firm, such as an NGO, and is more broadly described as payments linked to the delivery of indicated services or outputs.²² Other RBF programs seen in the case studies also pay on performance but reward recipients with gifts instead of monetary awards. The details of RBF described below hold true for supply-side programs, but not always for demand-side RBF programs.

²⁰ Rita Perakis, and William D. Savedoff. "An Introduction to Cash on Delivery Aid for Funders." *Note. Washington, DC: CGD* (2014), 1.

²¹ Rita Perakis, and William Savedoff. "Does Results-Based Aid Change Anything? Pecuniary Interests, Attention, Accountability and Discretion in Four Case Studies." (2015), 2.

²² "What Is OBA." GPOBA. Accessed March 11, 2015. <https://www.gpoba.org/what-is-oba>.

A RBF program begins with a contract agreed upon by both the giving and receiving party. In this contract, there has to be established measurable indicators that are outputs or outcomes, not inputs. The contract must state in which ways indicators will be measured. Usually the recipient government or organization will do the measuring and reporting, but in almost all RBF programs an independent party is also used to verify reported results. Finally, the contract must state the expected results and what the payment will be if the said results are in fact accomplished.

Something RBF contracts usually do not state is how the results are going to be achieved. RBF, in many of its sub-categories, is considered a “hands-off” approach to funding, which allows the recipients the freedom to create programs they feel will be most appropriate to improve the system.²³ Ideally, this will negate some of the inefficiencies brought upon by funders deciding how the money will be used when they are not as familiar with the needs of the population as locals are. Moreover, this approach also allows for recipients to be less dependent on donors.

Another hope is that RBF programs will increase transparency and accountability of the recipient. The expectation is that both the agreed upon contract and the results of the measurements taken are published for the public to see. This makes the recipient not only accountable to the funder, but also to the population it is serving. This allows the population to know when their government is not delivering what they have promised and to potentially give feedback on which programs work and which do not. Ultimately, this more intentional transparency and accountability will expectantly decrease corruption and the misuse of funds.

²³ Perakis and Savedoff. "An Introduction to Cash on Delivery Aid for Funders," 1.

Although an alternative to traditional funding of foreign development, RBF is not meant to be a standalone funding model. It is usually a supplementary aid program, as the money for inputs is still a necessity in most cases. The hope is that in accompanying the traditional input-based aid the recipient governments or organizations will be motivated to use the inputs more efficiently and, in return, be able to see clearer results from the aid money received.

LITERATURE REVIEW:

Results-Based Initiatives

Results-based incentives, in the context of foreign development, started evolving in the mid-1990s by the World Bank and several other bilateral aid agencies in response to critics of the current foreign aid policies. Their ideas were based on the belief that for an aid program to be successful, funders should require recipients to be involved in consultations, planning seminars, and meetings with NGOs, local communities, and domestic interest groups, but that ultimately recipient countries should take ownership of program design and implementation.²⁴ Continuing in this direction, the Paris Declaration was written and signed by over 90 countries and aid organizations in 2005 with the commitment of funders to help reform aid to focus on:

- Increasing the recipient's ownership of aid-funded programs
- Promoting coordination between funding organizations on the design, implementation, and reporting of foreign developmental initiatives

²⁴ Nancy Birdsall, William D. Savedoff, Ayah Mahgoub, and Katherine Vyborny. *Cash on delivery: a new approach to foreign aid*. CGD Books, 2010, 6.

- Creating objectives for programs that are in accordance with recipient's own priorities and current systems.
- Using performance and results as measures of achievement
- Increasing the effectiveness of foreign aid by promoting accountability of both donors and recipients
- Allowing recipient governments or organizations gain more autonomy by helping them better plan and manage their own budgets.²⁵

With these principals as building blocks, researchers and other development experts have begun to build RBF programs to be used for current and future foreign aid initiatives.

Several different approaches to results-based programming in foreign development have since been implemented and studied for effectiveness.

Some of the more common RBF schemes are COD, RBA, Conditional Cash Transfers (CCT), Output-Based Aid (OBA), Performance-Based Financing (PBF), and prizes for high yields. Each program type differs slightly in intervention focus, payment structures, and overall objectives. COD and RBA programs have focused objectives and try to incentivize governments. CCT agendas also have very focused objectives but aim to incentivize families by supplementing income only if certain services, such as healthcare, are sought out. OBA programs have few objectives and are focused on incentivizing firms to achieve outputs. PBF schemes can have multiple objectives and are focused on disbursing payments to facilities, like health clinics.²⁶

²⁵ Birdsall, Savedoff, Mahgoub, and Vyborny. *Cash on delivery: a new approach to foreign aid*, 8.

²⁶ William D. Savedoff "Incentive proliferation? Making sense of a new wave of development programs." (2011), 13-14.

Since its implementation, debate over the effectiveness of RBF has been prevalent. Although a promising initiative to make aid more efficient, there are still potential downfalls to RBF. First, evidence from previous schemes has revealed agreeing upon appropriate indicators and payments that actually incentivize providers are difficult tasks.²⁷ Other concerns are that focusing on certain targets through RBF schemes could lead recipient countries or organizations to distort resource allocation away from other important initiatives. Furthermore, RBF could mean shifting aid away from low-performing countries, even when they still need substantial aid.²⁸

There is also the possibility that RBF may be less effective in low-income than in high-income countries. In a systematic review comparing RBF use in high-income and low-income countries, researchers concluded that RBF might create more undesirable effects and have more implementation limitations in low-income countries. These undesirable effects could be: corruption, increasing the wealth gap, dependency on incentives, bureaucratization, and dilution of professional intrinsic motivation.²⁹

On the other hand, many researchers have published studies supporting RBF's success thus far. Many programs have shown that RBF incentives were successful in achieving better outputs and outcomes. RBF programs monitoring child growth, significant decreases in stunting were seen in Mexico, Nicaragua, and Colombia by 29%, 5.5%, and 6.9% respectively.³⁰ Further investigations have supported that RBF programs in

²⁷ Amanda Melina Grittner. "Results-based Financing." Bonn, *Germany*: German Development Institute (2013), 24.

²⁸ Paolo De Renzio, and Nagaire Woods. "The Trouble with Cash on Delivery Aid: A note on its potential effects on recipient country institutions." *Note prepared for CGD initiative on cash on delivery* (2008), 2.

²⁹ Andy D. Oxman, and Atle Fretheim. "An overview of research on the effects of results-based financing." (2008), 4.

³⁰ Rena Eichler, and Ruth Levine, eds. *Performance incentives for global health: potential and pitfalls*. CGD Books, 2009, 30.

Bangladesh and Cambodia successfully achieved targets to improve access to healthcare and reduce household spending on healthcare.³¹ All of these examples point to the effectiveness of incentivized schemes.

In response to claims of possible drawbacks, analysis of an RBF scheme in Cambodia concluded that there was no evidence supporting this program caused aversive effects or neglect of non-incentivized services.³² Addressing other concerns, some analyzes of RBF schemes have also shown that it is a cost-effective foreign aid mechanism. In Bangladesh, the performance-based contracted NGOs outperformed the public sector firms in delivering healthcare services while also being paid a comparable amount to those public firms.³³

Despite the evidence supporting both sides, many researchers have commented on the lack of rigorous studies of RBF effectiveness in achieving targeted outcomes, making the evidence for its success weak.³⁴ Additionally, more research needs to be done on the sustainability and cost-effectiveness of RBF.³⁵ This is most likely due to its relative newness in the realm of foreign aid.

Educational Results-Based Programs

RBF experts have also made the argument for its use in Education in order to improve primary and secondary schooling around the world. One of the most fundamental criteria for an RBF scheme is that the objectives agreed upon are important to both parties, and for Education that is seemingly simple. In 2000, the Millennium Development Goals

³¹ Grittner. "Results-based Financing.", 23.

³² Ibid, 32.

³³ Ibid, 40.

³⁴ Andrew D. Oxman, and Atle Fretheim. "Can paying for results help to achieve the Millennium Development Goals? Overview of the effectiveness of results-based financing." *Journal of Evidence-Based Medicine* 2, no. 2 (2009), 78.

³⁵ Oxman and Fretheim. "An overview of research on the effects of results-based financing." (2008), 4.

(MDGs) were created as a UN declaration and were agreed upon by 189 countries.³⁶ One of the MDGs was the universalization of primary schooling by 2015; however, it has not yet been accomplished. According to COD experts Nancy Birdsall and William Savedoff, COD, and more broadly RBF schemes, may be the way to reestablish motivation among donors and recipients and accelerate progress in countries where universal primary education has not been achieved.³⁷

With such large goals in Education of achieving universal primary education and also wanting to increase secondary education, it is easy to become discouraged by the vastness of the task. By focusing on and incentivizing attainable, smaller targets, RBF can help remedy this issue while still working towards the larger end-goal.³⁸ This type of aid can potentially give more motivation and encouragement to developing countries that still lack the educational systems needed to achieve universal schooling for its children.

RBF can also help Education focus more on its quality versus just its quantity. Experts suggest that completion of primary school should be measured by the number of students who complete a standardized test, or another learning assessment, in their last year of primary school because it is:

- An easily defined measurement
- Closely related to MDG goals for universal education
- Focused on the achievement and quality of learning
- Easy to audit

³⁶ Birdsall, Savedoff, Mahgoub, and Vyborny. *Cash on delivery: a new approach to foreign aid.*, 46

³⁷ Birdsall, Savedoff, Mahgoub, and Vyborny. *Cash on delivery: a new approach to foreign aid.*, 46-47.

³⁸ Katherine Vyborny. "Cash on delivery aid for education: experiences of incentive-based approaches." *Center for Global Development*. Available from: [http://www. cgdev. org/section/initiatives/_active/pbaedu/analysisanddiscussion1](http://www.cgdev.org/section/initiatives/_active/pbaedu/analysisanddiscussion1) (2007), 1.

- A way to encourage the development of suitable testing systems and methods of reporting information.³⁹

Using learning assessments as a measure helps set a standard for the definition of school completion that can vary across countries. Testing can also be an easier and better way of assessing progress since attendance and other types of records can be poorly kept or falsified by recipient nations. Also, by measuring a student who passes the test, instead of those who merely take it, helps determine the quality of education given to students.⁴⁰

Health Results-Based Programs

Much like in Education, many common goals to improve the Health sector internationally have been instated. Three of the MDGs are directly related to improving health, more specifically enhancing maternal and child health and decreasing the rate of common diseases, such as malaria and HIV/AIDS.⁴¹ Thus, RBF schemes can be effective in Health because of their emphasis on shared objectives between donor and recipients. RBF schemes in Health also help people who cannot afford healthcare to gain access to care. It also benefits donors, as they no longer have to micromanage finances for programs going on in other countries.⁴²

In Health, there is also the possibility that RBF schemes, with their broad outcome indicators, can promote policy changed to strengthen health systems in developing countries.⁴³ Incentives based on the additional efforts of the recipient can help improve health development by assisting recipients in paying for the additional reoccurring costs

³⁹ Birdsall, Savedoff, Mahgoub, and Vyborny. *Cash on delivery: a new approach to foreign aid.*, 48.

⁴⁰ Birdsall, Savedoff, Mahgoub, and Vyborny. *Cash on delivery: a new approach to foreign aid*, 49.

⁴¹ William D. Savedoff, and Katherine Douglas Martel. "Cash on delivery aid for health: What indicators would work best?." *Center for Global Development Working Paper 275* (2011), 2.

⁴² Eichler, and Levine, eds. *Performance incentives for global health: potential and pitfalls*, 20.

⁴³ Savedoff, and Martel. "Cash on delivery aid for health: What indicators would work best?." 3.

associated with caring for more people and are overall a stronger motivation to progress healthcare.⁴⁴ RBF schemes also can foster the enhancement of logistical structures within healthcare in order to guarantee the long-term sustainability of the system.⁴⁵

Although there is much literature on RBF, researchers have clearly identified some current research gaps and call for more in order to better assess whether it is an effective foreign aid mechanism.⁴⁶ Still, there is some evidence of its effectiveness, however, almost all that examination is focused on Health RBF schemes. Even so, many have advocated its use in Education and, in more recent years, have begun a more rigorous implementation of it in Education. Furthermore, there is even less investigation on the comparison of RBF's uses in these two sectors. This study hopes to contribute to the cross-sector comparison of RBF's uses in order to create more understanding of how RBF can be used more effectively, especially in Education, and help demonstrate the current state of RBF in both sectors. Understanding these components will allow for continued learning of implementing RBF in two very unique sectors, and will especially highlight the potential differences in RBF schemes across sectors.

OBSERVATIONS:

RBF Case Studies in Education

Below, Table 1 presents and summarizes the five RBF Education case studies based on the five main points of comparison described in the Methodology chapter.

⁴⁴ Savedoff, and Martel. "Cash on delivery aid for health: What indicators would work best?." , 7.

⁴⁵ Eichler, and Levine, eds. *Performance incentives for global health: potential and pitfalls*, 20.

⁴⁶ Birdsall, Savedoff, Mahgoub, and Vyborny. *Cash on delivery: a new approach to foreign aid*, 76.

Table 1: Education Case Study Comparison

Location	Tanzania ⁴⁷	Rwanda ⁴⁸	Ethiopia ⁴⁹	India ⁵⁰	Kenya ⁵¹
Funding/ Researching Organization	Twaweza (DFID, World Bank, & SIDA)	DFID	DFID	Azim Premji Foundation (World Bank & Educational Initiatives)	International Child Support (Dutch NGO)
Level of Intervention	Teacher, School, District, or Community Level (RCT)	National Governmental Level (Ministry of Ed.)	National Government level (Ministry of Ed.)	Teacher or School Level (RCT)	Teacher Level
Incentive Payment	20 USD per pupil	150 pounds per additional primary completers. 250 pounds per additional S3 completer from previous year	75 USD per boy pupil 100 USD per girl pupil (& paid if more than baseline took exam)	Increasing bonus based on average class or school exam score >5% of baseline	Prize- based bonus (enough prizes for about half the schools to win)
Measurement Used	Uwezo Grade 2 Literacy & Numeracy Exam	Increased number of children that complete P6, S3 & S6 (& teacher's English competency)	National Grade 10 Examination	Grade 3-5 Math & Language Exam	School average of district exams (Grade 4-8)

Twaweza Case Study

In more detail, Twaweza, an NGO working primarily in Tanzania, is implementing the first Education case study I analyzed. The program is also being supported by several large financial backers: DFID, the World Bank, and the Swedish International Development

⁴⁷ "Three Experiments to Improve Learning Outcomes in Tanzania: Delivering capitation grants better and testing local cash on delivery." *Note. Tanzania: Twaweza* (2012), 2-8.

⁴⁸ "Rwanda Education Programme 2011/12 to 2014/15 Business Case." England: UKaid from the Development for International Development, 45.

⁴⁹ Nancy Birdsall and Rita Perakis. "Cash on Delivery Aid: Implementation of a Pilot in Ethiopia." *Note. Washington, DC: CGD* (2012), 2-6.

⁵⁰ Karthik Muralidharan and Venkatesh Sundararaman. *Teacher performance pay: Experimental evidence from India*. No. w15323. National Bureau of Economic Research, 2009, 43-52.

⁵¹ Glewwe, Paul, Nauman Ilias, and Michael Kremer. *Teacher incentives*. No. w9671. National Bureau of Economic Research, 2003, 207-209. Accessed March 9, 2015.

<https://www.aeaweb.org/articles.php?doi=10.1257/app.2.3.205>.

Cooperation. The program was finalized in 2012, but started its implementation in 2013 and is still in progress. The program is being executed as a randomized control trial in order to test different combinations of interventions to better assess how RBF can be best implemented in Tanzania.

This program is testing three different interventions. The first intervention contains no RBF features but is assessing the impact of disbursing the normal \$10USD/ pupil funds to either districts or schools based on the literacy and numeracy test scores of their students. The second intervention is a COD-type scheme but differs slightly in that it does not pay out to government only. For every student that passes a Grade 2 literacy and numeracy assessment constructed by Uwezo, a branch of Twaweza, \$20USD/pupil is disbursed. This COD-type attempt will be focused at a local government level and will include four different models of disbursement. One trial will give the money to the districts and another directly to the schools, the third to the teachers, and the fourth will split the \$20 USD/pupil between the teacher and the student's parents. This is being done to assess the level at which the incentive produces the best results. The third intervention is meant to be a combination of a COD- type scheme and traditional input-based aid. In this intervention, each school will receive \$10USD/pupil upfront. In addition, for each student who passes the Uwezo Grade 2 literacy and numeracy assessments the school or the teachers and parents, depending on the trial, will be awarded an extra \$20USD/pupil. Twaweza also states that to verify these results, independent experts were used to further ensure the validity and reliability of the documented results.⁵²

⁵² "Three Experiments to Improve Learning Outcomes in Tanzania: Delivering capitation grants better and testing local cash on delivery", 2-8.

DFID Case Studies

Following that study, I analyzed two case studies on programs being implemented and funded by DFID in Ethiopia and Rwanda. Both are RBA programs and deal directly with the national governments of Ethiopia and Rwanda, specifically the National Ministries of Education. The programs were drafted and implemented in 2011-2012 and continuing until the end of 2015, with the potential of renewing the contracts. The United Kingdom, through DFID, has been in an aid-giving relationship with these countries long before these programs and continues to also give traditional aid in addition to these new RBF schemes. DFID also indicated that for both of their programs, a hired independent agent is performing random sampling and verification of reported results.

In Rwanda, DFID implemented a program that focuses on both primary and secondary school success. The indicators are solely outcome-based, paying on the passing of the P6, the final primary school exam, and the S3, a secondary school exam. For each additional student from the previous year that passes the P6 exam, DFID gives the Rwandan government £150/pupil. For each additional student from the previous year that passes the S3 exam, DFID awards the government £250/pupil.⁵³

In Ethiopia, DFID has designed a program that is a mixture of output and outcome indicators on which they give payment disbursements. The output measure focuses on secondary school enrollment and the outcome measure focuses on passing a critical secondary exam. First, they will give a disbursement for every additional student from the previous year that sits in on the already-existing Ethiopian grade 10 standardized test. In regions of Ethiopia that are considered emerging, or less developed, DFID pays £75/boy

⁵³ "Rwanda Education Programme 2011/12 to 2014/15 Business Case.", 45.

and £100/ girl taking the grade 10 exam. In non-emerging regions, they will pay £50/boy and £85/girl taking the test. For the second indicator, DFID pays the government for each additional student that passes the grade 10 exam from the previous year. In emerging regions, they pay £75/boy and £100/girl, while in non-emerging regions they pay £50/boy and £85/girl. In Ethiopia, unlike Rwanda, DFID found that girls were less present in school and performing worse than boys. This led to DFID to pay more for the schooling of girls in hopes to incentive the education of women to a greater degree in Ethiopia.⁵⁴

Azim Premji Case Study

The fourth case study I analyzed was another randomized control trial that took place in the Andhra Pradesh state of India and was implemented by the Azim Premji Foundation, with help from the NGO Educational Initiatives. Along with the foundation, the program had financial backing from the World Bank and DFID. This program took place from 2006 -2007. Much like the plan implemented by Twaweza, the scheme by Azim Premji proposed four different interventions that varied from input-aid only to output-aid only.

The first intervention involved no additional money for schools but consisted of detailed feedback on, and to, teachers in order to help teachers pinpoint they could better help students learn. The second intervention was to give an additional block grant for inputs to each school. The third intervention was to add contract teachers to schools since in India government teachers are paid without much accountability and are known to be frequently absent, a potential reason for low learning achievement. The fourth intervention was an outcome-based scheme but was not COD, RBA, or OBA, because teachers were paid in bonuses if test scores increased above the initial baseline by 5% or more. This bonus was

⁵⁴ Nancy Birdsall and Rita Perakis. "Cash on Delivery Aid: Implementation of a Pilot in Ethiopia.", 2-6.

not a set payment, but based on a formula, which depended on the percent improvement in the test scores. There were two variations of the fourth intervention; one that paid the teacher based on the school's average test score and one that paid teachers directly based on their class' average score. This was to assess if payment to an individual or group level was more incentivizing. To ensure correct reporting of test scores, economist Karthik Muralidharan and other researchers compiled data by random sampling of schools in the experimental districts.⁵⁵

International Child Support Case Study

International Child Support, a Dutch NGO, implemented the last Education case study I analyzed. This intervention took place in Kenya from 1998-2000 and was focused on student success in grades fourth through eighth. Students' test scores on the Kenyan district exams for each specific grade level were used to determine student success, making this an outcome-based RBF scheme. All the results from this program were studied and verified by economist Paul Glewwe and others.

This program was focused on incentivizing at the teacher level, but differed slightly from the other case studies in that instead of payments, the teacher bonuses were materials such as plates, cutlery, tea sets, blankets, etc. In monetary terms, these prizes were worth about 20% to 40% of a teacher's monthly salary. This program also differed in that it was a competition amongst teachers and schools, not everyone could receive a prize. Only teachers at about half of the schools involved in the incentivized scheme received some sort of prize. The test results were analyzed for absolute performance and

⁵⁵ Karthik Muralidharan and Venkatesh Sundararaman. *Teacher performance pay: Experimental evidence from India*, 43-52

improvement from a baseline score set by scores from the previous years. The teachers from the top performing schools for each category of score analysis were awarded.⁵⁶

Although not an explicit indicator, there was also an output-based component to this program. The exam scores on which schools and teachers were evaluated was a median test score of the classroom or school as a whole. The total number of students enrolled at the beginning of the term was the number of students used in calculating the median, even if students had dropped out by the time the test was taken. The hope for doing this was that it would also decrease student drop-out rates.

Education Case Study Summary

Overall, clear themes are visible within RBF usage in the Education sector. First, even though it was my intention of pulling case studies from all different regions of the world, I was not able to find well-documented supply-side RBF schemes in certain regions. For example, I found Education RBF schemes in Latin America, but all were demand-side and thus not applicable to this study. Through the case studies, it seems that many of the RBF schemes have similar funding sources, more specifically the World Bank and DFID. Across all the programs, outcome incentives, i.e exam scores, were used far more frequently than output incentives, i.e attendance, graduation rates, etc.

When it came to measuring, almost all the programs paid based on improvement over the baseline and not on absolute scoring. Also, all the programs were paid relative to their achievement, not an absolute amount. A certain amount of money, or type of gift, was given out per additional passing student or per percentage point higher above a baseline or other stated goal. Thus, payments given in all the programs could change based on the level

⁵⁶ Paul Glewwe, Nauman Ilias, and Michael Kremer. *Teacher incentives*, 207-209.

of achievement; they were not fixed payments based on achieving a specific goal. All the programs also used outside consultants for verification of reported results, usually in the form of random sampling or randomized control trial experiments.

Despite these similarities, many of the programs varied on a few of the elements. All of the programs differed in payment amount and recipients when results were achieved. Some paid to teachers or schools directly while others paid to local or national government. The payments differed in that some were set amounts per pupil while others were based on a formula. Most payments were given in money while one case awarded prizes instead. There also was not a specific school-level that was addressed across programs. There was great variation on whether primary or secondary school was the addressed population.

Healthcare Case Studies

Next, I analyzed five case studies of RBF programs in the Health sector. Table 2 below, similar to the one above in Education, summarizes the case studies on the basis of the five points I found pivotal for my research questions.

Table 2: Health Case Study Comparison

Location	Rwanda ⁵⁷	Argentina ⁵⁸	Haiti ⁵⁹	Nicaragua ⁶⁰	Afghanistan ⁶¹
Funding/ Researching Organization	World Bank, African Development Bank, European Commission, UK & Sweden	World Bank & University of California Berkeley	USAID	Inter- American Development Bank & N. Emergency Social Investment Fund.	EC, USAID & World Bank
Level of Intervention	Hospital Level	Local Government Level	NGO Level	Hospital, NGO, and Household Level	NGO Level
Incentive Payments	(fees * quantity) * (% quality score)	5 USD (+3 if all indicators met)/ person/ month	5% gain or lost in budget	Unit cost/ service & offered to 95% of group	10% bonus of contract value
Measurement Used	Quantity & quality assessment	10 indicators	7 indicators by % improvement	Preventative indicators	Mix of input, process & outputs

World Bank (and others) Case Studies

The first case study presented was implemented in Rwanda. This program was funded by several organizations working in partnership with one another: the World Bank, European Commission, African Development Bank, the United Kingdom, Sweden, and several Dutch NGOs. Within the country, there were two pilot RBF programs launched in

⁵⁷ Louis Rusa, Miriam Schneidman, Gyuri Fritsche, and Laurent Musango. "Rwanda: Performance-based financing in the public sector." *Performance incentives for global health: potential and pitfalls* (2009), 193-196.

⁵⁸ Paul J. Gertler, and Paula Ines Giovagnoli. "Rewarding provider performance to enable a healthy start to life: evidence from Argentina's Plan Nacer." *World Bank Policy Research Working Paper* 6884 (2014), 6-9.

⁵⁹ Rena Eichler, Paul Auxila, Uder Antoine, and Bernateau Desmangles. "Haiti: going to scale with a performance incentive model." *Eichler R, Levine R; the Performance-based Incentives Working Group. Performance incentives for global health: potential and pitfalls. Washington, DC: Center for Global Development* (2009), 166-169.

⁶⁰ Ferdinando Regalia, and Leslie Castro. "Nicaragua: Combining Demand-and Supply-Side Incentives." *Eichler R, Levine R, the Performance-Based Incentives Working Group. Performance incentives for global health: potential and pitfalls. Washington, DC: Center for Global Development* (2009), 215-226.

⁶¹ Egbert Sondorp, Natasha Palmer, Lesley Strong, and Abdul Wali. "Afghanistan: Paying NGOs for performance in a postconflict setting." *Eichler R, Levine R; the Performance-Based Incentives Working Group. Performance incentives for global health: potential and pitfalls. Washington, DC: Center for Global Development* (2009), 139-152.

the regions of Butare and Cyangugu in 2002. Then in 2005 another was launched in the regions of Kigali-Ngali, Kabgayi, and Kigali Ville, which lasted several years until adopted nationally by the government. These programs were paid for a set of specific indicators per unit administered, although a quality component also impacted the payment. This was a PBF scheme, as all of the payments for achieved outputs were given directly to the facilities to then be given to staff or used to improve the facility. Random crosscheck third party verification was used, although the organizations contracted for the job were different for each region. For example, the Butare region commissioned the School of Public Health, while Cyangugu hired a series of officers and supervisors as verifying consultants.

Like most of the Health RBF schemes, there were several indicators that the Rwandan programs specifically wanted to improve and thus pay for. There were 14 indicators in all, but not all specifically mentioned in the case study. It is clear, however, that the programs focused on HIV/AIDS services, TB and malaria services, vaccinations, medical personnel assisted births, hospital births, prenatal consultations, growth monitoring, and malnutrition treatment for children under five. Extra emphasis and, therefore, money was awarded to the achievement of HIV/AIDS treatment outputs. On top of services, there was also a quality evaluation of the hospitals and clinics. This quality assessment consisted of fifty criteria pertaining to three main areas: administration, quality assurance, and clinical activities.

The budget was different for each province, but there was a standard equation used to determine the payment awarded to each hospital:

- $\text{RBF earnings} = (\text{fees/service} \times \text{quantity}) \times (\% \text{ quality score}).$

There was a price assigned to each service indicator, which was then multiplied by the number of times that service was administered by each hospital. This amount was then multiplied by the quality score given to each hospital as a percentage of the total possible points a hospital could earn. The fee paid per treatment differed in each region and for each treatment but on average was anywhere from \$0.30 to \$2.00 USD per capita. The payments were disbursed quarterly to the facilities.⁶²

Next, I investigated the case study on Plan Nacer in Argentina. Plan Nacer was a COD scheme initiated in 2004 and was focused on bettering maternal and child health for the uninsured. It originated in the northern provinces of Argentina and by 2007 was a national program. The budget for this program was overseen by the Argentinean government but was mostly supported by the World Bank with extra support and research done by the University of California Berkeley. Third party verification was also used, and issued bimonthly clinic reports.

This program had 10 output-oriented indicators: prenatal checkup before twenty weeks, effective obstetric and neonatal care (APGAR score >6), birth weight over 2,500 grams, VDRL and tetanus vaccinations given to mother during pregnancy, case review of infant and maternal deaths, measles vaccines given to children under eighteen months, mothers who receive reproductive health counseling after delivery, children under one with a complete record of necessary check-ups, children under six with complete records of check-ups and weight and height percentile, and staff trained with specific knowledge to care for indigenous populations. For each eligible uninsured mother and child enrolled in the program, the Argentinean National Government disbursed \$5/person/month on a per

⁶² Louis Rusa, Miriam Schneidman, Gyuri Fritsche, and Laurent Musango. "Rwanda: Performance-based financing in the public sector.", 193-196.

capita basis to the local province government who then distributed the money to its clinics in addition to the clinic's annual budget. Further, the government could also disburse an extra \$3/person/month if the indicators or health targets, were being achieved. Payments could also be deducted if the third party verification caught clinics misreporting roster information and tracers. Also, the national government could have been fined for not relaying money to provinces correctly.⁶³

USAID Case Study

Next was the case study for the USAID-funded RBF scheme in Haiti from 1999-2007. Although funded by USAID, the US-based NGO Management Sciences for Health implemented the scheme. This NGO picked Centres pour le Développement et la Santé, Comité Bienfaisance de Pignon, and Save the Children, other NGOs working on health in Haiti, to be a part of this pilot program. In addition, an independent research firm, Institut Haitien de l'Enfance, was hired to verify results. The NGOs in the program received 95% of their promised annual funding up front. If they achieved all the indicator targets they could earn another 10%, receiving a total of 105% of their annual funding. If they failed to meet their targets, however, they received no further funding, losing the last 5% of their normal support. With firms being the targeted intervention level in this case study, it is an OBA scheme.

There were seven output indicators agreed upon with the NGOs contracted by Management Sciences for Health. A baseline was taken and from it the NGO had to increase or reduce the indicator by a certain percentage. The target goals were: 15% increase in mothers who use oral rehydration solution for children with diarrhea, 10% increase in

⁶³ Paul J. Gertler, and Paula Ines Giovagnoli. "Rewarding provider performance to enable a healthy start to life: evidence from Argentina's Plan Nacer.", 6-9.

children eleven months and youngers who are fully vaccinated, 20% increase in women who have three prenatal visits, 25% reduction in level of discontinuation of contraceptives, 50% increase in institutional births, 50% reduction in pediatric waiting time, and participation in establishing local community health centers. It was possible to earn a percentage of the bonus if only some indicator targets were reached.⁶⁴

Inter-American Development Bank Case Study

The Nicaraguan case study was about the el Red de Protección Social program that ran from 2000-2005. The Inter-American Development Bank funded this program while the Nicaraguan Emergency Social Investment Fund was in charge of its implementation. In addition, this program also used the Food Policy Research Institute to conduct randomized evaluations of results and impact. As stated previously in the Education case studies, many of the programs found in Latin America were demand-side programs. However, this program in Nicaragua was unique in that it combined both supply-side and demand-side RBF schemes. For the purpose of this case analysis, I only focused on the supply-side program, which took the form of a PBF scheme.

For the program, there were no specific indicators but were broadly defined as any treatment that was deemed preventative, such as vaccines or prenatal visits, thus making the indicators output measures. The clinics were paid a specified amount per health service provided and were paid on a quarterly basis with 3% of the total potential earnings paid upfront. The clinics would only receive the full incentive price for each service provided if the clinic provided preventative services to at least 95% of individuals in each category: children under five, women, pregnant women, etc. The population around the clinic was

⁶⁴ Rena Eichler, Paul Auxila, Uder Antoine, and Bernateau Desmangles. "Haiti: going to scale with a performance incentive model.", 166-169.

surveyed, providing a baseline to determine what percentage of the population the clinic served.⁶⁵

European Commission Case Study

Lastly, I analyzed a case study of a Health RBF scheme in Afghanistan. This program started in 2003 and was jointly funded by the European Commission, USAID, and the World Bank. These donors, with the help from the Afghan Ministry of Health, entered into OBA scheme contracts with about 55 NGOs providing basic healthcare services within the country. These contracts usually were entered into for a 24 to 36 month period with the possibility of renewal. Most of the performance-based contracts were through the World Bank. The donors paid directly to NGOs, except for some of the World Bank contracts that funneled the payments through the Afghan Ministry of Finance. All the funders were responsible for the verification of the results reported by the NGOs they contracted.

The contracts and indicators measured varied depending on donor and the NGO involved. The performance-based partnerships through the World Bank offered the chance of a 10% bonus of total contract amount. The first 5% of the bonus could be earned if the NGOs were able to see a 10% increase above the baseline in the chosen indicators. The other 5% was awarded at the end of the contract if indicator measurements increased 50% above baseline. The Ministry of Public Health was also eligible for a bonus in aid money if the NGO contractors they recruited achieved their target goals. The specific indicators are not mentioned in the case study but are said to focus on maternal, reproductive, and child

⁶⁵ Ferdinando Regalia, and Leslie Castro. "Nicaragua: Combining Demand-and Supply-Side Incentives.", 215-226.

health and are a mixture of input and output-based measures.⁶⁶

Health Case Study Summary

As intended, I was able to find Health RBF case studies across all developing regions of the world. Beyond that, there was also variation among almost all the other categories: funders, indicators, intervention level, and payment disbursement. Even with some variation, there were clear themes amongst the case studies. One commonality among all programs was the use third party verification. The World Bank was involved in many of the projects, yet many other large organizations and governments were also involved in almost every project. The specific indicators varied slightly amongst projects, but most focused on women and children's health issues and all were output-based measures. Most of the interventions were directed towards NGOs while a few were hospital or local government-focused. Finally, some used a formula or payment per person or service, allowing payment to vary based on the level of achievement. On the other hand, many of the schemes made lump-sum payments based on a percent of the total awarded grant money that were paid out for reaching certain achievement goals.

Health and Education Case Study Comparison

Funding Source

In looking at the case studies from both the Education and Health sectors, there were differences and similarities between the two sectors. For funding, there was a variation of sources in each sector; however, a common source in the majority of projects in both sectors was the World Bank, which was associated with five programs overall. In

⁶⁶ Egbert Sondorp, Natasha Palmer, Lesley Strong, and Abdul Wali. "Afghanistan: Paying NGOs for performance in a postconflict setting.", 139-152.

Education, the next most common donor was DFID that funded, or helped fund, three programs. DFID is not explicitly mentioned in any of the RBF Health programs, but is an entity of the UK government, which was a funder of the RBF Health program in Rwanda. For Health, the next most common funders were USAID and the European Commission, which both helped fund two projects. Neither USAID nor the European Commission was present in the RBF Education schemes to the extent of which I have studied.

Intervention Level

Unlike funding source, there was less overlap in the other areas between sectors. In both sectors, there were some programs that focused on paying directly to facilities, such as a school or clinic, when results were achieved. This payment structure was present in two programs in both Education and Health. In Education, paying to the government was much more common than in Health but was seen in both sectors. Three programs in Education paid to governments, one to local and two to national governments. Even those that did not pay directly to governments still paid out to government-run schools with government salaried teachers. In Health, only one program paid to a government and it was a local one. Paying to NGOs was only seen in Health, and occurred in three programs. In Education, programs also paid to individuals, i.e. teachers, while in Health none paid to individuals, except in a demand-side capacity, which was not analyzed. Overall, the Education programs paid overwhelmingly to the public sector while the Health sector was split between some public programs and others focusing on NGOs.

Incentive Payments

For payment structures in both Health and Education, a payment per person or per unit was used. This was the most common type of payment in Education, as three of the

programs paid on a per student basis. In Health, there was one case study that paid per person and two others that paid per service administered. One program paid not only for services, but also based on clinic quality, while another paid per person as long a certain percentage of the total population was being treated. Additionally, paying a fixed lump-sum amount as a percent of a grant for achieving said goals was seen in Health but not in Education. Instead, when bonus payments were used in Education, as seen in two case studies, it was calculated in proportion to an achievement.

Indicators and Measurements Used

The types of indicators chosen and measured were almost identical within, but not across, the two sectors. All the RBF Education programs used outcome indicators, mostly test scores. However, one scheme did supplement the outcome targets with an output measure that focused on teacher competencies. In contrast, all of the RBF Health programs measured output-based indicators such as vaccines, prenatal visits, institutional births etc. Additionally, third party verification was used to verify results in all programs in both sectors.

Starting Year of Intervention

I observed two other interesting phenomena when comparing the Education and Health case studies. The first was the years in which the programs initiated. Overwhelmingly more of the Health programs began before the Education ones. Three of the Education programs just started in recent years, 2011-2013, while the other two were from the late 1990's and early 2000's. All of the health programs I analyzed, however, were started in the late 1990's and early 2000's. Secondly, two of the case studies in Education

were randomized control trials to test which intervention level was better, yet none of the Health case studies doubled as similar research projects.

Debate regarding the Right Level of Intervention in the Education Sector

While the case studies gave a lot of insight into the research questions, literature and expert insight allowed for further comprehension of the two sectors and what is occurring in them. First, I tried to better understand the debate within the Education sector that has led to the use of randomized control trials seen in some of the case studies. In 2005, researchers Paul Glewwe and Michael Kremer recommended using more randomized evaluations to better assess Education, especially in the developing world, because of the many potential factors that affect learning achievement such as distorted budgets and weak incentives for teachers.⁶⁷

As Glewwe and Kremer mentioned, there has been a lot of debate over whether or not individual teacher incentives can improve learning in developing countries. In many countries, it has been observed that teachers are incredibly under certified and are subject to little regulation leading to a lot of teacher absenteeism.⁶⁸ These alarming facts led researchers to test whether increasing teacher quality by incentivizing teachers with performance pay would lead to better student outcomes.

In two different studies that took place in India, teacher performance pay programs significantly increased student test scores versus schools without incentive programs. In the case study that took place in India analyzed above in this chapter, students in schools with incentive pay for teachers scored on average 9.2 percent higher on exams than control

⁶⁷ Paul Glewwe, and Michael Kremer. "Schools, teachers, and education outcomes in developing countries." *Handbook of the Economics of Education 2* (2006), 947.

⁶⁸ Glewwe, Nauman and Kremer. "Teacher Incentives.", 206.

schools. This result was observed even on non-repeat questions, showing that teaching to the test was not an interfering factor.⁶⁹ These effects were not seen for just one or two years, but lasted over the course of a five-year program. In a separate trial, a large correlation was found between teacher quality and student achievement. Researchers showed that a student taught by a teacher who was considered in the 90th percentile for quality scored 1.271 standard deviations above students taught by teachers in the 10th percentile.⁷⁰ This study also compared the results with similar studies done developed countries and found that teacher quality had a larger effect on student achievement in developing countries than in developed ones.⁷¹

Conversely, other studies have shown that teacher quality was not enough to see significant increases in student achievement. In the Kenyan case study previously mentioned, teacher incentives proved effective for the first but not second year of implementation. In the first year, students in incentive schools scored an average of 10% higher on exams than students in control schools. In year two, however, students in incentive schools only did 1% better on average.⁷² The study determined this was because teachers learned how to respond to incentives in a way that made them ineffective in increasing student achievement. In an expert interview, the interviewee held an opinion that is supported by this data. His belief was that teacher improvement is not enough to maximize student achievement in developing countries.

⁶⁹ Karthik Muralidharan. "Long-term Effects of Teacher Performance Pay: Experimental Evidence from India." *Society for Research on Educational Effectiveness* (2012),15.

⁷⁰ Mehtabul Azam, and Geeta Gandhi Kingdon. "Assessing Teacher Quality in India." *Available at SSRN* (2014), 18.

⁷¹ Ibid.

⁷² Glewwe, Nauman and Kremer. "Teacher Incentives.", 213.

Beyond individual-level incentives, there also seems to be debate over whether a decentralized school system would increase learning. School systems in most developing countries are highly centralized, most likely as a result of their colonial history. This highly centralized system leads to a single curriculum for the entire country that is usually geared towards the elite.⁷³ The alternative to this would be a more local-focused or decentralized school system. Having knowledge of this debate and literature led Twaweza, in the Tanzanian case study, to include school and district incentive interventions as a part of their randomized control trial. Unlike in Education, there was no similar debate over intervention levels visible in the Health sector literature.

Outputs Becoming Outcomes In Education & Health

Continuing on with investigating the research questions, I looked at the ways in which outputs translated into outcomes in both Education and Health. As stated previously, this relationship is important because it could potentially impact the usage of RBF by influencing the type of indicators chosen and measurement system used in programs.

In Health there seem to be a stronger and more established relationships between outputs and outcomes. In other words, it is well established that health outputs, such as vaccination rates, lead to better health outcomes, such as the decrease in communicable diseases. This is exemplified in the childhood vaccination initiatives that have been occurring in developing countries. Between the years 2000-2012 the global coverage for the measles vaccine increased from 72% to 84%. In that same time period, the amount of deaths per year due to measles decreased from 562,000 to 122,000. Not only did these

⁷³ Glewwe and Kremer. "Schools, teachers, and education outcomes in developing countries.", 955.

vaccines decrease deaths, but also prevented an estimated 14 million deaths, mostly in developing countries.⁷⁴

Similar trends can be seen in maternal health. From 1990-2012, births that were attended by healthcare professionals increased from 56% to 68%. In that time, the amount of pregnant women who received at least four antenatal visits increased from 37% to 52%.⁷⁵ Consequently, since 1990, the maternal mortality rate has also decreased by 45%, from 380 to 210 deaths per 100,000 live births.⁷⁶ These examples not only show improvements in the Health sector, but also show a significant correlation between outputs and outcomes. In the time it took to increase healthcare professionals at births by 12% and at least four antenatal visits by 15%, maternal mortality decreased 45%. This displays that for every percent improvement in outputs, there was about 1.67% improvement in outcomes. These are just a few examples of a seemingly larger and consistent trend in Health of output-based initiatives leading to very visible decreases in death and increases in life-quality.

On the other hand, in Education, there is less of an indication that more outputs are leading to better outcomes. From 1990-2013, there was a net increase of 10%, from 80% to 90%, in net the primary school enrollment rate for children in developing countries. In some regions, such as Sub-Saharan Africa, this increase has been far more dramatic, going from 52% to 78%. Similarly, there has been an increase in secondary school enrollment. From 2005- 2012, the gross enrollment in secondary schools in low-income countries increased from 34.5% to 44.3%. Despite these increases in enrollment, an output measure,

⁷⁴"Millennium Development Goals Report 2014." New York City, NY: United Nations (2014), 27. Accessed March 8, 2015. [http://www.un.org/millenniumgoals/2014 MDG report/MDG 2014 English web.pdf](http://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%2014%20English%20web.pdf).

⁷⁵"Millennium Development Goals Report 2014.", 30.

⁷⁶ Ibid, 5.

there seems to be little improvement in educational outcomes, such as increased literacy and numeracy skills. From 1990-2013, there has only been a 6% increase, from 83% to 89%, in youth literacy in the developing parts of the world.⁷⁷ This means for every percent increase in enrollment, there has only been a 0.6% increase in literacy for children in developing countries.

Although the data above supports that there is less correlation between outputs and outcomes in Education than in Health, the results do show some correlation between outputs and outcomes in Education. Unsatisfied with this data, however, there has been a recent movement among NGOs to further expose that learning attainment may not be improving as it seems and is still extremely low in many developing countries. One example of this phenomenon is an Indian NGO ASER that has created basic literacy and numeracy assessments. Meaning 'impact' in Hindi, ASER originated out of a desire to measure the impact of development programs in order to empower ordinary people to communicate with others to better pinpoint, understand, and resolve problems in order to positively impact the world.⁷⁸

Using their tests, ASER has surveyed children learning attainment in almost every district of India. According to their surveys taken from 2006-2014 in India, the percentage of children in grade three who can at least read at a grade one level has decreased from 48.1% to 40.3%. Similarly in math, surveys from 2007-2014 have shown that the amount of students who can at least do subtraction by grade three has decreased from 42.4% to

⁷⁷ Millennium Development Goals Report 2014.", 18.

⁷⁸ "ASER Centre." Accessed March 8, 2015. <http://www.asercentre.org/>.

25.4%. These statistics stand true, even though, the amount of children enrolled in primary school has increased in India from 93.4% to 96.7% in that same time frame.⁷⁹

Not only do ASER's results indicate almost no correlation between enrollment and literacy rates, but also seem to exist in conflict with Indian Census Reports on literacy. In the census covering the years 2001-2011, an increase of 9%, from 65% to 74%, in literacy was reported for people of the age seven and above.⁸⁰ This evidence even more so muddles the previously seen correlation between outputs and outcomes in Education. In agreement, an expert interviewed concurred there is far fewer obvious ways to achieve outcomes in Education. A published report by DFID also agrees, stating that measuring and improving learning achievement is much less straightforward than doing the same for morbidity and mortality.⁸¹

Aid Money In Education and Health

In order to investigate if there are differing amounts of aid going into each field, I first asked some experts on foreign development and aid. In two separate interviews I was told there was more money in Health than in Education. Experts provided several reasons for this trend. One reason is that Health was more willing to be measured at an early time, which was very important to donors, and thus donors began giving more to the Health sector. Another expert also said the visibility and media attention to the HIV/AIDS crisis also has played a part in Health surpassing Education in foreign aid.

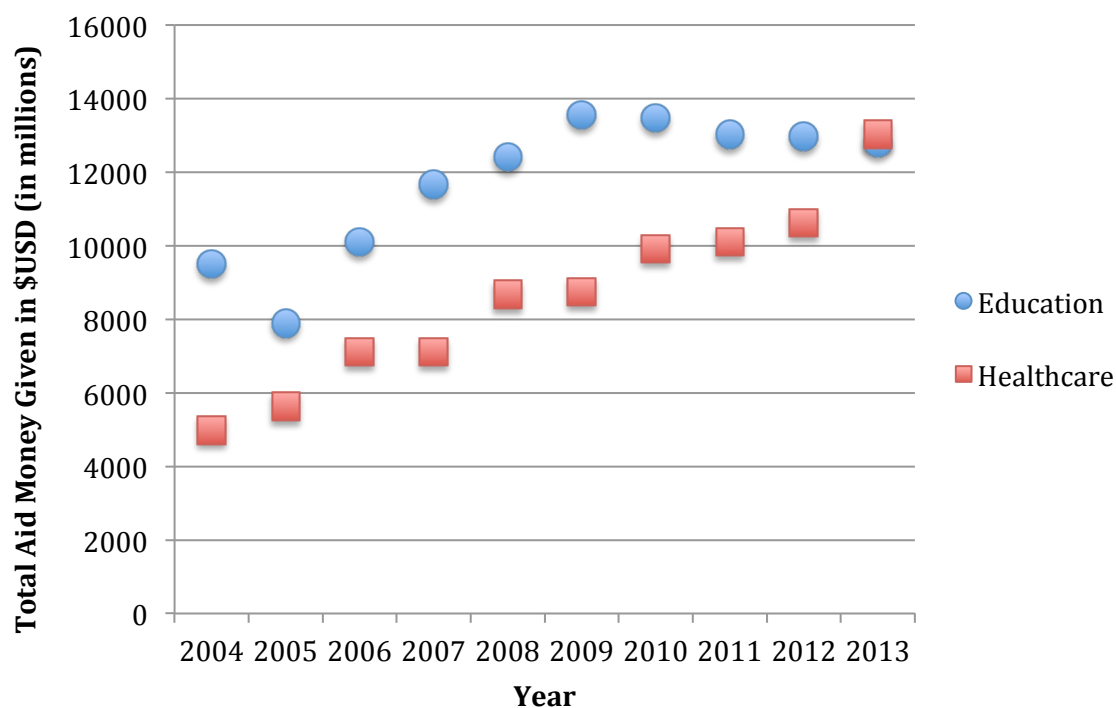
⁷⁹ "Trends Over Time 2006-2014." New Delhi, India: ASER Centre (2015), 7-9.

⁸⁰ C. Chandramouli "Chapter 6: State of Literacy." In *Provisional Population Totals Paper 1 of 2011 India Series 1*. India: Registrar General and Census Commissioner of India, 2011, 101.

⁸¹ Pearson, Johnson, and Ellison. "Review of major Results Based Aid (RBA) and Results Based Financing (RBF) schemes.", 7.

To corroborate these statements, I used the OECD database to find the estimated overall aid money going into the Education and Health sectors each year. In approximately the past ten years, Education has overall been receiving more aid money than Health, as shown in Figure 3 below. However, in 2013, Health surpassed Education in overall amount of funding with \$13029.83 USD in millions and \$12797.97 USD in millions going into Health and Education respectively. Furthermore, the data show that over the past decade the aid money going in Health is continually increasing at a linear rate. Although aid money to Education has also increased in the past decade, it has done so at a much slower rate and has even begun to decrease in the past five years.

Figure 3: Aid Money Given Per Year By Sector ⁸²



Beyond overall foreign aid trends, there also seems to be a difference in monetary resources available for RBF schemes in each sector. In 2007, the World Bank instituted the

⁸² "OECD Statistics." OECD. Accessed March 9, 2015. <http://stats.oecd.org/#>.

HRITF. This trust fund allotted a huge amount of aid money to be spent on Health and more specifically on RBF programs. At the time of this research, there was no such equivalent in Education.

Other Observations:

Next, I addressed the research question on whether people and knowledge available about RBF is the same in both sectors. Three experts provided similar answers, stating that there were more people with experience and a working knowledge of RBF implementation in Health than in Education. This can be supported by the evidence from the case studies that showed most of the Health RBF schemes were implemented much earlier than a majority of the Education RBF schemes that I was able to find. This is also supported by the fact that through the World Bank's HRITF, there was a large portion of an organization's resources and expertise dedicated to RBF in Health and no Education equivalent. Although true, one expert said that there is currently a lot of collaboration between people implementing RBF in Health and those wanting to, or already using, RBF in Education.

Beyond the research questions, I observed another potentially important distinction in the structure of both sectors. Education seems to be concentrated in the public sector, as the majority of children attend government schools in developing countries. In a 1995 report, the World Bank estimated that about 95% of primary schools in low-income countries were government ran or supported schools.⁸³ However, in Health, there seems to be a mix of public and private sector concentration, with many private organizations or NGOs running separate clinics within countries. According to an executive study by the

⁸³ Emmanuel Jimenez, and Marlaine E. Lockheed. *Public and private secondary education in developing countries: A comparative study*. Vol. 309. World Bank Publications, 1995, 4.

Center for Global Development, private doctors or healthcare professionals provide more than half of all health services, even among the poor.⁸⁴

FINDINGS & CONCLUSIONS:

Through the case study analysis, expert interviews, and other observations acquired through literature, I was able to answer each specific research question and come up with reasoning for what was seen in RBF in each sector. To the overall research question, which asked if RBF was used more in Health than in Education, I concluded that RBF has been more applied to Health but is becoming more of a trend in Education. There were also some significant differences in the way RBF was used or implemented in each sector. This conclusion is supported by the data and observations acquired for each specific research question.

First, as of 2013, there is more money being given as aid in Health than in Education. However, this does not seem to be a very influential factor that affects the implementation of RBF in each sector. RBF became more popular in Health in the early 2000s, as seen by the dates of the case studies and when the World Bank started their trust fund. This was before the decline of aid money going into Education, which started around 2010, and long before 2013 when Health began to surpass Education in the amount of annual aid money received.

Similarly to donor money, the source of the funding for RBF programs in each sector does not seem to play a significant role in the difference of RBF across sectors. In both sectors, the World Bank funded and supported the implementation of RBF schemes in

⁸⁴ April Harding. "Partnerships with the Private Sector in Health." *Washington, DC: CGD* (2009), x.

many of the case studies. Again, both sectors had large governmental aid organizations involved, USAID in Health and DFID in Education, potentially meaning that the money put into RBF programs was similar in both sectors. Still, it was clear by the establishment of the HRITF that the World Bank has been more focused on RBF in Health than in Education. This may account for the difference in prevalence of RBF in Health since the World Bank, the organization most involved in supporting RBF, has seemingly put more resources into Health RBF programs.

Something else the World Bank's allocation of resources suggests is that there are more people with RBF experience and knowledge in Health than in Education. The experts interviewed for this study also supported this observation. Two experts agreed that there are far more people familiar with RBF in Health than in Education. Although they agreed on this, there was disagreement on how big of a limitation this was to RBF's usage in Education. One expert believed the lack of people with RBF knowledge in Education was a large limitation, while the other believed this was not a large limitation because Health RBF experts and Education professionals have, and continue to, collaborate. The case study analysis more strongly supports the opinion of the latter expert. Since the World Bank was involved in a majority of RBF programs in both sectors, there is a great possibility that, even if different departments within the World Bank implemented these programs, there was a lot of intragroup collaboration. Additionally, the case studies revealed that even when the World Bank was not the primary implementer for the RBF scheme in Education, they still were cited as a financial backer or were consulted, as seen in the Education RBF programs in Tanzania and India. Although the World Bank was not involved in DFID's RBF

programs, the two organizations mutually supported other programs, such as the Twaweza program, suggesting a close relationship and an exchanged of knowledge.

One thing that seems to have played a large role in the implementation and structure of RBF programs in each sector is the extent to which outputs translate into outcomes. In Health, there is a much stronger trend of outputs turning into outcomes than in Education. This has affected RBF programs because it influences the indicators and measurement systems picked. It also has potentially influenced the frequency at which RBF is used in each sector. Almost all the indicators chosen for Health RBF programs were output indicators that focused on services provided to women and children. Consequently, those types of indicators do not require as complicated of a measuring system because they usually involve verifying the amount of services provided by each organization. Less complicated measurement, along with there being little debate over whether these measurements could negatively impact the care of patients could be a reason RBF was seen more in the Health sector.

In Education, however, almost all the indicators were outcome-based, focused on learning achievement, because of the poor relationship between outputs and outcomes. The fact that these types of indicators seem necessary in Education might also be a part of the reason why RBF has been implemented much later in Education than in Health. In an interview, an expert claimed that people within the Education sector have been much more hesitant to measuring outcomes because of the potential drawbacks it could have, such as teaching to the test. This resistance and then gradual shift towards measuring learning outcomes can be seen in the number of developing countries who use national testing. As of 1998, only 28% of developing countries administered a national standardized test,

whereas in 2006, 51% of developing countries had started administering standardized tests.⁸⁵ With movements to measure learning outcomes being newer phenomena, it makes sense that implementing RBF, which requires these measurements, would not have been popular with Education professionals in previous years.

Additionally, an expert identified that another potential initial barrier to RBF's implementation in Education has been the time and resources needed to create quality examinations for the measurement of learning achievement. Although this may have created an initial barrier, the expert also stated that spending money on creating quality tests it is not a large enough limitation to account for less RBF in Education than in Health. The expert believed the real reason is because Education refused to be measured for a lot longer than Health did.

This expert's opinion and observation can be supported further by evidence that suggests the push to measure Education and create learning assessments happened independently of RBF's appearance in Education. In other words, the Education sector was not waiting for the completion of quality tests to be made in order to implement RBF. NGOs, such as Twaweza and ASER, have made tests to measure literacy, numeracy, and other skills for their own research on learning achievement in different countries around the world. These learning assessments had no connection to RBF schemes initially. Later on, however, as RBF programs were being designed in Education, these tests were used as measurements tools. The case studies taking place in Tanzania and India are examples of RBF schemes that used assessments created by NGOs. Also, the RBF programs

⁸⁵ Marlaime Lockheed. "Measuring Progress with Tests of Learning: Pros and Cons for 'Cash on Delivery Aid' in Education." *Center for Global Development Working Paper 147* (2008), 2.

implemented by DFID in Rwanda and Ethiopia used already existing government standardized tests. This evidence shows that creating tests for measuring RBF schemes does not play a major factor in the current frequency of RBF usage in Education.

Beside the dates of the case studies, the fact that some of the Education cases were in the form of a randomized control trial, while none were in Health, further supports that RBF is newer in Education. The randomized control trials seen in the Education case studies focused on understanding where to target incentives in order to most effectively achieve learning outcomes. The fact that professionals are still trying to figure out how RBF can be most successful in Education reveals two things: 1) getting to outcomes in Education is much more difficult than in Health and 2) RBF is much newer in Education. However, there is also the possibility that this observation was only seen because of the case studies chosen. That said the Education case studies used for this research were the only ones I could find, even more so supporting that RBF is newer and used less in Education.

These randomized control trials also show that the Education sector is attempting to not let the difficulty of measuring and achieving educational outcomes be a large limitation to implementing RBF. Even so, the lack of data thus far regarding the most effective ways to use RBF in Education could be influencing the rate at which donors and organizations are choosing to use RBF programs. However, as more data is collected through these pilot programs, it seems that this limitation will continue to be less of a barrier to using RBF in Education.

Another factor that affects the way in which RBF is implemented, but not the frequency of use, is the structure of each sector. All of the Education case studies had an intervention level that was connected to the country's government, as even the recipients

of individual-based incentive being government teachers. In the Health cases, the intervention levels were mixed between private and public. Some were focused on paying to a government, while the majority focused on paying out to NGOs. As stated in the Observations chapter, public education is used by a large majority of families in developing countries. In Health, there is almost a 50-50 split in the use of public and private health services in developing countries. This accounts for the differences in intervention level seen across the Education and Health case studies.

In conclusion, RBF is used at different frequencies and in different ways in Health and Education. RBF, at this point in time, is seen much more in Health than in Education. Some potential limitations that have affected the frequency of RBF usage in Education are the lack of people with RBF experience, the money available for RBF, and the weaker relationship between outputs and outcomes. It does not seem that any of these limitations is large enough to fully explain why RBF is seen less in Education because there seem to be similar RBF-promoting organizations present in both sectors, there is exchange of ideas and assistance across sectors, and Education is researching the best ways to achieve learning outcomes. In conjunction with expert opinion, it seems much more likely that RBF is currently seen less in Education than in Health because it is newer due to Education's resistance to measuring learning outcomes. Ultimately, I predict that over time these results will change and that RBF will be used more in Education as these pilot programs and randomized control trials start to publish promising results.

FUTURE RESEARCH & DIRECTIONS:

My findings thus far have answered some questions of the differences of RBF in Education and Health; however, my findings also have led to more questions. With more time and resources, there would be several areas I would continue to explore.

One observation I had while doing my research was that many of the RBF schemes in Latin America, especially ones in Education, were focused on demand-side instead of supply-side incentives. Constrained by time and other aspects of my research, I was not able to investigate this further. However, with more time, I would be interested in learning the reasons behind this observation. To help explain this phenomenon, I would try to find the ways in which the Health and Education sectors in Latin America differ from other developing regions. I would search for a difference in the privatization of Education in Latin America versus other developing regions to see if that plays a role. I would also look into the ways in which people in Latin America are trying to solve issues of low learning achievement. Perhaps their solution entails sending more children to private schools, and helping families financially to be able to afford private school through RBF schemes would be a logical means to that solution. I would also see if the organizations implementing RBF in Latin America differed from the organizations in my case study analysis that seemed to support supply-side RBF schemes. If the organizations were different, the difference in RBF schemes being used could be based on the preference of those organizations. Exploring this possibility more would ultimately give more insight to the differences of RBF in Education and Health and even the difference of its use within each sector.

To better support my prediction that RBF usage in Education will continue to increase, I would want to continue my study and observations over a longer period of time.

An analysis of RBF's use within Education over time would give more support for, or potentially against, my finding that RBF is less used in Education because it is newer in the sector. If this were the case, then it would be expected that RBF would continue to gain popularity and usage in Education as it becomes more established. Looking at the use of RBF in Education over the next several years would also show if RBF is as successful in Education as in Health and the reasoning behind that. Time could also show that my analysis of limitations to RBF in Education was correct or it could show that things I thought were small limitations ended up playing a much larger role in RBF's implementation into Education. Continuing my study would also allow me to incorporate more research on which intervention levels work best for Education that will presumably be published in upcoming years as some of the RBF Education pilot programs end.

After concluding my research project, the creation of an Education Trust Fund by the World Bank, similar to HRITF, was announced. If the research project were to continue into the coming years, I would investigate how the establishment of this trust fund affects the use and implementation of RBF in Education. Assuming that this trust fund will be dedicated to RBF schemes, its launch means more money, people, and expertise will be entering into RBF in Education. Studying this trust fund's impact on RBF in Education would allow for more insight on the influence money and RBF knowledge has on the frequency of RBF usage in a sector. It would also be interesting to see how this new group will influence the amount material published on using RBF more effectively to achieve learning outcomes and how drastically the new research changes the RBF seen in the Education case studies presented in this study. Overall, my analysis would be enhanced by

a more long-term study that monitors how RBF in Education continues to change and if those changes affect RBF in Health as well.

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APPENDICES:

Appendix A: Interview Guide

Below is the oral script used and questions asked during expert interviews. Not all questions were asked to each interviewee, as some pertained to their field of expertise more than others.

Oral Script:

Hi, my name is Paige Taliaferro; I am a student at the University of Michigan doing research on the effectiveness and impact of Result-Based Financing in the Health and Education sectors. I have been referred to you by _____ because you are directly involved in the implementation for RBF. Would you be willing to let me interview you for more information about RBF and your opinion on it? The information you provide me will be used as a part of my research analysis, but your identity will be kept anonymous.

Questions:

- What are the organizations/governments involved in RBF funding?
- When did RBF first start being used?
 - Did that vary across sectors? Why?
- What is necessary for a successful RBF program?
- Has RBF fallen short of your expectations?
- What ways can RBF be improved? In Education? In Health?
- What are the limitations of RBF? In Health? In Education?
- What are the implementation challenges of RBF in both sectors?
- What is the general reaction of those on the receiving end of this new aid method?
- What do you see as the future of Result-based Financing?

- In your opinion, is it only appropriate to use this method in the context of developing countries?
- How have people chosen to measure improvement in Health? Why these ways?
- Is RBF used more in Health? If so, why?
 - Is RBF more fit or necessary in a certain sector?
- Is there more money in Health versus Education?
- What are some current Education RBF schemes you are aware of?
- What is the most successful method to evaluate learning and why?
- Is measuring Education harder than measuring Health?
 - Does that impact RBF usage?
- In your opinion, does result-based financing schemes work with the unique outputs and evaluation methods used in education?
 - If so, what type of result-based financing schemes work best in education and why?
- Do you have any suggestions of literature I should be looking at?