1. Introduction

Increases in educational attainment and the acquisition of skills have been major contributing factors to productivity growth and economic mobility for more than a century. Hundreds of studies conducted around the world have consistently shown that more schooling is associated with higher individual earnings, with a 10 percent average rate of return that tends to be even higher for low-income countries (Hanushek and Woessmann 2009). It is still a matter of debate as to whether these estimates reflect accurate measurement of the causal effects of schooling, and recent research suggests that they are more likely to underestimate the true impacts, with social returns exceeding private returns due to effects on crime reduction, health, fertility, increased citizen participation, and on the growth and productivity of the economy overall.

Indeed, a major focus of economic and social policy development in the last three decades, in both developed and developing countries, has been on raising educational attainment—that is, increasing the number of years of school

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attended. Policy strategies have sought to address both supply-side and demand-side constraints to human capital accumulation. One of the most prominent and widely adopted of these approaches, the conditional cash transfer program, is typically described as a demand-side policy intervention, one that removes constraints to human capital development by reducing out-of-pocket expenditures (for schooling, health care, etc.) and opportunity costs (e.g., of the loss of children’s labor income and time spent accessing services).\(^1\)

In general, cash transfers are not a politically popular public policy. Cash welfare benefits have been described as “handouts” or “something-for-nothing” transfers to the poor. Traditional arguments against cash welfare are that they foster dependency and undesirable behavior. A primary objective of conditional cash transfer programs is to provide short-term assistance to families in poverty, while at the same time promoting investments in long-term human capital development through conditions on benefit receipt. The conditions that typically accompany cash transfers—requiring prenatal care, infant and children’s health care, nutritional education, and/or minimum school attendance rates for children—are intended to change the behavior of recipients, beginning a cycle of investments that permanently change the health and well-being of poor families and break the intergenerational transmission of poverty. The coverage of these programs is vast in some countries; for example, Brazil’s Bolsa Família program that began in 2003 is expected to reach over fifty million poor persons.

My early work on conditional cash transfer programs began in Brazil, in which I worked with the health and education ministries in planning evaluations of the Bolsa Alimentacao (health) and Bolsa Escola (school) programs, two predecessor conditional cash transfer programs that were subsequently integrated into the Bolsa Familia program. At the same time, I was working with the Ministry of Social Development and the Inter-American Development Bank in Argentina to evaluate another conditional cash transfer program, the Becas Estudiantiles (student scholarship) program. Like Bolsa Escola, Becas Estudiantiles was intended to increase the demand for schooling by reducing out-of-pocket expenditures and opportunity costs for low-income families. In both Brazil and

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\(^1\) Rawlings (2004) submits that the use of demand-side interventions to target assistance represents a “marked departure from traditional supply-side mechanisms such as general subsidies or investments in schools, health centers, and other providers of social services.”
Argentina, increasing returns to education were contributing to widening wage gaps between those with a post-high school education and those with lower educational levels and unprecedented increases in economic inequality. In Argentina in 1999, only 27 percent of nineteen- to twenty-year-olds in the lowest income quintile completed high school, whereas the comparable number for those in the top income quintile was 83 percent. The Becas Estudiantiles program was distinctive, however, in that it sought to not only promote increased attendance by providing scholarships in the form of cash transfers to students’ families, but to also motivate improved school performance by making continued scholarship receipt conditional on students’ satisfactory performance and grade progression.

In designing public policies that are intended to shape the behavior of the beneficiaries in ways that also advance societal goals (e.g., increased productivity and growth, reduced poverty and inequality, greater civic engagement, etc.), it is essential to align the incentives of individuals with those of both public and private entities involved in the implementation and management of public programs. In addition, given the long-term transformation of national governments away from direct provision of goods and services and toward more devolved authority and decentralized public services delivery, the role of institutions in creating “incentive systems that structure human interaction” (North 2003) and the need for more highly developed institutional capacity for managing complex systems and interactions have grown. In the sections that follow, I examine the challenges of getting the incentives “right” in two different policy contexts related to human capital accumulation: the development and implementation of conditional cash transfer programs and the provision of supplemental educational services to children in poorly performing public schools.

2 In Argentina, the change in the share of aggregate labor for workers with less than a high school education declined by one-third between 1974 and 2002, and unskilled workers experienced particularly large losses in both hourly wages and hours of work in the 1990s (Gasparini 2003). At the same time, Gasparini’s analysis using Mincer equations (to compute wage-education profiles) showed that returns to formal education were always positive over this period, including during economic downturns.
2. The Challenge of Aligning Incentives in Conditional Cash Transfer Programs

New institutional economics suggests that the design of conditional cash transfer programs should promote self-enforcing behavior among the cash transfer recipients. At the same time, a primary challenge to successful implementation of conditional cash transfer programs has been limited institutional capacity and resources for program management on the part of governments to support a credible commitment to the programs’ key provisions. In large countries like Argentina and Brazil, funding flows from the federal government to programs that are administered at the municipal level, with local government, school, and health authorities playing key roles. And as Professor North’s work illuminates, institutions consist of more than the formal rules (e.g., laws, regulations, etc.), and thus, we need to also understand the informal norms and how they guide behavior and shape economic, political, and social activity. In addition, the enforcement of both formal rules and informal norms plays a crucial role in how these economic, political, and social relationships develop and evolve.

For example, in the Becas Estudiantiles program, school administrators attested that, in accord with program provisions, students’ records of attendance and grades influenced the duration of their scholarship receipt. Yet interviews conducted with school teachers produced anecdotal evidence suggesting that some Becas scholarship recipients were allowed to pass to the next grade even when their performance was below the minimum expected, because the teachers knew that they were very poor. In other words, teachers informally relaxed promotional standards for program beneficiaries, a phenomenon that was also observed by Joshua Angrist and colleagues in their 2002 study of school vouchers in Colombia.

This type of response to incentives generated by conditional cash transfers is of fundamental concern, as recent research suggests that how additional years of schooling translate into skills and how those skills relate to labor market performance are critical to economic growth and reductions in inequality (Hanushek and Woessmann 2009). In other words, although we have long used educational attainment (e.g., years of schooling completed or graduation rates) as a primary measure of the success of human capital development interventions, this measure neglects key elements of educational quality and academic achievement and obscures our understanding of the impact of human capital development
policies. In Argentina, tests of student achievement were not regularly administered to all students, which precluded the measurement of students’ acquisition of cognitive skills and a richer analysis of the impact of the Becas Estudiantiles program.

Despite similar challenges in evaluating Brazil’s Bolsa Familia program, the world’s largest conditional cash transfer program, many governments worldwide have sought to emulate this program that is widely viewed as a success in reducing poverty. Informed in part by social norms, the program design requires the mother of the family to be the cash transfer recipient, because it is believed that she is most likely to invest the cash transfer in ways that will benefit the children. Receipt of the monthly transfer is conditional on child immunizations and well-baby checks and mandatory minimum school attendance for children of school age.

In fact, New York City Mayor Bloomberg explicitly modeled the city’s new Opportunity NYC program on Bolsa Familia, describing it as an incentive-based strategy to increase participation in targeted activities and programs that decrease factors that contribute to poverty and long-term dependency. Opportunity NYC provides cash incentives to families in three key areas—education, health, and employment and training—for completing activities or satisfying requirements such as regular school attendance, attendance at parent/teacher meetings, improvements on standardized school test scores, having health insurance and yearly health/dental check-ups, and full-time employment (among adults).

I would argue, however, that the swift and widespread adoption of the Brazilian conditional cash transfer program model more likely reflects the political attractiveness of policies that place conditions on benefit receipt—which are presumably incentive-compatible and in the best interests of the beneficiaries—than careful consideration of the evidence on the effectiveness of conditional cash transfers. The findings from the well-studied randomized experimental evaluation of Mexico’s Progresa (conditional cash transfer) program showed some evidence of the program’s impact on school attendance and grade progression but not uniformly across students of all ages, and there is little information available on its impact on student achievement and human capital accumulation, short term or longer term (Skoufias and Parker 2001).

In addition, it is still an open question as to whether the conditions placed on receipt of the cash transfers actually drive any changes observed in outcomes or behavior. For all of its technical sophistication, with the use of electronic debit
cards for distribution of benefits and a centralized system for monitoring compliance with conditions, the enforcement of conditions for benefit receipt in the Bolsa Familia program is highly imperfect. For example, if a report on compliance with conditions is not made by a municipality for its beneficiary families, it is not possible to sanction those who may not be in compliance, which generates incentives to disregard the reporting requirements. At the same time, approximately 15 percent of municipal councils were improbably reporting that 100 percent of school-age children in these families were in school 100 percent of the time. And the political incentives for the councils to do so were considerable.

In the poor, northeastern state of Alagoas, where over half of families get Bolsa Familia, the head of Alagoas’s electoral court observed that “people come to us complaining that they sold their vote to a politician and he hasn’t paid them yet,” referring to their anticipated monthly cash transfer from Bolsa Familia (The Economist, “Happy Families,” Feb 7, 2008). In effect, in the absence of consistent enforcement and social norms reinforcing the program provisions, it did not pay to “cooperate.”

The political benefits of the Bolsa Familia program are perhaps most clearly recognized and enjoyed by Brazil’s current president Luiz Inacio Lula da Silva, who has seen increases in economic growth and reductions in income inequality that have been widely credited to Bolsa Familia and the cash it gets into the hands of the poor. For example, The Economist also reported that although only 30 percent of Alagoas’s labor force of 1.3 million had a formal job, more than 1.5 million of its people had a mobile phone last year. This might lead one to question exactly what type of incentives the program is creating for families, and whether municipal program administrators will follow through with the program provision that requires them to discontinue the cash transfer for families that no longer meet the conditions of eligibility. In addition, the originating law set the expectation for an annual re-application for benefits by families, a provision that has been largely ignored in the administration of Bolsa Familia. I recall in 2002, in a press conference introducing the predecessor program to Bolsa Familia, Bolsa Escola, the minister of education stated that we would know that Bolsa Escola was successful when the number of families in need of the cash benefit was reduced to zero.

Unfortunately, the entrenchment of political support for a permanent Bolsa Familia benefit has come at the cost of public and intellectual interest in garnering a deeper understanding of the program’s impact on economic, social,
and political activity and longer-term human capital development in Brazil, i.e., beyond increasing the income of poor families. I worked with a team of scholars at the Federal University of Minas Gerais and the Brazilian Ministry of Social Development on the first phase of an impact evaluation of Bolsa Familia in Brazil, beginning in 2005, but progress on the research has been halted since 2006, and it is unclear whether the evaluation will continue. A rigorous impact evaluation of conditional cash transfer programs is essential to understanding whether the incentives are working as intended to change individual behavior in ways that improves the long-term trajectories and well-being of beneficiaries. To Mayor Bloomberg’s credit, Opportunity NYC is currently being evaluated using one of the most rigorous methods possible, a random assignment experiment.

It is also worth noting that conditions on cash transfer receipt are not new to the United States—they have long been part of our cash welfare system (i.e., conditions that require participation in training and work). Like conditional cash transfer programs, in principle it seems that incentive-compatible agreements between governments and those striving to increase their skills and earnings capacities should not be difficult to establish and enforce in these programs. The rhetoric of personal responsibility, or the idea that work and training will provide a pathway out of poverty for everyone, is a simple and attractive message, but one that unfortunately collides with a difficult reality for those individuals and families who struggle to escape poverty even as they work or who cycle in and out of work and welfare. Pedro Carneiro and Nobel prize winning economist James Heckman (2002) find that the quality of the workforce has been declining since 1980, and that the labor market skills of a substantial fraction of adult welfare recipients are meager. They argue that it is far too costly to society to address the skills deficits of these adults, relative to the payoffs from investing more in human capital development at much younger ages.

Although human capital development deficits or lags are often viewed as a problem primarily of developing countries, significant gaps in human capital accumulation and skills deficiencies among U.S. youth and adult workers, as identified by Heckman and Krueger (2002), have reinvigorated education policy debates in developed countries. As they explain, a widening of skill- and education-based pay differentials, in conjunction with growing gaps in education and skills acquisition, have contributed to significant increases in economic and social inequality. The U.S. government has attempted to aggressively respond to these problems by targeting children in public schools that are underperforming or
that show major gaps in student achievement by race, gender, and socioeconomic status with additional educational resources. Below I discuss the challenges of aligning incentives in a key education reform, the provision of supplemental education services.

3. The Challenge of Aligning Incentives in the Provision of Supplemental Education Services

The U.S. government has long claimed a central role in promoting human capital development primarily through its provision of public education at the K–12 level. Yet there is widespread discontent with the current public education system, which statistics suggest delivers shockingly unexceptional and uneven quality in education, even though access is universal. The most recent National Assessment of Educational Progress (NAEP) assessments indicate that less than one-third of U.S. fourth graders are proficient in reading, mathematics, science, and American history, and more than half of low income students cannot demonstrate basic levels of knowledge in science, reading, and history. And U.S. twelfth graders recently ranked eighteenth out of twenty-one countries in combined mathematics and science assessments.3

The most recent major reform, the U.S. No Child Left Behind (NCLB) Act, was signed into public law in 2002 “to close the achievement gap with accountability, flexibility, and choice.” Institutional change is a central feature of the new law. In a Whitehouse report4, President George W. Bush articulated the priorities of the act, stating that they “are based on the fundamental notion that an enterprise works best when responsibility is placed closest to the most important activity of the enterprise, when those responsible are given greatest latitude and support, and when those responsible are held accountable for producing results.” The corresponding elements or priorities of the legislation include the following: holding states, districts, and schools accountable for student achievement, i.e., “parents will know how well their child is learning;” reducing bureaucracy and

3 http://education-portal.com/articles/Top_5_Reasons_Why_Public_Schools_Are_Failing_Our_Children.html
increasing administrative and funding flexibility for states and school districts; “empowering” parents with more information about the quality of their children’s schools and offering school choice to those in persistently low-performing schools; and targeting federal funds on effective (evidence-based) practices for improving teacher and school quality.

The NCLB provision that I will discuss embodies most of these neoclassical economics elements as it aims to use market-like mechanisms and private sector involvement to improve educational opportunities for children in public schools that are performing below minimum standards. Public schools that have not made adequate yearly progress in increasing student academic achievement for three years are required under NCLB to offer parents of children in low-income families the opportunity to receive extra academic assistance or to transfer to another public school. Consistent with the design and intent of the law, these interventions are implemented at the local level and draw on the private sector to offer eligible students a range of choices for supplemental educational services (SES) (e.g., free tutoring outside of regular school hours). NCLB urges states to allow for as expansive a choice as possible among non-profit, for-profit and faith-based and community organizations providers in accord with the key principle of “open market entry.” Although no new federal monies are allocated along with the mandate for these institutional changes, the law obligates school districts to set aside 20 percent of their Title I funding allocation for them and to measure their effectiveness in increasing student achievement. Only about 1 percent of students eligible for school choice elect to transfer to another public school, so I

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5 See Title I, Section 1116(e) of the Elementary and Secondary Education Act (ESEA), reauthorized by the No Child Left Behind Act of 2001.

6 Title I federal funding, which began in the 1965 Elementary and Secondary Act, was created to allow all students an equal opportunity to receive the highest quality education possible. Through Title I, school districts can hire teachers to lower student-teacher ratios, provide tutoring for struggling students, create school computer labs, fund parent involvement activities, purchase instructional and professional development materials for teachers, hire teacher assistants, and more. The twenty percent Title I set-aside for SES and school transfers cannot be spent on administrative costs for these activities, although the district may reallocate any unused set-aside funds to other Title I activities after all eligible students have had adequate time to opt to transfer to another school or apply for SES.
will talk about the implementation of SES, which involves approximately $2.5 to $3 billion in expenditures annually (GAO 2006).

My colleagues and I at the Wisconsin Center for Education Research are studying the implementation of SES in Milwaukee Public Schools (Heinrich, Meyer, and Whitten 2008). Milwaukee Public Schools (MPS) are regrettably better known for their failures than their successes and particularly for their inequality in outcomes by race. African-American males in MPS, for example, have a graduation rate of approximately 31 percent, Hispanic males have an estimated graduation rate of 36 percent, and the white male rate of graduation from MPS is estimated to be 66 percent. In other words, the graduation rates for minorities in MPS are comparable to those that I observed for the poorest students in Argentina in 1999.

MPS is also the home of the largest publicly funded school voucher program; in the 2006–2007 school year, there were 17,410 students participating the program. Voucher schools receive $6,501 per full-time student. Less widely recognized, however, are the investments that MPS is making in supplemental educational services (tutoring) for students who enrolled in schools that have failed to make adequate yearly progress; approximately $2,000 is offered per student to use in accessing extra academic assistance outside the regular school day, and over 8,000 students were eligible for services in 2006–2007.

As described above, both the design and implementation of SES are based on neoclassical economic principles: this intervention aims to foster a competitive market, generate a wider range of choices, encourage innovative approaches to educational services delivery as providers compete for market share, and squeeze out inefficient and ineffective providers through choice and management tools that hold them accountable for performance. Stronger accountability for student performance is the primary management tool for state and local educational agencies under NCLB, which requires them to expunge SES providers that fail to increase students’ academic achievement over a two-year period. Criticized by some and extolled by others, NCLB now requires annual, statewide testing to measure all students’ mastery of academic content that meets state standards and the reporting of test results annually to the public (disaggregated within schools by gender, race, ethnicity, English proficiency, and migrant status). Thus, one might argue that state and local educational agencies have very clear-cut and widely accepted measures of SES provider performance (in the form of
students’ test scores) by which to evaluate program effectiveness and “discipline” the market.

A functioning market, as described by North in his work with John Wallis and Barry Weingast (2008, 45), will, in effect, help policymakers and educators solve the problem of poor educational quality, as resources are “able to move to their highest valued use, and because prices reflect marginal costs and benefits, resources can actually seek out and determine their highest valued use.” Research shows that a large number of diverse organizations have newly entered the market to compete for available SES funds, with widely varying hourly rates, service costs, tutor qualifications, tutoring session length, instructional strategies, and curriculums. Local educational agencies are required to disseminate information about SES providers to students (and their parents) who are eligible for SES, and most SES providers do their own marketing as well, sending out brochures, inviting parents to presentations, and sometimes offering incentives to students to register with them. Thus, in theory, accountability and increased educational value should be realized primarily through the exercise of choice by parents and students, who in using this information, are expected to identify the best provider to meet their child’s needs and sign up for services.

Research and evaluation efforts show, however, that establishing a causal relationship between SES and student achievement is particularly difficult, as is assessing the effectiveness of specific providers. First, a comparison group of students not receiving SES is essential for separating the effects of SES from other classroom and after-school activities and interventions that influence students’ learning. Even then, the possibility of unobserved differences between those receiving SES and those not participating poses challenges for school districts in identifying the effects of SES. To date, beyond self-reported data and some internal performance evaluations conducted by large national providers, there is very little reliable information on the effectiveness of different organizations that are entering the market to provide SES. Nor is there adequate information on the relationship between strategies deployed by SES providers, the rates they charge, and the outcomes achieved. If estimates of provider effectiveness cannot be produced for SES vendors, how will parents and students choose providers, and how can states and school districts decide which providers should be allowed to continue to offer services and which should be withdrawn?

A question posed in North’s (2003) research asks: How do people make choices “in the face of enormously complex information, imperfect knowledge,
and imperfect feedback on the consequences of their actions”? The central question we are addressing in our study is: Are the SES providers with the greatest market shares also the providers who are most effective in increasing student achievement?

The findings from our study of SES in MPS suggest that relying on parents and students to check the market through their choice of providers when there is insufficient information available for judging the quality of SES vendor services is highly problematic. Recognizing this flaw in the market, some SES providers have offered students incentives to sign up for services, ranging from computers and iPods to school supplies and gift certificates. MPS students indicated in surveys that they chose providers based on the attractiveness of the incentives (i.e., iPods, computers, etc.), and early in the program, MPS became aware that students were switching providers after the start of their tutoring to get additional prizes or rewards. For example, the SES provider with the largest market share in this study period was also the vendor with the largest proportion of students (55 percent) reporting in the surveys that they had received an incentive or reward.

In general, given the limited information available to the consumers for making choices in a rapidly evolving market (i.e., with significant numbers of provider entries and exits each school year), it is not surprising that provider market shares were not highly correlated with the estimates of provider performance or other vendor characteristics in our study. Our analysis also showed little relationship between hourly rates charged by SES providers, the number of SES sessions typically offered to students, total SES hours attended by students, and provider performance in increasing student achievement. Clearly, this is not a functioning market as described by neoclassical economic theory, nor is it what NCLB intended.

The difficulties of attributing changes in student achievement to a particular school reform effort or intervention, in the absence of a random assignment evaluation, have plagued education reform efforts worldwide. In countries with fewer resources and less sophisticated systems for data collection and monitoring, these problems are enormously challenging. In a conference on incentives in education, I compared performance evaluation of city services such as street cleaning and garbage collection to the challenges of performance measurement and attribution in education. I remarked that unlike New York City’s approach to photographing city streets and rating their cleanliness, we cannot take a photograph of a classroom and assess whether students have realized gains in learning.
A colleague from India at the same conference interjected that taking photos of classrooms in India is exactly what they are doing, just to verify that the teachers are reporting to the classrooms!7

I also learned in part from my research in Honduras that just sending more money and supplies to developing countries is not the answer, just as the work of Eric Hanushek and colleagues has suggested that the level of per student spending on education in the United States bears little relationship to student achievement.8 A World Bank country manager in Honduras described storage facilities full of supplies for schools that were not being used, while students were still attending (on average) less than 80 of the expected 180 days of schooling each year, often because they could not count on a teacher being present to meet and teach them in the classroom. Clearly, the need for improved incentives and greater institutional capacity for managing resources is critical to overcoming such barriers to increasing human capital accumulation.

4. Conclusion

The consistent and long-standing findings on the sizeable returns to human capital development, particularly investments made at a young age, reinforce that we must persist in our design of policies to increase the effectiveness of public investments in early education and human development. Although school enrollment rates are high now just about everywhere we look across the globe, the quality of education and skill levels of the workforce are incredibly uneven, even within developed countries, and there is considerable progress to be made.9

Our experiences to date with conditional cash transfer programs and other policies to increase human capital and skills development no doubt underscore

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7 One study found that one-third of Indian school headmasters were absent at the time of the researchers’ visit (The PROBE team, 1999).

8 According to the U. S. Department of Education, public schools receive an average of $9,969 per pupil, twice the average amount spent per student at private and charter schools.

9 In Mexico, for example, primary school enrollment rates before the PROGRESA conditional cash transfer program ranged from 90 to 94 percent, and program impact estimates suggested that they increased by about 1–1.5 percent due to the program. Secondary school enrollment rates were lower on average and increased for both males and females to approximately 75–79 percent following the program.
the importance of key insights of new institutional economics that demonstrate the critical role of institutions and their incentive systems—including their historical development, political and societal acceptance, and their administration—in addressing these major public policy problems of our time. Despite the growing complexity and sophistication of our public and private organizations, along with economic, technological, and political advances over time, we are continually challenged to engineer policy changes that will reach those most in need and maximize benefits to society as well as to individuals. Indeed, this essay suggests that there is still much to be learned and tried in attempting to successfully address one of our most basic and long-standing problems, that is, how to more effectively promote human capital accumulation and fully realize its significant potential returns to improving individual health and well-being and the overall growth and productivity of the economy.

References

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