Early Childhood "Pay-For-Success" Social Impact Finance: A PKSE Bond Example to Increase School Readiness and Reduce Special Education Costs

A Report of the

Kauffman Foundation -- ReadyNation

Working Group on Early Childhood Finance Innovation

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Executive Summary

State and federal budget spending cuts sweeping America are forcing reductions in resources for education resources at every age level. This is occurring at the same time the importance of an educated workforce is clearer than ever. One solution to this challenge is social impact finance -- private investment working with philanthropy to achieve state and national goals on a "pay-for-success" basis. How to do this has been the focus of the Kauffman ReadyNation working group on early education finance.

This is a working group progress report. Final answers may be years away and will depend on regional initiatives. This report is written for business people, philanthropists, investors, investment advisors, government officials, and early childhood service providers. It describes social impact finance, early childhood programs and special education, and provides an example of how social impact bonds might be used pay for early learning services for three and four year-old children to increase school readiness and reduce public school special education costs.

A. <u>Science, Innovation and Entrepreneurship</u>

Every parent in America wants the best for their children and knows education is the key. Every school district is struggling to prepare students for a future that demands more education than ever before. And the lesson in every classroom is clear – school success, and ultimately life success, depends most on how ready children are when they first arrive at school. But how can school readiness be increased? Science, innovation and entrepreneurship provide answers.

Unemployment is high. Local economies are at risk. Government budgets are limited. History and the most recent economic research show that human capital is the key to job-creating innovation, restoring growth and regaining fiscal strength. This research shows that investing in young children improves parent and classroom productivity and increases local economic and per capita income growth. In fact, the research shows that investing in the youngest children, investing in school-readiness, strengthens local economies more than any other development strategy. Strong local economies mean a strong national economy.

But how can more school-readiness investment be paid for? Where will the money come from? Local and state budgets are empty, and federal spending has to be cut. Where will the resources come from? One answer is completely American – science, innovation and entrepreneurship combined with social impact finance.

<u>Science</u> tells us that social and emotional capacities and many cognitive skills necessary for school and life success are best developed before age five. From brain research it is clear that the first five years of a child's life, when 85% of human brain development occurs, are the most important in child development and education. These are the years when crucial health, personality and cognitive traits needed for school readiness, workplace productivity, and life success are established. It is simply easier and much cheaper to teach some things to children when they are three or four years old than when they are seven or eight. This is the essence of the "skill begets skill" insight of Nobel Prize winner James Heckman. It is what is meant in human capital terms by business and engineering's Six Sigma principle – quality depends most on what is done earliest. It is far cheaper to spend more on early engineering and design than to try to fix problems later during manufacturing and assembly. Whether it is a jet plane or a three-year old, the cost difference between doing things right early-on and doing repairs later are so great, the savings often more than cover the cost.

Economic science tells us that there is almost nothing a region can do to improve its growth and per capita income outlook more than investing in young children and their families to increase school readiness. Investing in kids increases parent productivity and attracts strong families, which in turn attracts good businesses and increases incomes and property values. Good early childhood programs also generate public sector gains that reduce operating costs and increase revenues. These gains include lower special education assignments and improved classroom performance; lower grade retention, child welfare costs, teen pregnancy, and adolescent crime; and higher high school graduation rates, employment, family formation, business investment attractiveness, economic growth and per capita income.

Innovation involves linking previously separate ideas into workable new combinations. Experts have long believed that the economic returns on sound early childhood programs are so high it should be possible to pay for them with "invest-in-kid bonds". This idea combined with rapidly evolving concepts of social impact finance, looks particularly promising. Social impact transactions are taking many forms. They "pay for success" in improving outcomes and take advantage of the overlap of for-profit and non-profit incentives.

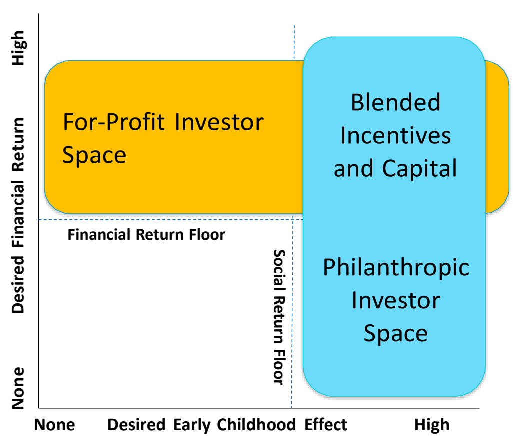
Social Impact Bonds (SIBs) are one kind of social impact finance. They pay for specific intervention services that reduce government costs or increase revenues. SIB earnings and repayment come from the government's monetary benefits, according to the terms of the contracts among the SIB participants.

Entrepreneurship is business leaders combining these findings in new enterprises that can increase local school readiness and strengthen the local economy. Early learning capital partnerships are one example. Such partnerships could sell early learning bonds to pay for the services at-risk children need for school readiness. Bond interest and principle repayments would come from the cost savings from lower public school spending on special education, grade retention and English language training. Many names have been suggested for such bonds – for example, ELSIE bonds ("early learning social impact"), ELLIE bonds ("early learning"), and PKSE ("peek see") bonds ("pay for pre-k to reduce special-ed costs"). All of which can be used to finance early health, parenting, and learning programs where benefit-to-cost ratios are high enough. This report refers to this class of social impact finance as PKSE bonds because the example presented focuses on reducing special education costs through early learning.

B. Social Impact Finance and PKSE Bonds

SIB "pay for success" financing approaches build on the overlap of for-profit and non-profit incentives.

Segments of Social Impact Investors



The three most important questions are: (1) Can research satisfactorily affirm that a particular early childhood intervention with a clearly identified group of children yields government cost savings or revenue increases? (2) Can those cost savings or revenue increases be monetized via enforceable contracts between a social impact bond (SIB) issuing institution, a few government agencies, and the providers of the intervention services? And (3) Can the cost savings or revenue gains be monetized within timeframes and risk levels that investors find acceptable?

SIBs can be used to fund early childhood care and education programs if information uncertainties and operational challenges are effectively addressed. Major challenges include these seven:

1. Unclear returns on the SIB investment project or intervention.
2. Long delays between the SIB intervention investment and the return.
3. Inability to link government cost reductions or revenue gains solely to the SIB investment intervention.
4. Multiple government jurisdictions with mobile young families and irreconcilable differences.
5. Resistance to paying SIB investors from public cost savings or revenue gains.
6. Limited capacity to administer and evaluate SIB program performance.
7. Incentive inconsistencies among the parties to the SIB financing.

To address the major challenges to early childhood SIB establishment and operation, the following are required:

1. Strong business, philanthropic and government support to provide essential regional knowledge, marshal the capital needed to conduct necessary statistical studies, pay SIB set-up costs, overcome jurisdictional and political differences, and in some instances take first-loss positions in the SIB capital structure.
2. Strong local child care and education community support and high-quality programs in the local area to provide expert guidance on child care and education economics, advocate for sector reforms such as quality ratings, and marshal youth human capital sector voter power to overcome jurisdictional and political opposition.
3. Rigorous statistical studies to demonstrate net benefits and serve as a foundation element of SIB contracts
4. Sound legal foundations for SIB issuing organizations
5. Clear enforceable contracts among SIB participating entities
6. Familiar investor terms and other features of the bonds or other SIB assets
7. Good investor relationships with the investment underwriting, institutional and foundation investor sectors

C. PKSE Capital Partnership Example

To attract strong investor interest, PKSE programs will need to demonstrate strong local business and philanthropic support. To provide this, in the example presented in this report, local philanthropy is given full responsibility for setting up and covering all the operating expenses of the bond issuing organization. To give investors the strongest sense that their funds will invest in children, all PKSE bond proceeds are allocated to fund pre-k scholarships for at-risk children. And to accommodate diverse kinds of pre-k providers and incentivize them to achieve higher quality, parents are permitted to use the PKSE scholarships to pay for pre-k services from any provider so long as they can show their quality is as good based on a rigorous quality rating and improvement system.

The example draws on the findings of the 2009 Pennsylvania Pre-K Counts evaluation, and is loosely based on the Bethlehem Area School District in eastern Pennsylvania, the third largest school district in the Pre-K Counts (PKC) study.

The PKC evaluation study spanned a three year period from 2005-2008 and involved 21 school districts and 10,002 children. The study projected that if Pre-K Counts services were available to all at-risk children it would reduce the rate of special-ed assignment from the 21 schools' historical average of 18%, to 2.4%. The evaluation raised the possibility that Pre-K Counts might generate special-ed cost savings for the county and state government but did not pursue the matter. The sample PKSE program assumes non-prek children are assigned to special-ed at an 18% rate, but increases the assignment rate for Pre-K Counts children three-fold to 7.5%.

The cost of pre-k is the actual amount the state government pays each year for full-day Pre-K Counts services. The cost of special-ed is estimated to be equal to 70% of the Bethlehem school district per child per year special-ed cost. In addition to these assumptions, the example limits the allows for 2% per year out-migration of PKSE students, discounts future financial flows at a 5% discount rate, provides for operations, mentoring and monitoring costs, and incorporates local philanthropic and national PRI-type contributions.

PKSE scholarships are paid for out of the proceeds of PKSE bond sales. The PKSE bonds are basic 10-year interest-bearing bonds. PKSE operations are paid for by regional business-leader philanthropists. And future yearly rounds of PKSE financing are funded out of the net gains from the preceding round. The example shows positive resource generation with reasonable interest rate and operating cost assumptions, and becomes sustainable in six years. However, there is point when cash flow goes negative and more capital is needed because accumulated special-ed savings are not enough to pay off the bonds entirely. By introducing PRI financing to cover the capital shortage, the program becomes sustainable in two financing rounds.

<u>Investment returns to for-profit and non-profit investors</u>

The returns to for-profit investors are simply the interest rate paid on the PKSE bonds and any intangible sense that their capital is being allocated to sound economic activities. The returns to philanthropic investors are more complex. There are at least three bottom lines. Before describing them, a few words are needed about what is not in this report.

Absence of standard error estimates or analysis

Very few investors allocate capital without at least asking how returns varied in the past. If the average of past returns is high and variation is low, they have higher confidence in the investment. "Standard error" is a measure of past variation and is an important measure of investment risk in portfolios. If the standard error is high, investors perceive more risk and have less confidence they will earn the average return. An important aspect of calculating standard error is the number of observations. The more observations there are, the lower the standard error is. If the return on investment and its standard error are calculated from hundreds of observations – hundreds of individual stocks, for example, and hundreds of stock portfolios -- investors have more confidence that they understand the investment and will earn the average of past returns.

As complex as risk-return measures are in finance, they pale in comparison to those in early childhood research. In finance average returns consist of simple percentages, and average returns and standard errors are calculated from many hundreds of observations on assets and from portfolios of those assets, over many decades. Average returns in early childhood research consist of sometimes hard-to-define health, behavior and education effects. And these "returns" and their standard errors are calculated from relatively small numbers of children in individual studies and from only a handful of studies. The very small number of studies makes standard errors of expected "returns" quite large.

To be manageable, this report cannot explore standard error measurement. This is a task for future research. In this report, program effect returns are accepted as point estimates, and uncertainties about the returns are dealt with by using high social discount rates, by making conservative assumptions about special-ed assignment rates and the degree to which quality preschool can ameliorate learning disabilities, and by excluding key returns such as grade retention and English language learning cost reductions.

Three bottom lines of philanthropic investment

Non-profit investments in PKSE bonds have three bottom lines. The first is economic -- the improvement in school readiness and all its implications for the life success of PKSE scholars – higher third-grade reading and math scores, higher graduation rates, lower involvement in crime, fewer teen pregnancies, less drug use, higher rates of employment and future earnings, improved parent productivity, and stronger regional economic and per capita income growth. These benefits cumulate at the local and regional levels and strengthen national aggregate growth and job creation. To paraphrase Jim Heckman, "Benefits beget benefits."

A second bottom line is financial -- the reduction in special education costs. Investor purchases of PKSE bonds is just the way business leaders and philanthropists get outside for-profit capital to pay for what is needed to increase local and regional school readiness and cut special-ed costs. There are no bonds to purchase unless there are institutions, preferably local ones, to issue the bonds. The present value of regional business-leader philanthropic contributions to establish a small version of these institutions is $412 thousand. The financial return on that philanthropic investment is the amount of special-ed cost savings. In the first round this is $1.9 million. Success in this is measured by the ratio of special-ed savings to local philanthropic investment. In this case, the present value of the first round return is 464%. There are returns from successive rounds also. Including them increases first-round returns several times over.

The third is societal. The process of building PKSE organizations knits together local and national business leaders and philanthropic institutions into networks of people locally and nationally who understand the importance of youth human capital development, have built effective investment frameworks that can attract capital from many sources, and have the capacity to act at the levels of local, state and federal policymaking. PKSEs and arrangements like them can overcome some of the market obstacles to effective youth human capital investment, but only state and federal policymaking can address the major obstacles. One of the returns to philanthropic investment returns from establishing institutions like PKSEs is the creation of coalitions of hundreds of business leaders in every state that have the knowledge of what works and doesn't work in early child development and education. These are the people who can and ultimately will affect state and federal policy.

D. Action Items for Local and State Business and Philanthropic Leaders

To strengthen local and state economies despite limited budget resources, regional business and philanthropic leaders should –

1. Form local and state business leader early childhood investment councils.
2. Develop broad business sector support for quality prenatal through age five programs for children and their families.
3. Work with national foundations that specialize helping business leaders establish regional and state business coalitions and provide technical assistance in setting up SIB arrangements such as PKSEs.
4. Establish local "school readiness capital partnerships" to increase regional per capita income and economic growth through youth human capital investment.
5. Identify what early childhood programs the region needs most to reduce school special education, grade retention and English language learner (ELL) costs.
6. If, for example, quality preschool is needed, carefully study of the effect of specific preschool programs on special-ed, grade retention and ELL costs. Great care needs to be taken that the results are not biased in favor of a preschool program by "pre-selection". Pre-selection is a critical issue. Regarding the benchmark study, PKSE organizers need to be sure that children selected to be the preschool program being studied are not less likely to be assigned to special-ed, biasing the results in favor of the preschool program. And organizers need to be sure their PKSE scholarship granting process does not exclude children more likely to be assigned to special-ed.
7. If the study is promising, implement a PKSE program beginning with educating regional business and philanthropic leaders on SIB financing and how PKSE bond programs work. Carryout a PKSE benchmark study and complete contract arrangements among PKSE participants. Sell regional PKSE bonds to banks, investors and foundations. Closely monitor and evaluate progress and performance.

E. Action Items for National Philanthropy

To support and facilitate from-the-ground-up strategies for restoring economic growth and fiscal sustainability, large regional and national foundations should --

1. Develop SIB design, technical assistance and implementation expertise.
2. Support non-profits that are dedicated to establishing local, state and federal business and philanthropic early childhood investment councils and coalitions.
3. Fund local "effect-studies" to determine how much specific early childhood interventions actually reduce local school costs.
4. Make Program-Related Investments in promising PKSE programs to finance periods when they are cash-flow negative and to serve as a first-loss risk taker.
5. Provide background information to support business leaders in obtaining local and state statutory or regulatory changes to recognize SIB finance approaches and where appropriate to define criteria for state income tax exemption.

F. Action Items for State Governments

To encourage city and county officials and business leaders to make the best use of social impact finance to promote near-term school readiness and long-term workforce strength, state governments should --

1. Authorize, by statute and regulation, state agencies, school districts and other government entities to enter into contracts with SIB capital partnerships.
2. Authorize state entities to rebate cost savings and/or revenue increases to SIB capital partnerships as provided for in partnership contracts.
3. Establish criteria for SIB-issued debt to be income-tax exempt.

G. Action Items for the Federal Government

The federal government provides funding to states under federal law for many state-provided services such as special education. If a SIB capital partnership reduces state spending on special education, it also reduces federal spending. To encourage local public-private arrangements like SIB capital partnerships, Congress should --

1. Authorize, by statute and regulation, federal agencies to enter into contracts with SIB capital partnerships in parallel with state entities.
2. Authorize federal agencies to rebate cost savings and/or revenue increases to SIB capital partnerships as provided for in partnership contracts.
3. Amend federal laws and regulations such as the banking Community Reinvestment Act, which encourage businesses to engage in socially-desired purposes, to include investment in early child development and education.

Acknowledgments

This is a working group progress report. Final answers may be years away and will depend on regional initiatives. This report is also a group effort. It reflects the input of many people but any errors are the responsibility solely of the authors.

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Kauffman-ReadyNation Working Group

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Kauffman-ReadyNation Early Childhood Finance Innovation Working Group was organized in early 2010 is to explore development of early child care and education social impact finance methods and, where possible, assist in implementing demonstrations of their effectiveness. The working group's goal is to facilitate creation of "invest-in-kid bonds" that can be underwritten individually or aggregated into asset backed securities, which can be invested in by individuals and institutions worldwide.

This report incorporates the analysis and finding of its November 2010 report "Early Childhood Finance: Meeting Notes and Initial Findings of a Conference Convened by the Kauffman Foundation and the Partnership for America's Economic Success".[1]

Kauffman Foundation

The Kauffman Foundation in Kansas City is dedicated to strengthening American entrepreneurship and believes "education should lead students on a path to self-sufficiency, preparing them to hold good-paying jobs, raise their families, and become productive citizens", with particular emphasis on "advancing student achievement in science, technology, engineering and math (STEM)."[2]

ReadyNation

ReadyNation[3] is an affiliate of America's Promise Alliance[4] and is dedicated to "amplifying the voice of business leaders in support of policies that strengthen our economy and workforce"[5] ReadyNation is formerly known as the Partnership for America's Economic Success, a project of the Pew Charitable Trusts' Center on the States.

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