COSTING COMPLEX CASH TRANSFERS:
A CASE STUDY OF THE SAVINGS AND INVESTMENT LINKAGES (SAIL) PROGRAM IN SOUTH AFRICA

TECHNICAL BRIEF

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Introduction

The Savings and Investment Linkages (SAIL) pilot program aimed to generate evidence on the effects of linking South Africa's Child Support Grant (CSG) to an integrated program combining financial inclusion, economic opportunities, and employment opportunities for participating youth. Evidence-building pilots – such as the SAIL program – are powerful tools that can enable governments to explore and evaluate the impact of complex cash transfers. Some examples of complex cash transfers include conditional cash transfers, services-linked cash transfers and the emerging "cash plus care" programs that have demonstrated the potential to strengthen outcomes for the intended participants in ways that generate longer-term resilience.

Programs linking cash transfers with other interventions, like SAIL, involve a range of activities to strengthen developmental outcomes for participants. A program may provide additional benefits, for example, services and financial resources, through linked interventions. In the case of SAIL, these complementary interventions included (i) financial literacy training, (ii) facilitated access to financial services, (iii) savings subsidy incentives, (iv) life-skills training, and (v) HIV/AIDS prevention education, among other initiatives.

Evidence-building pilots are commonly adopted as a first step in designing integrated cash transfer programs like SAIL. Evidence-building pilots enable policymakers to: (i) understand the potential outcomes of programs and examine their intended and unintended effects on participants, (ii) experiment with and fine-tune the intervention to maximize outcomes, (iii) assess and modify alternative targeting methods and improve targeting effectiveness, and (iv) evaluate the cost efficiency of the intervention in generating the desired outcomes. ***An evidence-building pilot allows policymakers to improve the cost and operational efficiency of a program at a significantly lower cost than that for a nationally-scaled program.***

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In partnership with the Department of Social Development (DSD) and with the financial support of the Ford Foundation, the Economic Policy Research Institute (EPRI) designed and implemented the SAIL pilot as an evidence-building pilot of this nature. Upon the completion of a two-year pilot, SAIL was evaluated for (i) the effectiveness of the intervention at reducing youth unemployment through financial inclusion and youth development activities, and (ii) the cost efficiency of the intervention. As a part of this analysis, EPRI undertook a comprehensive costing exercise to determine the total cost of the SAIL pilot.

Box 1. The SAIL Pilot Program (2013-2015)

EPRI implemented SAIL in two South African provinces: Western Cape and Limpopo. Limpopo is one of South Africa's most rural provinces and by some measures the poorest. Western Cape, on the other hand, is representative of a more urban population with relatively low poverty rates. Implementation in these two provinces tested the intervention in two diverse contexts.

South Africa's Department of Social Development (DSD) is considering scaling up the intervention nationally to reach all CSG recipients. However, before attempting national-scale delivery, the intervention will be further tested and evaluated rigorously in several environments to better understand the impacts as well as barriers and challenges associated with scaling it up effectively and efficiently.

This brief provides a framework for quantifying program costs based on the SAIL pilot model. SAIL was a youth-oriented cash transfer program working in combination with youth employment and development activities. It aimed to improve savings behavior and expand financial inclusion among youth living in poor households, as well. When adapting this model to cost other livelihoods-linked cash transfers, policymakers must keep a few key considerations in mind:

- The costing model presented in this brief is based on a pilot as opposed to a mature or nationally-scaled program. Mature programs can leverage economies of scale and lessons from pilot programs to improve efficiency. They are likely to face fewer bottlenecks in program implementation compared to pilots, and to generate significant savings in terms of delivery cost per participant. This phenomenon is demonstrated in the scaling costs presented in the costing model.
- A non-profit organization implemented the SAIL pilot. A government intervention at the scale of this pilot, rather than a national program, is likely to incur higher administrative and bureaucratic costs as well as higher labor costs.
- If using this model to cost other programs, it should be adapted to reflect contextual differences such as the ease of targeting, geographical reach and other factors that might alter program costs.

Background: The SAIL Pilot Program

The long-term goal of the SAIL pilot was to expand economic opportunities for disadvantaged youth and reduce youth unemployment. The pilot aimed to enable poor households to access livelihood opportunities that offer long-term income security. It provided households with a savings mechanism to support asset development and multiple types of educational programs.

TARGETING: IDENTIFYING THE PARTICIPANTS

The selection of participants was a randomized process. It started with identifying "focal youth" by drawing a representative sample of CSG participants in the Western Cape and Limpopo provinces. The names of 15 youths in each province were randomly selected from a list of all CSG or Foster Care Grant (FCG) recipients in the province. The program had two targeting requirements: (i) the focal youth had to be close to 16 years of age (usually within 3 months of their 16th birthday) to be eligible, and (2) the caregiver had to report receipt of the CSG or FCG on behalf of the participating youth.

The SAIL sampling methodology involved recruiting high schools and secondary schools (also called sub-locations) close to focal youth into the study. A cluster of schools within a pre-defined radius of each focal youth was recruited into the study sample. This cluster is referred to as a "super-location." The study aimed to enroll an average of 60 households per super-location by enrolling a minimum of three schools in each super-location, and enrolling an average of 20 households per school.[1] The study's enrollment goal was to reach a total sample of up to 1,800 households in this fashion.

Box 2. Study Design

Each sub-location within a super-location was assigned to one of the three groups:

- **Control group:** receiving no treatment except for a cellphone and/or airtime and the similar small incentives as the other two groups for completing surveys.
- **Treatment 1:** access to (1) Financial Literacy Program, (2) savings accounts, and (3) MSP incentives.
- **Treatment 2:** access to (1) the Financial Literacy Program, (2) savings accounts, (3) MSP incentives and (4) Youth Development Program.

THE INTERVENTIONS

The SAIL program had four key components: (i) The Matched Savings Plan (MSP), (ii) Financial Literacy Program, (iii) Youth Development Program, and (iv) SMS Nudges.

[1] More than three schools were recruited if the number of households for the super-location did not meet the requirements.

Matched Savings Plan (MSP)

The Matched Savings Plan (MSP) was designed to encourage the caregivers of the program participants to save using formal savings accounts. The plan provided incentives to save based upon short, medium, and long-term savings rates in accordance with pre-defined rules (see Box 3).[2]

Box 3. Rules for the Matched Savings Plan (MSP)

- **Short term matches:** SAIL matched 50% of a savings deposit that remained in the participant's savings account for the first three months, up to a maximum amount of R25 per month. **Over the course of the two-year program, a participant could receive up to R600 in short-term matches.**
- **Medium-term matches**: SAIL matched 50% of a deposit that remained in the participant's savings account for one year, up to R25 per month, in addition to the short-term matches. **Over the course of the two-year program, a participant could receive up to R600 of medium-term matches.**
- **Long-term (investment) matches**: At the end of the two-year period, SAIL matched the savings that were used for an investment in entrepreneurial activities or post-secondary education by an additional 100%, on top of the initial short- and medium-term matches. **Over the course of the two-year program, a participant could receive up to R1200 of long-term (investment) matches.**
- **Fundisa matches:** For participants who chose the government-subsidized Fundisa Fund as their savings vehicle, the fund matched an additional 25% on all savings and matched incentives. Over the course **of the two-year program, a participant could receive up to R900 in Fundisa matches.**

Financial Literacy Program

SAIL provided basic financial literacy training to caregivers and youth covering themes such as saving, banking, budgeting, financial planning, debt management and credit status, insurance and investment and protection from fraud and theft. During the first year, the youth and caregivers were invited to participate in three workshops lasting three hours each (usually on weekends). EPRI developed and delivered the remaining training through a tablet application.

Youth Development Program

Activities under the youth development program took the form of a series of workshops delivered by SAIL facilitators on personal skills (soft skills such as attitudes, social manners, and

[2] The Fundisa Fund referenced in Box 3 was a private, educational matched savings fund organized by the Association for Savings and Investment South Africa and offered through the private banks Absa, Nedbank, and Standard Bank from 2007 to early 2018. The account was specifically designed for saving for the tertiary education of students from low-income households. It provided higher than average interest rates and an additional 25% annual bonus (up to R600 a year) if the savings were used for education at an accredited tertiary institution. If people decided not to put their savings towards a tertiary institution, they could withdraw their money and close their account, receiving their money plus interest but not receiving the 25% bonus. It was wound down after a commitment by the South African government to provide free higher education and training for students from families with annual earnings of less than R350,000 (see: https://www.businesslive.co.za/bd/national/education/2018-02-28-education-unit-trust-fund-fundisa-closes).

communication style), and study and life skills (cognitive and analytical abilities, interpersonal abilities, etc.). Facilitators also provided career guidance to encourage and assist participant learners to navigate their environment and plan their future.

SMS Nudges

Based on global evidence regarding "nudges," SAIL delivered regular text messages to caregivers via mobile phones to provide information, send reminders, and encourage them to increase their savings.

MONITORING AND EVALUATION

The study collected both qualitative and quantitative data using a set of surveys carried out through both standard in-field data collection approaches and electronic surveys.[3] The program team conducted a total of 12 surveys, including six traditional in-field main surveys: baseline (2013), midline (2014) and end line (2015) surveys, each with youths and their caregivers; and six supplementary surveys: three monitoring surveys (conducted electronically in 2013 and 2014 and by in-field survey in 2015) and three post-school surveys[4] (two conducted electronically in 2015, and one in-field survey in 2016).

Costing the SAIL Pilot

The costing model presented in this brief aims to provide insight into the costs of the SAIL pilot as well as the differences between costing a pilot and a nationally-scaled program. Comparing the two, the model generates advice for policymakers in implementing large-scale programs. The costing exercise provides two key lessons.

First, ***the costs of setting up a program and the costs of scaling a pilot are significantly different.*** The costs differ in three ways:

(i) Pilot programs ***incur higher costs associated with setting up efficient delivery systems and building effective partnerships***.
(ii) Pilot programs also ***face more 'teething problems'*** associated with barriers to program take-up and bottlenecks in delivery. These, in turn, inform the development of efficient systems.
(iii) Program ***costs are non-linear***. Many costs incurred during the pilot phase payoff as the program expands – i.e., the investments in systems during the initial stages generate returns as the program scales.

Second, and more importantly, ***evidence-building pilots provide an opportunity for policymakers to test and build effective and efficient implementation systems with a significantly lower investment than required for a nationally-scaled program***.

[3] The electronic surveys were created using Dooblo (www.dooblo.net) – a survey design application. They were administered through Android mobile phones and tablets.
[4] Survey regarding the respondent's plans after graduating from school.

The costing model in this brief utilizes an adaptive framework that can be tailored to cost interventions of different types. Instead of segregating the cost by input (e.g., human resources, technology, etc.), which makes replication and comparison challenging since all interventions organize inputs differently, this brief presents the inputs by function (e.g., identifying schools, developing workshop content, etc.). The costing model for the SAIL pilot is based on several components and split by phases of the program. The four phases of the program and costing model include:

1. Program Design and Set-up Costs
2. Targeting Costs
3. Operational Costs
4. Monitoring and Evaluation Costs

This brief presents the actual cost of the SAIL pilot and uses it to generate projected costs of scaling the SAIL pilot nationally. It estimates the cost of going to scale in two components: the fixed costs and the variable costs. Fixed costs do not increase proportionally with the number of participants, instead the cost burden per participant decreases as the number of participants increase (e.g., identification of schools or establishing partner relationships). Variable costs, on the other hand, are directly associated with each additional participant and increase with the number of participants (e.g., the costs of incentive payments or following up with participants). ***Estimating fixed and variable costs highlights a key lesson: investing in systems at the pilot stage of a program can substantially reduce the cost of scaling up programs, since the scaled program can take advantage of the pilot's systems.***

In estimating the costs of scaling the SAIL pilot nationally, the following assumptions were made:

- Total number of estimated participants were assumed to equal the total number of youth in public school, as reported by the Department of Basic Education[5] based on the 2013 SNAP[6] report. The assumed number of participants in the scaled-up SAIL is 11,975,844.
- The total number of schools in the nationally scaled pilot was assumed to be equal to the total number of public schools in south Africa in 2013 (24,136), also based on Department of Basic Education reporting from the 2013 SNAP report.[7]
- The projected total costs represent the lowest cost combination of inputs for each function.

[5] Department of Basic Education, 2015. *Education Statistics South Africa 2013.* Department of Basic Education, South Africa.

[6] The SNAP Survey collects data from all schools in South Africa each year. The data forms part of the national Education Management Information Systems (EMIS) database used to inform education policymakers and managers in the Department of Basic Education and the Provincial education departments, as well as to provide valuable information to external stakeholders. For example, data from schools in the survey is used to compile and maintain the Master List of Schools in the country for education planning purposes.

[7] Department of Basic Education, 2015. *Education Statistics South Africa 2013.* Department of Basic Education, South Africa.

A summary of total costs is presented below. The costs breakdown demonstrates that costs do not scale in a linear fashion. Since there are fixed cost components involved, the overall cost per participant falls as the number of participants increases. ***The actual cost per participant of the SAIL pilot was $992.31, but scaling the project nationally is estimated to reduce this to $186.60 per participant, as explained below.***

Table 1. Total Costs

	Costs	
	SAIL Program Actuals	**Scale-up Projections**
Total Participants	3,000	11,975,844
Total Program Cost	$2,976,923	$2,234,701,714*
Total Cost per Participant	$992.31	$186.60

* Amount comprised by a fixed cost of $7,194,730 or $0.60 per participant and a variable cost of $186.00 per participant.

PROGRAM DESIGN AND SETUP COSTS

The costs associated with this phase include human resource costs, particularly technical expertise to design the interventions, and logistical and administrative expertise to arrange program delivery. Much of this phase involves identifying partners and establishing relationships to ensure smooth delivery of the various components of the program. Costs incurred in this phase are fixed costs that generate economies at scale. The table below shows that the design and setup cost of the SAIL pilot amounted to $420,000. The cost of scaling the program nationally is projected to increase the costs of phase by 2.29 times to $960,000.

Table 2: Program Design and Setup Costs

Tasks	**SAIL Program Actual Costs**	**Fixed Costs of Scaling Up**
Program Design	$300,000	$600,000
Partner Relationships	$120,000	$360,000
Total	**$420,000**	**$960,000**

TARGETING COSTS

The cost of targeting the SAIL pilot was significantly reduced by using the Child Support Grant participant database to identify the initial pool of participants. Nonetheless, identifying the sub-locations, verifying eligibility of youth and ensuring the minimum number of participants were enrolled were labor-intensive tasks involving high administrative costs. This process achieved some efficiencies since it also served as the registration for the Management Information System (MIS).

The cost of identifying the schools is a fixed cost. It was estimated using the marginal cost of identifying one school, based on the underlying assumption that the SAIL pilot enrolled a total of

100 schools. The registration process entails a per participant cost of $4.15. Since participant registration feeds into the development of the centralized MIS database, it reduces per participant costs for monitoring and evaluation.

Table 3: Targeted Costs

Tasks	Costs		
	SAIL Program Actual Costs	**Fixed cost in scaling up**	**Variable costs in scaling up (per participant)**
Identifying schools	$19,000	$4,585,840	-
Registration (in hand with M&E)	$41,538	-	$4.15
Total	**$60,538**	**$4,585,840**	**$4.15**

OPERATIONAL COSTS

The operational costs for the SAIL pilot differed for each component of the intervention, depending upon the activities involved. The key components of program delivery included collecting and verifying savings for the MSP, developing workshop content, designing the youth development and financial literacy programs, and delivering short text message "nudges" to mobile phones.

For each of the program components, the additional cost of scaling up is substantially smaller than the cost of the delivering the pilot. ***The operational cost projections demonstrate how investments in scalable systems during the pilot phase can significantly reduce the costs of scaling up a program.***

Table 4: Operational Costs

Intervention	Tasks	Costs		
		Actual SAIL Program cost	**Fixed cost in scaling up**	**Variable costs in scaling up (per participant)**
Matched Savings Plan (MSP)	Developing Delivery Systems	$62,000	$372,000	-
	Developing Partnerships	$41,000	$164,000	-
	Facilitated Access to Savings Accounts	$27,692	-	$2.77
	Collecting and Verifying Savings	$166,153	-	$16.62
	Incentive Payments and Transfer Costs	$553,846	-	$92.31
	Following up with Participants	$41,538	-	$4.15
	Total (MSP)	***$892,230***	***$536,000***	***$115.85***
Financial Literacy	Content Development	$37,000	$148,000	-
	Workshops	$387,692	-	$38.77
	Total (Financial Literacy)	***$424,692***	***$148,000***	***$38.77***

Intervention	Tasks	Costs		
		Actual SAIL Program cost	**Fixed cost in scaling up**	**Variable costs in scaling up (per participant)**
Youth Development	Content Development	$41,000	$205,000	-
	Workshops	$193,846	-	$19.38
	Total (Youth Development)	***$234,846***	***$205,000***	***$19.38***
SMS Nudges	Content development	$12,000	$60,000	-
	Text message delivery	$235,384	-	$7.85
	Total SMS Nudges	***$247,384***	***$60,000***	***$7.85***
Total		**$1,799,153**	**$949,000**	**$181.85**

MONITORING AND EVALUATION COSTS

The costs associated with monitoring and evaluation are largely fixed costs. The cost of setting up systems like the MIS, the evaluation design are one-off costs, as these processes do not need to be repeated when a pilot is scaled. Similarly, there are no additional costs associated with collecting and analyzing data for an evaluation as the infrastructure and resources required for these processes do not change with the scale of the program.

Table 5: Monitoring and Evaluation Costs

Tasks	Actual SAIL Program cost	Fixed cost for a nationally-scaled program
Evaluation design	$98,000	$98,000
Data collection	$249,230	$249,230
Data analysis	$272,000	$272,000
MIS development	$78,000	$78,000
Total	**$697,230**	**$697,230**

Concluding Remarks

This brief presents a framework for costing complex cash transfer programs. It highlights key considerations to differentiate between costing pilots and costing programs at scale. Three key observations result from this study: (i) pilots allow policymakers to strengthen the cost and operational efficiency of programs at a significantly lower cost than nationally scaled programs; (ii) pilots present an excellent opportunity to invest in and build strong systems, infrastructure and partnerships that can be leveraged to generate economies at scale and (iii) costs of scaling up a pilot are non-linear; a pilot has a significantly heavier cost burden per participant than a fully-scaled version of the same program. These observations reinforce the contribution evidence-building pilots make in designing successful national-level cash transfer programs: they provide a cost-effective way to fine-tune operational processes and develop robust systems. Even if a pilot program fails to generate the intended outcomes, it represents a success insofar as it prevents much larger investments from failing.

Box 4. Key Lessons

- Costing a cash transfer linked with additional components is complex. Human resources, technology and other costs might vary significantly with small changes in program design, but ***costing programs based on functions provides a strong understanding of the cost burden at each stage of the program's lifecycle.***
- Costing a pilot program is vastly different from costing a mature and nationally-scaled program, but ***the costs of the pilot can generate valuable cost estimates for scaling-up the program***.
- When meticulously designed and rigorously tested, the costs of evidence-building pilots appear starkly larger in comparison with the additional cost of scaling up. ***These costs should be treated as investments in developing systems that yield cost and operational efficiencies in the fully-scaled versions of programs.***
- The costs of expansion are non-linear. ***As programs scale, they substantially reduce the cost per participant***. Greater efficiencies may also be found in examining lessons learned from the pilot.
- ***Significant cost-savings can be achieved by combining activity functions when feasible,*** such as SAIL did by making use of the targeting and registration process to gathering information for the MIS.

Useful Readings on Costing Cash Transfers

Caldés, N. & Maluccio, J., 2005. The cost of conditional cash transfers. *Journal of International Development,* 17(2), pp. 151-168.

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