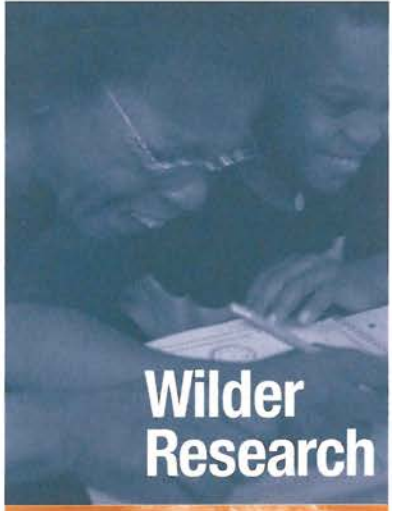

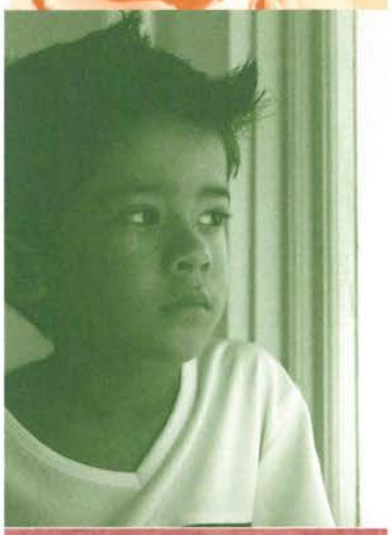

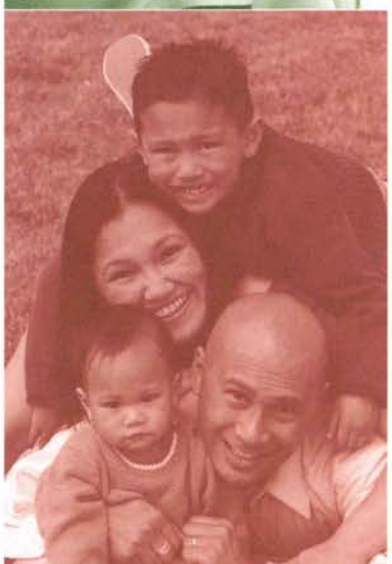

Economic analysis of programs that could qualify for a human capital performance bond pilot

Prepared for Invest in Outcomes with funding from the Bush Foundation

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Introduction

Human capital performance bonds are predicated on the assumption that health, education, and social service programs produce social outcomes that have measurable economic value. A clear example is job training programs, which increase state income and sales tax revenues when they successfully achieve employment and wage gains for participants. Other types of programs may not increase tax revenues, but they might save money by reducing costly state spending, such as for repeat incarceration or chronic homelessness. This economic value is equivalent to cash and has the same financial value as cash flow in a business. Accordingly, just as businesses use projected cash flow to finance their current spending, state government could do the same to finance social programs based on their expected future payback.

Invest in Outcomes, led by founder Steve Rothschild, has proposed using state appropriation bonds in a pilot initiative to test this new model for funding programs by rewarding those that successfully meet set performance goals. For every million dollars in bond funding, programs in the pilot would have to generate cash flows of $140,000 per year for up to 10 years to cover the interest (4%), amortization (8%), and administrative costs (2%). The purpose of this report is to identify the types of programs that are best suited for this performance-based funding pilot.

First, we examine the cash flows and projected savings for a set of workforce programs associated with the Greater Twin Cities United Way, which provided a data set that includes aggregated placement and 6-month retention rates, wage changes, and criminal background information for 22 metro-area programs.[1] In the absence of data regarding the number and ages of dependents among workforce program participants, we computed cash flows for three types of job placements: 1) one adult, no dependents, 2) one parent with one child age 30 months, and 3) one parent with three children (ages 30 months, 4 years, and 6 years).

Then we review and analyze cost-benefit studies of other service and program areas that could demonstrate opportunities for big enough cost avoidance or income growth to produce sufficient cash flows.

The final section describes the key design features and data elements for evaluating the pay-for-performance pilot.

Subsequent reports will examine in detail 1) two other service and program areas that demonstrate initial opportunities for big enough cost avoidance or income growth to

[1] The original data set with 36 programs was reduced to 22 programs with sufficient data for analysis.

produce sufficient cash flows; 2) the rules, procedures, and safeguards of the pay-for performance process during the pilot; and 3) a detailed evaluation plan that pertains to each type of service or program in the pilot.

Summary and conclusions

First-year and 10-year projected cash flows of workforce programs

Workforce programs produce cash flows through increased tax revenues due to increased wages of persons placed in jobs as well as due to possible decreases in public assistance payments. Using conservative assumptions that may not capture all the economic value produced for the state of Minnesota from a set of 22 metro-area workforce programs associated with the Greater Twin Cities United Way, we computed for the five highest performing workforce programs the number of additional placements in the first year required to cover the interest, amortization, and administrative costs on a $1 million bond and the number of additional placements required to cover the costs of the bond over 10 years.

To cover the first year costs of a $1 million bond would require an additional 29 placements, or about 6 percent more placements than the 463 placements these five programs had altogether in the past year. However, to cover the bond costs over 10 years would require 29 more placements for a total of 58 additional placements, or about 13 percent more placements altogether than in the past year for the five top performing programs.

Other potential service categories that are suitable for pay-for-performance funding

The other service and program areas that have demonstrated the potential to produce big enough cost avoidance or income growth to pay off the bonds and to benefit from performance-based funding and, thus, should be considered for the pilot appear to be:

- Addiction treatment services, for which the benefit-cost ratio reaches 12:1 when factoring in savings related to reduction in crime and health care use and increased tax revenues due to increased productivity of treated individuals.
- Adult day health programs that substitute for nursing home care for frail elderly, which have shown benefit-cost ratios of 5:1.
- Supportive housing, which have shown health care costs reduced nearly 50 percent and declines in incarceration costs of 76 percent.

- Employment for people with disabilities, with potential return of $3 for every $1 invested.

Conclusions

The job placement and retention performance of metro area workforce programs suggests that human capital performance (HUCAP) bonds are a feasible way to fund some workforce programs. The state should be able to pay off the bonds based on public assistance and tax benefits saved and increased tax revenues. The programs would have to gauge their placement and retention outcomes against the top performing programs and decide if they have the capacity and right mix of participants to increase their placements by, at most, about 13 percent.

Addiction treatment services and adult day health programs are the two most promising service areas to explore further at this time for the bond pilot. Wilder Research is currently conducting a comprehensive return on investment study of supportive housing in Minnesota. Invest in Outcomes should revisit supportive housing as a candidate for pay-for-performance funding when that study is completed at the end of 2011.

Finally, these initial conclusions do not mean that these are the only program areas in which the HUCAP bonds can work. There may be other areas where the potential is high but the economic studies and data are too limited at this time to qualify for the bond pilot.

Estimated economic contribution of workforce programs to Minnesota taxpayers

Introduction

Minnesota Workforce Development pass-through spending for FY2010 totaled nearly $26.1 million, including $17.8 million state transfers from the State Dislocated Worker Program and $8.3 million pass-through appropriations from the General Fund.

This section estimates the cash flows and projected savings of workforce development programs based on a set of 22 workforce programs associated with the Greater Twin Cities United Way. The United Way provided a data set that includes aggregated placement and retention rates, wage changes from both the Minnesota Department of Employment and Economic Development and program surveys, and criminal background information for participants in the programs.

First, we estimated cash flows using a benefits model developed by the Minnesota Taxpayers Association. We used the wage increases to estimate savings in public assistance and tax credits and net increases in tax revenues generated by the programs through job placements of program participants. In addition, we estimated cost savings due to reduced recidivism based on the percentage of placed participants with criminal backgrounds. We then estimated the present values of projected benefits generated by the programs over the next 10 years based on reported program retention rates and relative intensity of program services.

The benefits model as well as data, procedures, and assumptions used in the calculations are described in the Appendix.

Profile of workforce programs

The key outputs and outcomes of the 22 workforce programs used in the cash flow analysis are shown in Figure 1. These elements include average wages before and after training, the percentage of participants with criminal backgrounds, the number of participants placed in employment, the 6-month job retention rates, and the level of program intensity. High intensity programs tend to last 6 months or more, and low intensity generally run 4-12 weeks.

1. Profile of workforce programs

Program ID	Average wage year before training	Average wage year after training	Percentage of participants with criminal background*	Number of placements	6-month job retention rate	Level of program intensity
5762	$13,516	$20,286	5.6%	410	69%	High
5776	$8,301	$12,994	21.1%	570	88%	Low
5777	$12,841	$24,555	5.7%	250	70%	Low
5784	$8,510	$19,824	35.8%	201	75%	High
5785	$17,465	$21,810	11.5%	124	93%	High
5789	$14,697	$21,668	0.0%	99	87%	High
5791	$0.00	$1,642	0.0%	66	51%	Low
5792	$12,734	$14,943	0.7%	1003	64%	Low
5794	$10,538	$25,877	32.0%	79	82%	High
5796	$11,960	$17,619	0.0%	59	85%	Low
5797	$23,775	$34,911	37.5%	43	72%	High
5799	$12,593	$16,334	12.5%	108	79%	Low
5802	$12,332	$19,332	2.4%	77	64%	Low
5803	$16,985	$25,329	0.0%	97	90%	High
5804	$24,560	$30,352	8.5%	152	81%	Low
5805	$12,426	$20,064	3.6%	115	68%	Low
5806	$10,009	$11,576	0.0%	1513	60%	High
5809	$12,236	$19,029	0.8%	352	62%	High
5811	$17,229	$22,973	25.7%	99	80%	Low
5812	$18,182	$28,915	25.4%	87	88%	High
5813	$13,523	$23,325	0.0%	43	100%	Low
5815	$15,898	$36,881	6.1%	53	92%	High

* *Criminal background means participant has been convicted of a felony or incarcerated due to a felony in the past 7 years.*

First year cash flows of workforce programs

This section describes the average per program cash flows in the first year after job placements in terms of public assistance and benefit administration savings, tax credit savings, increased tax revenues, and crime-related cost savings for the state of Minnesota only. These figures do not include savings or benefits for other levels of government.

Nor do they include any potential savings and benefits of persons trained but not directly placed in employment.

Due to limitations in the available data set regarding the number and ages of any dependents of placed individuals, we computed cash flows for each program for three scenarios as shown in Figures 2-4: 1) one adult, no dependents, 2) one parent with one child age 30 months, and 3) one parent with three children (ages 30 months, 4 years, and 6 years). Additional details for each scenario are in the Appendix.

Note: For Figures 2-4, the average total cash flow per placement is the total cash flow in year 1 (last column) divided by the number of placements in Figure 1. It is also the sum of the two columns to its left. The averages are rounded.

2. Computed savings and benefits in first year after job placements (cash flows) for Minnesota, assuming one adult, no dependents

Program ID	Average wage year before entry	Average wage year after exit	Average cash flow per placement from savings & taxes	Average crime savings per placement	Average total cash flow per placement	Total cash flow year 1
5762	$13,516	$20,286	$816	$328	$1,144	$468,994
5776	$8,301	$12,994	$626	$1,241	$1,867	$1,064,075
5777	$12,841	$24,555	$1,369	$334	$1,702	$425,606
5784	$8,510	$19,824	$1,446	$2,111	$3,557	$714,896
5785	$17,465	$21,810	$466	$678	$1,143	$141,783
5789	$14,697	$21,668	$751	$0	$751	$74,685
5791	$0	$1,642	$433	$0	$433	$28,756
5792	$12,734	$14,943	$363	$38	$401	$402,196
5794	$10,538	$25,877	$1,841	$1,887	$3,727	$294,017
5796	$11,960	$17,619	$762	$0	$762	$44,934
5797	$23,775	$34,911	$1,956	$2,211	$4,167	$179,161
5799	$12,593	$16,334	$533	$737	$1,270	$137,125
5802	$12,332	$19,332	$888	$2,529	$3,418	$263,177
5803	$16,985	$25,329	$883	$0	$883	$85,609
5804	$24,560	$30,352	$1,535	$502	$2,036	$309,514
5805	$12,426	$20,064	$952	$214	$1,166	$133,619
5806	$10,009	$11,576	$219	$0	$219	$331,024
5809	$12,236	$19,029	$870	$426	$1,296	$456,546
5811	$17,229	$22,973	$612	$167	$778	$77,063
5812	$18,182	$28,915	$2,083	$1,495	$3,577	$311,261
5813	$13,523	$23,325	$1,144	$0	$1,144	$49,201
5815	$15,898	$36,881	$2,943	$357	$3,301	$174,928

3. Computed savings and benefits in first year after job placements (cash flows) for Minnesota, assuming one adult, one child age 30 months

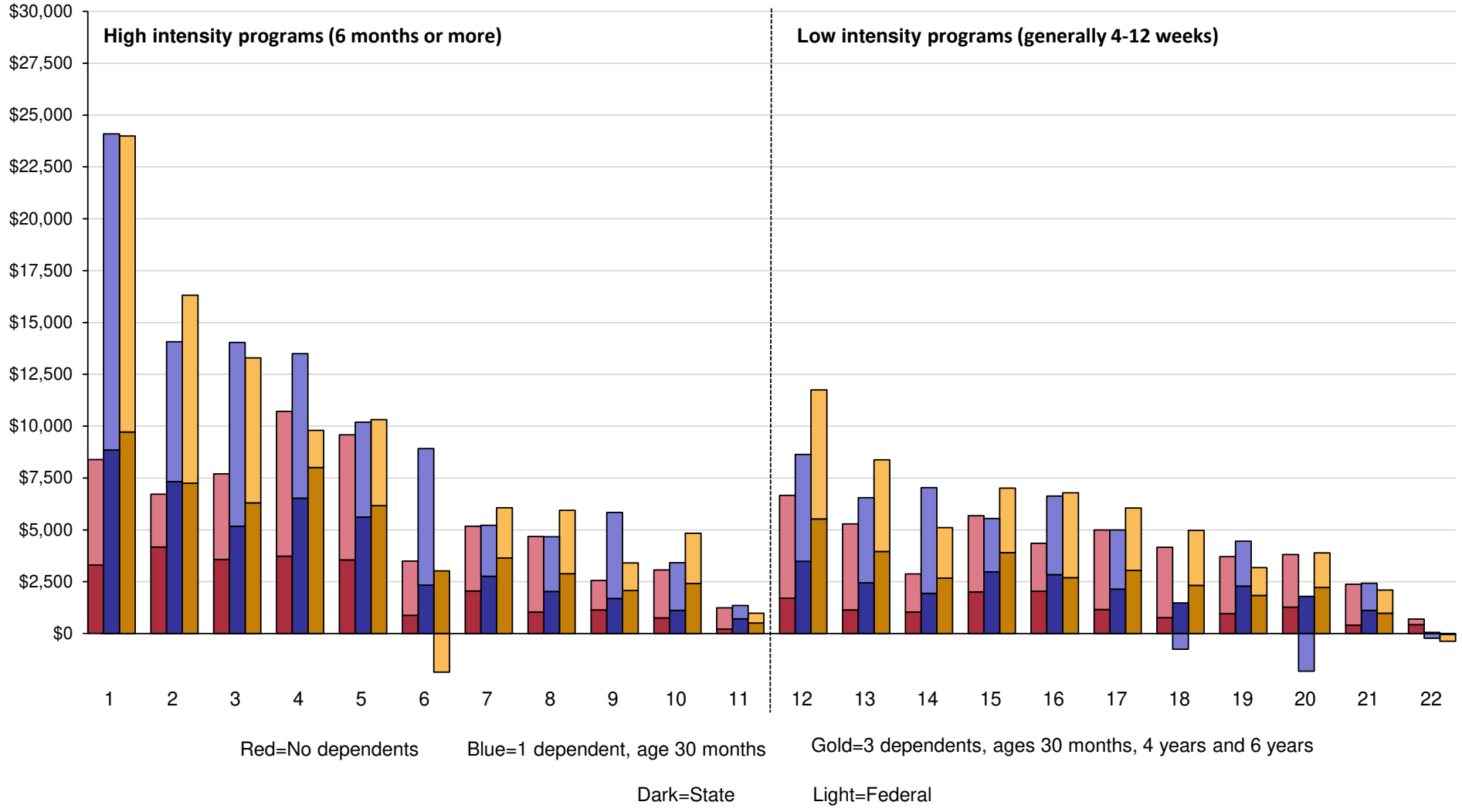
Program ID	Average wage year before entry	Average wage year after exit	Average cash flow per placement from savings & taxes	Average crime savings per placement	Average total cash flow per placement	Total cash flow year 1
5762	$13,516	$20,286	$1,516	$328	$1,844	$755,994
5776	$8,301	$12,994	$1,967	$1,241	$3,208	$1,828,445
5777	$12,841	$24,555	$3,152	$334	$3,485	$871,356
5784	$8,510	$19,824	$3,501	$2,111	$5,612	$1,127,951
5785	$17,465	$21,810	$1,011	$678	$1,688	$209,363
5789	$14,697	$21,668	$1,119	$0	$1,119	$111,264
5791	$0	$1,642	$55	$0	$55	$3,672
5792	$12,734	$14,943	$1,076	$38	$1,114	$1,117,406
5794	$10,538	$25,877	$4,636	$1,887	$6,522	$514,486
5796	$11,960	$17,619	$1,474	$0	$1,474	$86,942
5797	$23,775	$34,911	$5,120	$2,211	$7,331	$315,213
5799	$12,593	$16,334	$1,059	$737	$1,796	$193,933
5802	$12,332	$19,332	$1,848	$2,529	$4,378	$337,097
5803	$16,985	$25,329	$2,340	$0	$2,340	$226,938
5804	$24,560	$30,352	$2,337	$502	$2,838	$431,418
5805	$12,426	$20,064	$1,925	$214	$2,139	$245,076
5806	$10,009	$11,576	$709	$0	$709	$1,072,394
5809	$12,236	$19,029	$1,867	$426	$2,293	$807,809
5811	$17,229	$22,973	$1,519	$167	$1,685	$166,856
5812	$18,182	$28,915	$3,678	$1,495	$5,172	$450,042
5813	$13,523	$23,325	$2,452	$0	$2,452	$105,445
5815	$15,898	$36,881	$8,497	$357	$8,855	$469,290

4. Computed savings and benefits in first year after job placements (cash flows) for Minnesota, assuming one adult, three children (ages 30 months, 4 years, and 6 years)

Program ID	Year before entry	Year after exit	Average cash flow per placement from savings & taxes	Average crime savings per placement	Average total cash flow per placement	Total cash flow year 1
5762	$13,516	$20,286	$2,401	$328	$2,729	$1,118,844
5776	$8,301	$12,994	$1,506	$1,241	$2,747	$1,565,675
5777	$12,841	$24,555	$5,195	$334	$5,528	$1,382,106
5784	$8,510	$19,824	$4,053	$2,111	$6,164	$1,238,903
5785	$17,465	$21,810	$1,402	$678	$2,079	$257,847
5789	$14,697	$21,668	$2,411	$0	$2,411	$239,689
5791	$0	$1,642	-$43	$0	-$43	-$2,832
5792	$12,734	$14,943	$947	$38	$985	$988,006
5794	$10,538	$25,877	$6,118	$1,887	$8,004	$631,386
5796	$11,960	$17,619	$2,321	$0	$2,321	$136,915
5797	$23,775	$34,911	$5,041	$2,211	$7,252	$311,816
5799	$12,593	$16,334	$1,487	$737	$2,224	$240,157
5802	$12,332	$19,332	$2,777	$2,529	$5,307	$408,630
5803	$16,985	$25,329	$3,017	$0	$3,017	$292,607
5804	$24,560	$30,352	$2,192	$502	$2,693	$409,378
5805	$12,426	$20,064	$2,835	$214	$3,049	$349,316
5806	$10,009	$11,576	$510	$0	$510	$771,307
5809	$12,236	$19,029	$2,718	$426	$3,144	$1,107,634
5811	$17,229	$22,973	$2,252	$167	$2,418	$239,423
5812	$18,182	$28,915	$4,813	$1,495	$6,307	$548,798
5813	$13,523	$23,325	$3,960	$0	$3,960	$170,289
5815	$15,898	$36,881	$9,358	$357	$9,716	$514,923

Figure 5 shows the average computed savings and benefits of each workforce program for the three scenarios sorted by level of program intensity. This graph also shows the state savings in public assistance spending and increased tax revenues relative to the federal savings and increased tax revenues. In general, the high intensity programs produce greater savings and revenue, which accrue to the federal budget more than to the state's.

5. Computed average per placement savings and benefits in first year after job placements (cash flows) for Minnesota and Federal government, for three dependent-child scenarios, sorted by level of program intensity



Program ID and Number: *1=5815; 2=5797; 3=5812; 4=5794; 5=5784; 6=5803; 7=5762; 8=5809; 9=5785; 10=5789; 11=5806; 12=5777; 13=5813; 14=5811; 15=5802; 16=5804; 17=5805; 18=5796; 19=5776; 20=5799; 21=5792; 22=5791*

Discussion of first year cash flows of workforce programs

In this analysis, the first year cash flows range as high as $9,716, depending on the number and ages of dependents and the criminal backgrounds of placements (program graduates placed in jobs). For the five programs with the highest first year cash flows (ID numbers 5784, 5794, 5797, 5812, and 5815), the average cash flows are highest for placements with 3 dependent children (in this analysis ages 30 months, 4 years, and 6 years), followed by placements with 1 child age 30 months, and placements with no dependents, respectively: $7,489, $6,698, and $3,666.

These 5 programs, all high intensity programs, had a combined 463 placements. On average, 27 percent of the placements had criminal backgrounds, compared with an overall average of 12 percent for all the placements by the 22 programs. On average, these five programs had a retention rate of 82 percent, ranging from 72 percent to 92 percent.

For perspective, the cash flows required to pay the $140,000 in the first year to cover the interest (4%), amortization (8%), and administrative costs (2%) on a $1 million bond could be generated with an additional 29 placements – of which 24 are retained – or about 6 percent more placements than in the past year among these programs altogether, assuming an equal amount of each type of placement. If these programs served only single adults with no dependents and about a quarter with criminal backgrounds, they would require an additional 46 placements – of which 38 are retained – or about 10 percent more placements altogether than in the past year.

The pool of programs in the bond pilot would probably require some low-intensity programs that produce job placements within about 12 weeks rather than 6 months or more. In this analysis, the first year cash flows of the top 4 low-intensity programs range as high as $5,528 and average $3,267 across the three types of placements. These 4 low-intensity programs (ID#s 5776, 5777, 5802, and 5804) had a combined 1,049 placements and an average 6-month retention rate of 76 percent. The cash flows required to pay the $140,000 in the first year could be generated with an additional 57 placements – of which 43 are retained – or about 5 percent more placements altogether than in the past year among these low-intensity programs, assuming an equal amount of each type of placement.

Ten-year projected cash flows of workforce programs

The proposed human capital performance bond would likely be amortized or paid back over 10 years. This section estimates the average present values of projected savings and benefits generated per placement by each workforce program for 10 years after placement, based on reported 6-month job retention rates and relative intensity of program services. The 5 high-intensity programs with the highest projected cash flows

had 463 placements and an average 6-month retention rate of 82 percent. The details of the cash flow projections and the assumptions used to compute them are in the Appendix.

As shown in Figure 6, the projected cash flows range as high as $77,059 per placement, depending on the number and ages of dependents and the criminal backgrounds of placements. For the 5 programs with the highest first year cash flows (ID numbers 5784, 5794, 5797, 5812, and 5815), the average 10-year projected cash flows are highest for placements with 3 dependent children (in this analysis ages 30 months, 4 years, and 6 years), followed by placements with 1 child age 30 months, and placements with no dependents, respectively: $50,581, $32,359, and $24,230.

The total projected cash flows must be at least $1,400,000 over 10 years to cover the interest, amortization, administrative costs on a $1 million bond. Assuming an equal amount of each type of placement and an average projected cash flow per placement of $35,723, these programs would require an additional 58 job placements – of which 39 are retained – or about 13 percent more job placements altogether than in the past year.

6. Average present values of 10-year projected cash flows per placement per workforce program

Program ID	No dependents	One dependent	Three dependents
5762	$5,914	$9,534	$14,109
5776	$13,574	$23,324	$19,972
5777	$7,914	$16,202	$25,699
5784	$20,712	$32,680	$35,894
5785	$9,113	$13,456	$16,573
5789	$5,385	$8,023	$17,284
5791	$1,227	$157	($121)
5792	$1,596	$4,433	$3,920
5794	$24,838	$43,462	$53,337
5796	$5,114	$9,895	$15,582
5797	$22,887	$40,268	$39,834
5799	$7,353	$10,400	$12,878
5802	$13,638	$17,468	$21,175
5803	$6,681	$17,712	$22,837
5804	$12,457	$17,363	$16,476
5805	$5,162	$9,469	$13,496
5806	$939	$3,041	$2,187
5809	$5,753	$10,179	$13,957
5811	$4,660	$10,089	$14,477
5812	$26,534	$38,364	$46,783
5813	$10,951	$23,470	$37,904
5815	$26,178	$70,230	$77,059

Other potential service categories that are suitable for pay-for-performance funding

Introduction

This section of the report examines other service and program areas to assess if they have demonstrated the potential to produce big enough cost avoidance or income growth to pay off the bonds and to benefit from performance-based funding.

The service and program areas reviewed include: addiction treatment services, family home visiting, supportive housing and homeless prevention services, small business development, supported employment for people with disabilities, and adult day health care. In addition, we looked into early identification and intervention for special education, community-based corrections, and adult mental health treatment but did not find sufficient documented outcomes or cost-benefit studies.

Of the program areas examined, the best suited areas for the human capital performance bond pilot appear to be:

- Addiction treatment services
- Supportive housing
- Employment for people with disabilities
- Adult day health care

This initial conclusion does not mean that these are the only program areas in which the performance-based bonds can work. There may be other areas where the potential is high but the economic studies and data are too limited at this time to qualify for the bond pilot.

Addiction treatment services

The programs

The Consolidated Chemical Dependency Treatment Fund (CCDTF) pays for low-income (100% of poverty) and chemically-dependent Minnesotans to receive chemical dependency treatment services. Approximately 350 providers throughout the state provide treatment services. In 2009, 27,100 adults were placed for treatment (though some may have received treatment more than once).

State dollars

For state fiscal year 2011, the state appropriated $94.1 million to the CCDTF.[2]

Outcomes

About 61 percent of those who receive publically-funded treatment in Minnesota successfully complete treatment (Minnesota Department of Human Services, 2009), leading to increased employment, reduced crime, and reduced use of emergency and other health care.

Potential ROI

The potential return on investment for addiction treatment services varies from $2 to $56 per dollar invested, with the likely return of $12 per dollar invested. A study in Washington State found that $3.77 was returned for every dollar invested. Another Washington study found $2.05 returned. As noted in the Minnesota Department of Human Services' 2009 Legislative Report, the California Drug and Alcohol Treatment Assessment found that every dollar spent on addiction treatment saves $7 dollars in averted future social costs related to reduction in crime and increase in productivity of treated individuals. The benefit-cost ratio rises to 12:1 when health care costs are factored in.

Family home visiting

The programs

The Minnesota Department of Health operates the Family Home Visiting program, which targets families who are at or below 200 percent of poverty or have other risk factors. Currently, 91 programs are funded (81 counties and 4 city health departments). Programs are encouraged to use evidence-based home visiting models, such as Nurse Family Partnership or Healthy Families America.

State dollars

MDH receives $300,000 annually to fund state level positions that coordinate the Family Home Visiting program.[3] Grants are awarded to local public health departments out of the $9 million federal dollars the state receives through TANF funding. Sixty-five (71%)

[2] Diane Hulzebos, Fiscal Operations Supervisor, Alcohol and Drug Abuse Division, Minnesota Department of Human Services.

[3] Laurel Briske, Section Manager: Maternal & Child Health/Children & Youth with Special Health Needs, Community & Family Health Division, Minnesota Department of Health.

of the counties also use state general funds to support their home visiting programs, but the total amount spent from the state general fund is not reported.[4]

Outcomes

About 14,000 families were served in the first half of 2009 (Minnesota Family Home Visiting Program, 2010). No outcome data for Minnesota have been reported yet.

The Nurse Family Partnership (NFP) program has been shown to have the following impacts:[5]

- 59% reduction in juvenile crime
- 48% reduction in child abuse and neglect
- 67% reduction in developmental delays
- 32% reduction in subsequent pregnancies
- 83% increase in participation in the labor force
- 56% reduction in emergency room visits

Potential ROI

The benefit cost ratio of the NFP program has been estimated to be between $2.88 and $5.70 for every dollar spent, in reduced use of public programs, reduced criminal justice costs, and increase in family income (Minnesota Family Home Visiting Program, 2010).

The Dakota Healthy Families program, in Dakota County, estimated that 87 percent fewer of their high-risk families had confirmed cases of child abuse. The program costs one-quarter of the expense of investigating and prosecuting a child protection case.

Reductions in medical costs associated with early hospital discharge produce, on average, $19,136 per newborn child.

[4] http://www.health.state.mn.us/divs/fh/mch/fhv/documents/fhvevalplan08.pdf.
[5] http://www.nursefamilypartnership.org/assets/PDF/Fact-sheets/NFP_Public_Funding.

Supportive housing and homeless prevention

The programs

Both Minnesota Housing Finance Agency (Minnesota Housing) and the Department of Human Services (DHS) fund housing and support services.

The Supportive Housing and Rental Assistance program provides permanent supportive housing to individuals that face multiple barriers to obtaining and maintaining housing, such as long-term homelessness, mental health issues, substance abuse, and lack of education or training to get a job. Over 92 programs across the state receive funding to provide permanent supportive housing.

The Family Homeless Prevention and Assistance Program (FHPAP) provides housing or rental assistance to assist Minnesotans in moving out of emergency shelters or to prevent them from losing their permanent housing (known as rapid re-housing). Across the state, 20 local organizations, nonprofits, and county agencies receive FHPAP grants.

DHS funds five Supportive Housing Services Grants to provide case management for families living in permanent supportive housing.

The Transitional Housing Program, through DHS's Office of Economic Opportunity, provides 87 grants for transitional housing, which is housing and support services to people experiencing homelessness for up to 24 months.

State dollars

In fiscal year 2011, the state appropriated $28.9 million to Minnesota Housing for these services, $21.14 million for supportive housing, and $7.75 million for FHPAP. DHS was appropriated $6.62 million for Supportive Housing Service Grants and $5.9 for the Transitional Housing Program.

Outcomes

As a result of Minnesota Housing's supportive housing activities, 88 percent of households served in the 2009 calendar year were still in permanent housing at the end of the year, 31 percent of households served experienced an increase in income since entering housing, and 17 percent of households have income from wages.

In addition, participants in the Minnesota Supportive Housing and Managed Care Pilot experienced fewer mental health symptoms and used alcohol and/or drugs less after 18 months in housing. Although overall costs of the Minnesota Supportive Housing and

Managed Care Pilot (2001 – 2007) did not change significantly, costs shifted from jails, inpatient treatment, and detox to preventive medical and mental health care.

Rapid re-housing (FHPAP) served more than 17,500 households in fiscal year 2009. In 2008, only 6 percent returned to the FHPAP program, of which 3 percent returned to shelters.

Transitional housing was provided to 4,500 people as part of DHS's Transitional Housing Program.

Potential ROI

Hennepin County's Frequent Users Service Enhancement (FUSE) program estimates it saved $79,000 by housing six people through fewer jail days, stays in shelters, and days in detox.[6]

Hamilton (2009) presents a study that includes the total of all medical and criminal justice expenditures for housed and homeless individuals on Cape Cod, Massachusetts. The study documented that the annual average cost of housed individuals was 12 percent less than the cost of the homeless subpopulation. Among those with supportive housing, the pre-enrollment cost for health care and incarcerations per client was $42,075, dropping to $16,108 during the first year after enrollment. Other studies (Perlman & Pavernsky, 2006) report a 44.6 percent reduction in health costs during a two-year period, and declines in incarceration costs of 76 percent.

Small business development

The programs

Minnesota's Department of Employment and Economic Development's Office of Entrepreneurship and Small Business (OESB) development assists small businesses start-ups to secure resources and grow through two state-operated programs. They operate nine regional centers that provide one-on-one technical assistance to small business owners at no cost. The Small Business Assistance Office assists with regulatory, legal, and tax questions, in addition to producing a variety of publications and guides for small business owners.

State dollars

In state fiscal year 2011, the state appropriated $2.3 million to these activities.

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[6] http://documents.csh.org/documents/ResourceCenter/HotTopicsSH/2010-FrequentUsers/MNFUSEdoc.pdf.

Outcomes

In 2009, about 33,500 hours of consultation were provided to over 3,000 small businesses. One hundred and one new businesses, 6,575 jobs, $105.8 million in capital, and $323.1 million in sales revenue were attributed to this work.

Potential ROI

During its 29 year history, the OESB estimates $5.23 is returned for every dollar invested.

Supported employment for people with disabilities[7]

The programs

Minnesota's Department of Employment and Economic Development has two programs that support the employment of people with disabilities. The Vocational Rehabilitation program assists people with severe disabilities to obtain employment through job training and placement. The Extended Employment program provides ongoing support to people with significant disabilities to maintain their employment.

State dollars

Vocational Rehabilitation receives about $9 million a year in state funds. The U.S. Department of Education matches each state dollar with $3.70. The Extended employment program received $15.4 million in state appropriations in 2011.

Outcomes

About 22,000 people are served each year in the Vocational Rehabilitation program (8,500 new clients). In 2009, 96 percent got competitive employment, and 43 percent no longer received public assistance as their primary source of income. The average wage for full-time employees exiting the program was almost $11.

Over 6,000 Minnesotans maintain employment through the Extended Employment program, earning $27 million in wages.

A recent Wilder Research ROI study of Minnesota Diversified Industries (MDI) (Da'ar, 2011), employing persons with disabilities, found an average annual wage increase of $13,721, generating total annual increased earnings of $932,982 (for all disabled employees). In addition, taxpayers realized reduced public assistance payments and increased tax contributions.

[7] Details in this section come from Minnesota Management & Budget, Employment and Economic Development Agency Profile, 11-30-10.

Potential ROI

The Wilder study of MDI found a return of $3 for every $1 invested in MDI activities.

Adult day health care

The programs

Adult day health care services provide daytime care and activities outside of the home as both an alternative to private care giving and to nursing home care. The core services include supervision, activities, and socialization. For adults with more health care needs, programs offer enhanced services such as nurse monitoring, therapy, and moderate assistance with daily activities. A third level offers intensive services, including nurse monitoring and intervention, rehabilitation, staff assistance with daily activities and transfer to chair, toilet or bed. Specialized programs provide support and care for adults with dementia.

Medicaid pays for these services under special Medicaid programs or under Medicaid waiver programs for home care.

According to the Minnesota Adult Day Services Association, Minnesota has 50 adult day centers at various levels throughout the state.

Potential ROI

The reimbursement rate of adult day health care services compared to that of nursing home care is 1:5 on average (Alteras, 2007).

Planning for an evaluation of the pilot

This section identifies key data elements for conducting a comprehensive evaluation of the human capital performance bond pilot.

Participating programs will obtain state-agencies approved signed consent forms and will collect data using common definitions and procedures.

Participant data needed for analysis include household size and type, number and ages of dependent children, and sources of income (including child support).

The following data from state agencies will be collected for the full 12 months prior to job training and for at least 12 months after exit.

Job retention will be tracked using hours and employer data from the Minnesota Department of Employment and Economic Development (DEED) using social security numbers.

Department of Human Services data

Income support payments (MAXIS system)

- Diversionary Work (DW)
- Minnesota Family Investment Program (MFIP)
- Emergency Assistance (EA)
- Food Support (FS)
- General Assistance (GA)
- Emergency General Assistance (EGA)
- Group Residential Housing (GRH payments to individuals only)
- Minnesota Supplemental Aid (MSA)
- Emergency Minnesota Supplemental Aid (EMSA)

Medical costs/payments (MMIS system)

- Minnesota Health Care Program (MHCP) fee-for-service claims for long-term care and professional services in inpatient settings and regional treatment centers where the primary diagnosis associated with the claim is neither mental health nor chemical dependency related
- Minnesota Health Care Program (MHCP) fee-for-service claims for long-term care and professional services in outpatient settings, where the primary diagnosis associated with the claim is neither mental health nor chemical dependency related
- MHCP fee-for-service pharmacy claims regardless of diagnosis
- MHCP monthly capitation payments paid by the state to health plans for participants in prepaid health plans

Mental Health Costs/payments (MMIS and CMHRS systems)

- MMIS System: Minnesota Health Care Program (MHCP) fee-for-service claims for long-term care and professional services in inpatient settings and regional treatment centers where the primary diagnosis associated with the claim is related to mental health
- CMHRS system: Imputed costs for mental-health related regional treatment center stays for adults only
- MMIS system: MHCP fee-for-service claims for long-term care and professional services in outpatient settings and regional treatment centers where the primary diagnosis associated with the claim is related to mental health

Chemical Dependency Costs/payments (MMIS, CMHRS, and SSIS systems)

- MMIS System: Minnesota Health Care Program (MHCP) fee-for-service claims for outpatient settings and regional treatment centers where the primary diagnosis associated with the claim is related to chemical dependency
- DAANES system: Imputed costs for stays in hospitals, residential facilities
- DAANES system: Imputed costs for outpatient chemical dependency treatment
- SSIS system: Provide summary out-of-home care costs for all placement settings of any child(ren) of the adult participants in the study

Department of Employment and Economic Development data

- Wages and hours worked by quarter, 4 quarters prior to job training and at least 4 quarters after leaving the program or placement
- Employer NAICS Code

Bureau of Criminal Apprehension data

- Highest conviction level
- Dates of arrests
- Controlling agency
- Arrest statute
- Arrest charge
- Date of offense
- Confinement agency
- Court count
- Court sentenced
- Court statute
- Court charge
- Court disposition
- Custody start date

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Appendix

The benefits model

We modified and applied a model developed by Minnesota Center for Public Finance Research called, *"The Minnesota Family Assistance Model."* The model examines the interactive effects of more than a dozen state and federal programs providing cash and non-cash assistance to households at earned incomes up to $52,000. The model calculates the value of all cash and non-cash benefits for which households are eligible. In particular, it captures the dollar values of the following tax credits and estimated benefits on an annual basis.

Federal tax credits

- Federal Earned Income Tax Credit
- Federal child credit
- Federal child and dependent care

State tax credits

- Minnesota Working Family Credit
- Minnesota child and dependent care
- Minnesota marriage credit
- Minnesota property tax refund

Federal and state-funded benefits

- MFIP (TANF)
- Medical Assistance
- MinnesotaCare
- Child Care Assistance
- School lunches

Federally-funded benefits

- Food support
- WIC
- Section 8 Housing
- Energy Assistance

We added public assistance administrative costs and savings, increased income tax and sales tax revenues, and crime-related cost savings to the benefits model.

Sensitivity of the benefits model

The benefits model is sensitive to two key factors that, if modified, would change the estimated cash flow results:

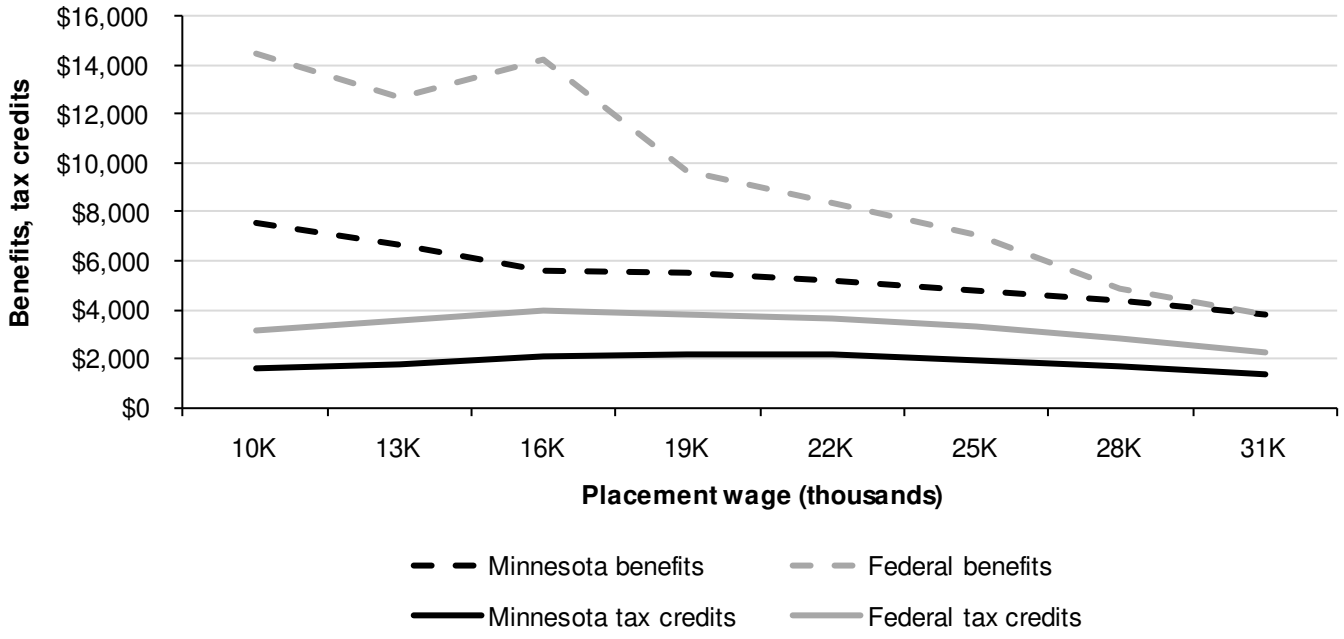
Household size, especially the number and ages of children: In the three scenarios in this analysis, adding one preschool child adds $3,032 to the average cash flow. Adding one more preschooler and one school-age child adds another $791 to the average cash flow. The cash flows would be higher for households that do not need or use child care.

Wage differential before and after job training: The model is also sensitive to the extent to which wages among those placed in jobs are higher than before their job training. For example, if the pre-training wage is $0, and if the average wage after training is $30,000 rather than $15,000, the use of public assistance goes down and the state would save, on average, as much as 30 percent more.

This analysis also assumes a 50/50 split in the state and federal portions of public assistance spending. In reality, the split varies from year to year but will likely average out to 50/50 in the long run.

Figure 7 shows the changes in the dollar values of tax credits and public assistance benefits for one adult and one dependent age 30 months as wages increase in $3,000 increments.

7. Sensitivity of the benefits model to increases in wages



Factors not in the model

Moreover, factors not in the model could change the average cash flows. For example:

- Only program participants placed in jobs are included in the analysis. Any increased tax revenues or reduced public assistance use by persons who partially completed job training are not captured in the cash flows.
- The model does not factor in any private health benefits among low-wage workers, so use and costs associated with publicly-funded health care may be slightly overestimated.
- Short-term and long-term benefits and cost savings associated with family stability due to employment stability are not included in this analysis, including, for example, improved child health and educational achievement.

Procedures for computing wages before and after workforce program participation

1. We identified the wage per person for the first quarter before intake. Individual wage data was provided to the United Way by the Department of Employment and Economic Development of Minnesota (DEED).
2. We computed the average wage in the quarter prior to intake for each program.
3. We annualized the average per program wage in the quarter prior to intake. We used this initial wage as the baseline for the estimation of the savings in public benefits and taxes.
4. We identified 8 quarters after the individual exited the program (regardless of the reason for exiting) and produced the total wage earned by the individual during the first 2 years after they exited the program.
5. We computed the average wage for each program for the first and second year after exiting the program.
6. To obtain average wages per program for placed participants, we repeated steps 2-6 only for those individuals reported as placed in jobs. (Reasons for exit are recorded as: placed in a job, went back to school, dropped the program, unknown, or still in the program.)

Assumptions

Assumptions in the benefits model

We netted out the state portion of both tax credits and benefits. For benefits with both federal and state funding, we used just the state portion, assuming a 50/50 split. For benefits wholly funded by the federal government, we assumed 10 percent administrative costs.

The model assumes that all estimated benefits and tax credits are functions of earned income (or lack thereof). There are two threshold earned wages – one at which some components of estimated benefits are substituted, and another where some benefits completely phase out.

In addition, the benefits model assumes that, at the same level of earned income, the benefits are sensitive to household size and composition. However, size of benefits received by a household is inversely related to the age of the child. As a base, the model assumes that the household has one adult, not pregnant, with a toddler, and files taxes on earned and unearned income at the end of year.

Assumptions about generation of cash flow

We used the amount of wage increase to determine tax revenues (wage and sales) using the Minnesota marginal tax rate (5.35%) of the income level of program participants and the state's sales tax rate of 2.1.

Independent of increased wages, we used program-specific participation rates for individuals with criminal backgrounds to determine crime-related cost savings to the state, using the state recidivism rate (18%) and cost per inmate ($32,573).

Assumptions about the 10-year cash flow projections

Annual wages at placement persist throughout the 10-year period, assuming any productivity gains by some are balanced with job losses or reduced hours by others.

For each program, cash flows after the first year are reduced in subsequent years by the retention rate of each program.

For high intensity programs, participants will stay employed longer and/or, if they lose their jobs, they will spend less time finding another job than participants from low-intensity programs.

Therefore, for high-intensity programs, the number of placements who retain their jobs will remain approximately constant after the third year. For low-intensity programs, the

number of placements who retain their jobs will remain approximately constant after the fourth year. After that, some of the employed participants will lose their jobs, but some of the participants who lost their jobs previously will find new jobs, and these two trends will cancel out each other.

Finally, we calculated the present value of each 10-year cash flow stream, assuming a 4 percent discount rate to convert the amounts into today's dollars.

A1. First year cash flow estimations: One adult, no dependents

Program ID	Year before entry	Year after exit	Public benefits paid by MN	Public benefit admin costs	Tax credit savings	Income taxes	Sale taxes	Average cash flow per placement from savings & taxes	Total benefit & taxes cash flow	Average crime savings per placement	Total crime savings	Average total cash flow per placement	Total cash flow year 1
5762	$13,516	$20,286	$0	$312	$0	$362	$142	$816	$334,703	$328	$134,291	$1,144	$468,994
5776	$8,301	$12,994	$0	$276	$0	$251	$99	$626	$356,590	$1,241	$707,486	$1,867	$1,064,075
5777	$12,841	$24,555	$0	$496	$0	$627	$246	$1,369	$342,176	$334	$83,430	$1,702	$425,606
5784	$8,510	$19,824	$0	$603	$0	$605	$238	$1,446	$290,623	$2,111	$424,273	$3,557	$714,896
5785	$17,465	$21,810	$0	$142	$0	$232	$91	$466	$57,752	$678	$84,031	$1,143	$141,783
5789	$14,697	$21,668	$0	$232	$0	$373	$146	$751	$74,685	$0	$0	$751	$74,685
5791	$0	$1,642	$259	$52	$0	$88	$34	$433	$28,756	$0	$0	$433	$28,756
5792	$12,734	$14,943	$0	$198	$0	$118	$46	$363	$363,731	$38	$38,465	$401	$402,196
5794	$10,538	$25,877	$0	$698	$0	$821	$322	$1,841	$145,199	$1,887	$148,817	$3,727	$294,017
5796	$11,960	$17,619	$0	$340	$0	$303	$119	$762	$44,934	$0	$0	$762	$44,934
5797	$23,775	$34,911	$792	$334	$0	$596	$234	$1,956	$84,093	$2,211	$95,068	$4,167	$179,161
5799	$12,593	$16,334	$0	$254	$0	$200	$79	$533	$57,533	$737	$79,592	$1,270	$137,125
5802	$12,332	$19,332	$0	$367	$0	$374	$147	$888	$68,410	$2,529	$194,767	$3,418	$263,177
5803	$16,985	$25,329	$0	$261	$0	$446	$175	$883	$85,609	$0	$0	$883	$85,609
5804	$24,560	$30,352	$792	$311	$0	$310	$122	$1,535	$233,247	$502	$76,268	$2,036	$309,514
5805	$12,426	$20,064	$0	$383	$0	$409	$160	$952	$109,060	$214	$24,558	$1,166	$133,619
5806	$10,009	$11,576	$0	$102	$0	$84	$33	$219	$331,024	$0	$0	$219	$331,024
5809	$12,236	$19,029	$0	$364	$0	$363	$143	$870	$306,536	$426	$150,010	$1,296	$456,546
5811	$17,229	$22,973	$0	$184	$0	$307	$121	$612	$60,577	$167	$16,486	$778	$77,063
5812	$18,182	$28,915	$792	$491	$0	$574	$225	$2,083	$181,208	$1,495	$130,053	$3,577	$311,261
5813	$13,523	$23,325	$0	$414	$0	$524	$206	$1,144	$49,201	$0	$0	$1,144	$49,201
5815	$15,898	$36,881	$792	$588	$0	$1,123	$441	$2,943	$155,990	$357	$18,938	$3,301	$174,928

A2. First year cash flow estimations: One adult, one child age 30 months

Program ID	Year before entry	Year after exit	Public benefits paid by MN	Public benefit admin costs	Tax credit savings	Income taxes	Sale taxes	Average cash flow per placement from savings & taxes	Total benefit & taxes cash flow	Average crime savings per placement	Total crime savings	Average total cash flow per placement	Total cash flow year 1
5762	$8,301	$12,994	$1,479	$436	-$298	$251	$99	$1,967	$1,120,960	$1,241	$707,486	$3,208	$1,828,445
5776	$13,516	$20,286	$975	$416	-$379	$362	$142	$1,516	$621,703	$328	$134,291	$1,844	$755,994
5777	$12,841	$24,555	$1,728	$720	-$169	$627	$246	$3,152	$787,926	$334	$83,430	$3,485	$871,356
5784	$8,510	$19,824	$2,503	$858	-$703	$605	$238	$3,501	$703,678	$2,111	$424,273	$5,612	$1,127,951
5785	$17,465	$21,810	$202	$478	$7	$232	$91	$1,011	$125,332	$678	$84,031	$1,688	$209,363
5789	$14,697	$21,668	$582	$337	-$319	$373	$146	$1,119	$111,264	$0	$0	$1,119	$111,264
5790	$0	$1,642	$61	$12	-$140	$88	$34	$55	$3,672	$0	$0	$55	$3,672
5792	$12,734	$14,943	$780	$228	-$97	$118	$46	$1,076	$1,078,941	$38	$38,465	$1,114	$1,117,406
5794	$10,538	$25,877	$2,639	$1,011	-$157	$821	$322	$4,636	$365,669	$1,887	$148,817	$6,522	$514,486
5796	$11,960	$17,619	$1,333	$152	-$433	$303	$119	$1,474	$86,942	$0	$0	$1,474	$86,942
5797	$23,775	$34,911	$2,379	$733	$1,178	$596	$234	$5,120	$220,145	$2,211	$95,068	$7,331	$315,213
5799	$12,593	$16,334	$1,115	-$1	-$334	$200	$79	$1,059	$114,341	$737	$79,592	$1,796	$193,933
5800	$12,332	$19,332	$1,280	$477	-$430	$374	$147	$1,848	$142,330	$2,529	$194,767	$4,378	$337,097
5803	$16,985	$25,329	$813	$744	$161	$446	$175	$2,340	$226,938	$0	$0	$2,340	$226,938
5804	$24,560	$30,352	$996	$433	$476	$310	$122	$2,337	$355,151	$502	$76,268	$2,838	$431,418
5805	$12,426	$20,064	$1,305	$508	-$457	$409	$160	$1,925	$220,517	$214	$24,558	$2,139	$245,076
5806	$10,009	$11,576	$494	$146	-$48	$84	$33	$709	$1,072,394	$0	$0	$709	$1,072,394
5809	$17,229	$22,973	$444	$583	$64	$307	$121	$1,519	$150,370	$167	$16,486	$1,685	$166,856
5811	$12,236	$19,029	$1,310	$477	-$426	$363	$143	$1,867	$657,799	$426	$150,010	$2,293	$807,809
5812	$18,182	$28,915	$1,315	$953	$610	$574	$225	$3,678	$319,989	$1,495	$130,053	$5,172	$450,042
5813	$13,523	$23,325	$1,369	$592	-$239	$524	$206	$2,452	$105,445	$0	$0	$2,452	$105,445
5815	$15,898	$36,881	$3,907	$1,649	$1,378	$1,123	$441	$8,497	$450,352	$357	$18,938	$8,855	$469,290

A3. First year cash flow estimations: One adult, 3 dependent children

Program ID	Year before entry	Year after exit	Public benefits paid by MN	Public benefit admin costs	Tax credit savings	Income taxes	Sale taxes	Average cash flow per placement from savings & taxes	Total benefit & taxes cash flow	Average crime savings per placement	Total crime savings	Average total cash flow per placement	Total cash flow year 1
5762	$8,301	$12,994	$1,478	$434	-$756	$251	$99	$1,506	$858,190	$1,241	$707,486	$2,747	$1,565,675
5776	$13,516	$20,286	$2,133	$629	-$865	$362	$142	$2,401	$984,553	$328	$134,291	$2,729	$1,118,844
5777	$12,841	$24,555	$3,810	$1,125	-$613	$627	$246	$5,195	$1,298,676	$334	$83,430	$5,528	$1,382,106
5784	$8,510	$19,824	$3,563	$1,052	-$1,405	$605	$238	$4,053	$814,630	$2,111	$424,273	$6,164	$1,238,903
5785	$17,465	$21,810	$1,369	$410	-$701	$232	$91	$1,402	$173,816	$678	$84,031	$2,079	$257,847
5789	$14,697	$21,668	$2,196	$653	-$957	$373	$146	$2,411	$239,689	$0	$0	$2,411	$239,689
5790	$0	$1,642	$0	$0	-$165	$88	$34	-$43	-$2,832	$0	$0	-$43	-$2,832
5792	$12,734	$14,943	$696	$205	-$119	$118	$46	$947	$949,541	$38	$38,465	$985	$988,006
5794	$10,538	$25,877	$4,922	$826	-$773	$821	$322	$6,118	$482,569	$1,887	$148,817	$8,004	$631,386
5796	$11,960	$17,619	$1,783	$526	-$410	$303	$119	$2,321	$136,915	$0	$0	$2,321	$136,915
5797	$23,775	$34,911	$1,557	$664	$1,990	$596	$234	$5,041	$216,748	$2,211	$95,068	$7,252	$311,816
5799	$12,593	$16,334	$1,178	$348	-$318	$200	$79	$1,487	$160,565	$737	$79,592	$2,224	$240,157
5800	$12,332	$19,332	$2,204	$651	-$599	$374	$147	$2,777	$213,863	$2,529	$194,767	$5,307	$408,630
5803	$16,985	$25,329	$2,534	$119	-$258	$446	$175	$3,017	$292,607	$0	$0	$3,017	$292,607
5804	$24,560	$30,352	$615	$303	$842	$310	$122	$2,192	$333,111	$502	$76,268	$2,693	$409,378
5805	$12,426	$20,064	$2,406	$711	-$851	$409	$160	$2,835	$324,758	$214	$24,558	$3,049	$349,316
5806	$10,009	$11,576	$493	$145	-$245	$84	$33	$510	$771,307	$0	$0	$510	$771,307
5809	$17,229	$22,973	$1,893	$557	-$626	$307	$121	$2,252	$222,937	$167	$16,486	$2,418	$239,423
5811	$12,236	$19,029	$2,140	$631	-$559	$363	$143	$2,718	$957,624	$426	$150,010	$3,144	$1,107,634
5812	$18,182	$28,915	$2,682	$876	$455	$574	$225	$4,813	$418,745	$1,495	$130,053	$6,307	$548,798
5813	$13,523	$23,325	$3,171	$934	-$875	$524	$206	$3,960	$170,289	$0	$0	$3,960	$170,289
5815	$15,898	$36,881	$4,512	$1,528	$1,755	$1,123	$441	$9,358	$495,985	$357	$18,938	$9,716	$514,923

A4. 10-year present value and cash flow projections: One adult, no dependents

Program ID	Present Value of cash flow	Year 1 after exit	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Program intensity	6-month retention
5762	$7,737,001	$1,064,075	$969,055	$950,354	$932,014	$932,014	$932,014	$932,014	$932,014	$932,014	$932,014	Low	88%
5776	$2,424,889	$468,994	$337,790	$266,937	$266,937	$266,937	$266,937	$266,937	$266,937	$266,937	$266,937	High	69%
5777	$1,978,442	$425,606	$310,693	$248,554	$198,843	$198,843	$198,843	$198,843	$198,843	$198,843	$198,843	Low	70%
5784	$4,163,208	$714,896	$558,508	$475,427	$475,427	$475,427	$475,427	$475,427	$475,427	$475,427	$475,427	High	75%
5785	$1,129,995	$141,783	$135,746	$139,468	$139,468	$139,468	$139,468	$139,468	$139,468	$139,468	$139,468	High	93%
5789	$535,312	$74,685	$66,857	$64,530	$64,530	$64,530	$64,530	$64,530	$64,530	$64,530	$64,530	High	87%
5790	$81,394	$28,756	$15,546	$9,493	$5,797	$5,797	$5,797	$5,797	$5,797	$5,797	$5,797	Low	51%
5792	$1,600,571	$402,196	$269,477	$199,418	$147,572	$147,572	$147,572	$147,572	$147,572	$147,572	$147,572	Low	64%
5794	$1,959,184	$294,017	$251,101	$232,026	$232,026	$232,026	$232,026	$232,026	$232,026	$232,026	$232,026	High	82%
5796	$301,718	$44,934	$39,427	$37,356	$35,393	$35,393	$35,393	$35,393	$35,393	$35,393	$35,393	Low	85%
5797	$984,162	$179,161	$134,538	$110,446	$110,446	$110,446	$110,446	$110,446	$110,446	$110,446	$110,446	High	72%
5799	$794,158	$137,125	$112,036	$99,381	$88,154	$88,154	$88,154	$88,154	$88,154	$88,154	$88,154	Low	79%
5800	$1,050,10	$263,177	$176,599	$130,864	$96,974	$96,974	$96,974	$96,974	$96,974	$96,974	$96,974	Low	64%
5803	$648,105	$85,609	$79,352	$79,107	$79,107	$79,107	$79,107	$79,107	$79,107	$79,107	$79,107	High	90%
5804	$1,893,438	$309,514	$259,748	$236,165	$214,724	$214,724	$214,724	$214,724	$214,724	$214,724	$214,724	Low	81%
5805	$591,361	$133,619	$94,993	$74,182	$57,931	$57,931	$57,931	$57,931	$57,931	$57,931	$57,931	Low	68%
5806	$1,420,214	$331,024	$208,589	$146,040	$146,040	$146,040	$146,040	$146,040	$146,040	$146,040	$146,040	High	60%
5809	$461,320	$77,063	$63,994	$57,620	$51,882	$51,882	$51,882	$51,882	$51,882	$51,882	$51,882	Low	80%
5811	$2,026,845	$456,546	$295,003	$211,270	$211,270	$211,270	$211,270	$211,270	$211,270	$211,270	$211,270	High	62%
5812	$2,308,684	$311,261	$284,790	$280,505	$280,505	$280,505	$280,505	$280,505	$280,505	$280,505	$280,505	High	88%
5813	$470,909	$49,201	$50,677	$55,745	$61,320	$61,320	$61,320	$61,320	$61,320	$61,320	$61,320	Low	100%
5815	$1,387,447	$174,928	$166,973	$171,069	$171,069	$171,069	$171,069	$171,069	$171,069	$171,069	$171,069	High	92%

A5. 10-year present value and cash flow projections: One adult, one child age 30 months

Program ID	Present Value of cash flow	Year 1 after exit	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Program intensity	6-month retention
5762	$13,294,815	$1,828,445	$1,665,168	$1,633,034	$1,601,519	$1,601,519	$1,601,519	$1,601,519	$1,601,519	$1,601,519	$1,601,519	Low	88%
5776	$3,908,795	$755,994	$544,500	$430,288	$430,288	$430,288	$430,288	$430,288	$430,288	$430,288	$430,288	High	69%
5777	$4,050,522	$871,356	$636,090	$508,872	$407,098	$407,098	$407,098	$407,098	$407,098	$407,098	$407,098	Low	70%
5784	$6,568,640	$1,127,951	$881,205	$750,120	$750,120	$750,120	$750,120	$750,120	$750,120	$750,120	$750,120	High	75%
5785	$1,668,599	$209,363	$200,448	$205,944	$205,944	$205,944	$205,944	$205,944	$205,944	$205,944	$205,944	High	93%
5789	$797,498	$111,264	$99,603	$96,136	$96,136	$96,136	$96,136	$96,136	$96,136	$96,136	$96,136	High	87%
5790	$10,393	$3,672	$1,985	$1,212	$740	$740	$740	$740	$740	$740	$740	Low	51%
5792	$4,446,812	$1,117,406	$748,680	$554,035	$409,995	$409,995	$409,995	$409,995	$409,995	$409,995	$409,995	Low	64%
5794	$3,428,286	$514,486	$439,390	$406,012	$406,012	$406,012	$406,012	$406,012	$406,012	$406,012	$406,012	High	82%
5796	$583,791	$86,942	$76,288	$72,279	$68,482	$68,482	$68,482	$68,482	$68,482	$68,482	$68,482	Low	85%
5797	$1,731,518	$315,213	$236,703	$194,317	$194,317	$194,317	$194,317	$194,317	$194,317	$194,317	$194,317	High	72%
5799	$1,123,160	$193,933	$158,451	$140,552	$124,675	$124,675	$124,675	$124,675	$124,675	$124,675	$124,675	Low	79%
5800	$1,345,048	$337,097	$226,201	$167,621	$124,211	$124,211	$124,211	$124,211	$124,211	$124,211	$124,211	Low	64%
5803	$1,718,034	$226,938	$210,351	$209,700	$209,700	$209,700	$209,700	$209,700	$209,700	$209,700	$209,700	High	90%
5804	$2,639,179	$431,418	$362,051	$329,181	$299,294	$299,294	$299,294	$299,294	$299,294	$299,294	$299,294	Low	81%
5805	$1,084,641	$245,076	$174,231	$136,061	$106,253	$106,253	$106,253	$106,253	$106,253	$106,253	$106,253	Low	68%
5806	$4,600,961	$1,072,394	$675,750	$473,114	$473,114	$473,114	$473,114	$473,114	$473,114	$473,114	$473,114	High	60%
5809	$998,847	$166,856	$138,558	$124,759	$112,334	$112,334	$112,334	$112,334	$112,334	$112,334	$112,334	Low	80%
5811	$3,586,283	$807,809	$521,975	$373,819	$373,819	$373,819	$373,819	$373,819	$373,819	$373,819	$373,819	High	62%
5812	$3,338,050	$450,042	$411,768	$405,574	$405,574	$405,574	$405,574	$405,574	$405,574	$405,574	$405,574	High	88%
5813	$1,009,225	$105,445	$108,609	$119,469	$131,416	$131,416	$131,416	$131,416	$131,416	$131,416	$131,416	Low	100%
5815	$3,722,192	$469,290	$447,950	$458,938	$458,938	$458,938	$458,938	$458,938	$458,938	$458,938	$458,938	High	92%

A6. 10-year present value and cash flow projections: One adult, 3 dependents

Program ID	Present Value of cash flow	Year 1 after exit	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Program intensity	6-month retention
5762	$11,384,187	$1,565,675	$1,425,863	$1,398,347	$1,371,361	$1,371,361	$1,371,361	$1,371,361	$1,371,361	$1,371,361	$1,371,361	Low	88%
5776	$5,784,876	$1,118,844	$805,841	$636,811	$636,811	$636,811	$636,811	$636,811	$636,811	$636,811	$636,811	High	69%
5777	$6,424,757	$1,382,106	$1,008,938	$807,150	$645,720	$645,720	$645,720	$645,720	$645,720	$645,720	$645,720	Low	70%
5784	$7,214,770	$1,238,903	$967,885	$823,906	$823,906	$823,906	$823,906	$823,906	$823,906	$823,906	$823,906	High	75%
5785	$2,055,011	$257,847	$246,868	$253,637	$253,637	$253,637	$253,637	$253,637	$253,637	$253,637	$253,637	High	93%
5789	$1,717,997	$239,689	$214,567	$207,099	$207,099	$207,099	$207,099	$207,099	$207,099	$207,099	$207,099	High	87%
5790	-$8,015	-$2,832	-$1,531	-$935	-$571	-$571	-$571	-$571	-$571	-$571	-$571	Low	51%
5792	$3,931,854	$988,006	$661,980	$489,876	$362,516	$362,516	$362,516	$362,516	$362,516	$362,516	$362,516	Low	64%
5794	$4,207,252	$631,386	$539,227	$498,266	$498,266	$498,266	$498,266	$498,266	$498,266	$498,266	$498,266	High	82%
5796	$919,346	$136,915	$120,137	$113,825	$107,844	$107,844	$107,844	$107,844	$107,844	$107,844	$107,844	Low	85%
5797	$1,712,858	$311,816	$234,152	$192,223	$192,223	$192,223	$192,223	$192,223	$192,223	$192,223	$192,223	High	72%
5800	$1,630,471	$408,630	$274,201	$203,190	$150,569	$150,569	$150,569	$150,569	$150,569	$150,569	$150,569	Low	64%
5799	$1,390,865	$240,157	$196,217	$174,052	$154,391	$154,391	$154,391	$154,391	$154,391	$154,391	$154,391	Low	79%
5803	$2,215,180	$292,607	$271,220	$270,381	$270,381	$270,381	$270,381	$270,381	$270,381	$270,381	$270,381	High	90%
5804	$2,504,350	$409,378	$343,555	$312,364	$284,004	$284,004	$284,004	$284,004	$284,004	$284,004	$284,004	Low	81%
5805	$1,545,983	$349,316	$248,338	$193,933	$151,447	$151,447	$151,447	$151,447	$151,447	$151,447	$151,447	Low	68%
5806	$3,309,188	$771,307	$486,026	$340,282	$340,282	$340,282	$340,282	$340,282	$340,282	$340,282	$340,282	High	60%
5809	$1,433,255	$239,423	$198,819	$179,018	$161,189	$161,189	$161,189	$161,189	$161,189	$161,189	$161,189	Low	80%
5811	$4,917,358	$1,107,634	$715,710	$512,564	$512,564	$512,564	$512,564	$512,564	$512,564	$512,564	$512,564	High	62%
5812	$4,070,546	$548,798	$502,126	$494,572	$494,572	$494,572	$494,572	$494,572	$494,572	$494,572	$494,572	High	88%
5813	$1,629,852	$170,289	$175,398	$192,938	$212,232	$212,232	$212,232	$212,232	$212,232	$212,232	$212,232	Low	100%
5815	$4,084,132	$514,923	$491,508	$503,564	$503,564	$503,564	$503,564	$503,564	$503,564	$503,564	$503,564	High	92%