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## Estimation of the Cost of a Newark Promise

George A. Erickcek

*W.E. Upjohn Institute*, [erickcek@upjohn.org](mailto:erickcek@upjohn.org)

Michelle Miller-Adams

*W.E. Upjohn Institute*, [miller-adams@upjohn.org](mailto:miller-adams@upjohn.org)

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## Estimation of the Cost of a Newark Promise

George A. Erickcek and Michelle Miller-Adams  
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This report offers an estimate of the cost of a place-based scholarship program, with a similar program structure as the Kalamazoo Promise, for the City of Newark, New Jersey. It is assumed that the projected Newark Promise scholarship program would begin in the fall of 2013, and the full cost of the scholarship would not occur until 2016 when four years of students are enrolled with Promise scholarships. Once “fully loaded,” annual cost estimates for a Newark Promise range from *approximately \$8 million to \$11.5 million per year*, although costs would be substantially lower in the initial years of the program. Only the scholarship costs are estimated in this report; costs associated with administering the scholarship program or any related support programs are not included.

### Background

Discussions of a Promise program for Newark have been under way for more than a year under the auspices of the Newark Education Subcommittee of the Council of New Jersey Grantmakers. The key contextual factors that stakeholders hope to address with a Promise program are these:

- The City of Newark has a low proportion of residents with four-year degrees (13.9 percent), creating challenges for workforce development and economic revitalization. This compares to a state average of 35.4 percent and a national average of 28.5 percent.
- Only 55 percent of Newark Public Schools graduates attend college, and of these 62 percent go to two-year colleges, most of them to Essex County College, a community college located within Newark. Of students who attend Essex County College seeking to complete a certificate or degree program, only 10 percent successfully complete the program. Research suggests that the value of post-secondary education in terms of employability and earnings depends less on credits earned, and more on degree or certificate completion; thus, the low completion rate for students in two-year programs is a cause for concern.
- Similarly, research finds that a community benefits when a high proportion of its residents hold two-year and four-year degrees, with higher earnings not just for the degree holder, but for the community as a whole.

Thus, there are at least two critical needs that a Newark Promise might seek to address, including a shortfall in the proportion of residents with four-year degrees and low rates of college completion. In this report we offer cost estimates for two program designs, one directed toward post-secondary educational attainment in general and the other focused on four-year degrees.

**Key Assumptions**

The assumptions on which this cost estimate is based come from discussions with the Newark Education Subcommittee and its representatives, data from publicly available sources, and data from the Newark Schools Research Collaborative at Rutgers University. Stakeholders are still in discussions over whether the overriding goal of a Promise program should be 1) increasing the percentage of residents with four-year degrees, or 2) increasing college access and degree attainment at all levels. Clearly, the design of the program will vary depending on which of these critical issues the program’s sponsors decide to address. Cost estimates are provided for each option, but there are some assumptions that are common to both. These include the following:

**Student eligibility.** All Newark residents who graduate from high school would be eligible for the program. This includes students from public, charter, magnet, private, and vocational schools. Eligibility will be determined based on length of residency in Newark and enrollment in Newark schools on the same sliding scale used in the Kalamazoo Promise:

<u>Length of Attendance.....</u>	<u>Benefit</u>
K-12.....	100%
1-12.....	95%
2-12.....	95%
3-12.....	95%
4-12.....	90%
5-12.....	85%
6-12.....	80%
7-12.....	75%
8-12.....	70%
9-12.....	65%
10-12.....	0%
11-12.....	0%
12.....	0%

**Eligible post-secondary institutions.** Students would use their Newark Promise scholarships only to attend public, in-state colleges or universities in New Jersey. They would receive funding for up to 130 credits, to be used within six years of high school graduation (with deferments for military service).

**Middle-dollar award.** Newark Promise funds would be awarded after federal and state grants are calculated. Such grants include federally funded Pell grants, as well as state-level Educational Opportunity Fund (EOF) grants, and Tuition Aid Grants (TAG).

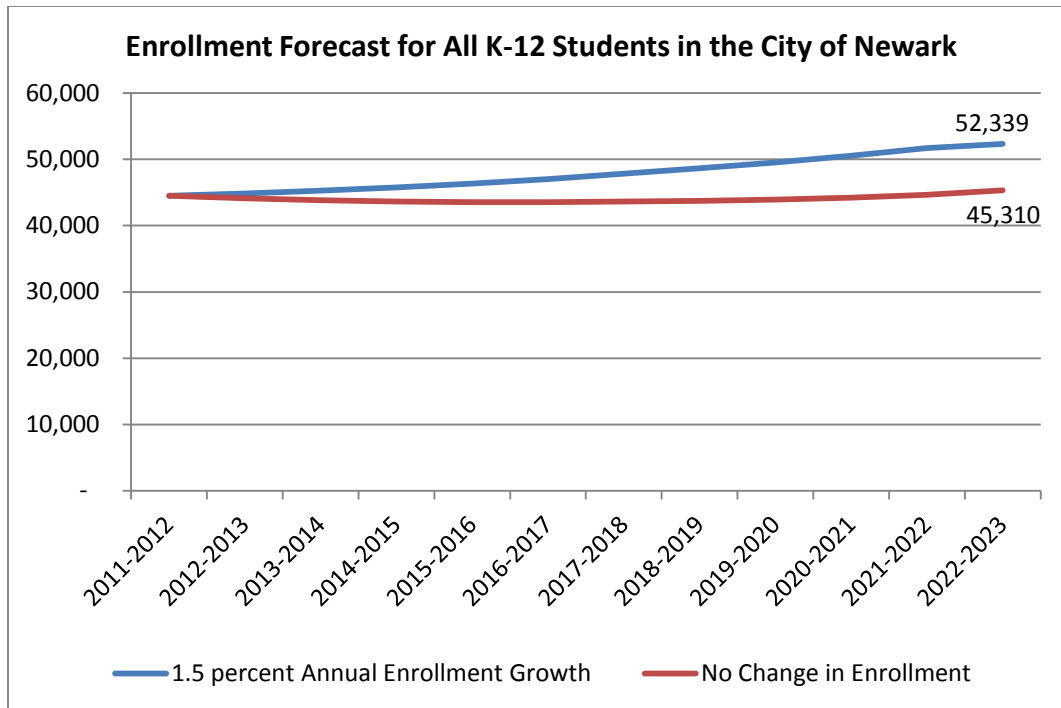
The basic assumptions of the two models are described here. The first, Program Design No. 1, is specifically targeted to increase the four-year degree attainment rate for Newark high school graduates. The second, Program Design No. 2, is the more comprehensive option, which aligns more closely with the Kalamazoo Promise and other place-based scholarship programs.

	<b>Program Design No. 1</b>	<b>Program Design No. 2</b>
<b>Critical need</b>	To increase the percentage of Newark residents with four-year college degrees.	To increase post-secondary educational opportunities for all Newark high school graduates.
<b>Response</b>	Promise scholarship for four-year programs only at public, in-state colleges or universities.	Promise scholarship for any post-secondary program offered by public, in-state college or university.
<b>Key advantage</b>	Likely to result in higher rates of four-year attendance and (possibly) completion; may attract some new residents.	Likely to create broad buy-in and incentives for more students to pursue post-secondary education.
<b>Key disadvantage</b>	Not available to lower-achieving students who cannot gain admission to four-year programs. These students are more likely to be low-income.	Does not directly address issue of low percentage of residents with four-year degrees and does not necessarily resolve low completion rates at Essex County College.
<b>Key challenge</b>	Residents with four-year degrees have greater employment mobility; mechanisms (e.g., internships) to attach 4-year graduates to local economy are essential.	Students who attend two-year programs are more likely to remain in Newark and become part of the local workforce.

### **Enrollment Forecast**

The first step in estimating the potential cost of a Newark Promise is forecasting its potential impact on the school district’s enrollment and graduation rate. As mentioned above, the proposed scholarship would be available for students attending public, charter, and private schools in the City of Newark. To estimate combined enrollment growth of these three types of schools, a standard survival-cohort forecast model was created using the districts’ historical five-year average rate of grade advancement. Based on conversations with stakeholders, who do not expect a major enrollment boost from a Newark Promise, our enrollment forecast offers two scenarios—the first projects no growth in enrollments, and the second projects a 1.5 percent annualized growth rate. Expectations are that the enrollment effect of a Newark Promise would fall within this range—with zero enrollment impact, enrollment would grow slightly from 44,109 (2011) to 45,310 (2023), while the 1.5 percent enrollment growth rate would lead to an increase in enrollment to 52,339 by 2023.

Based on data from the Kalamazoo Promise, no major changes in high school graduation or dropout rates are expected as a result of a Promise program.



### College-going Patterns

The next step in producing a cost estimate is estimating the changes in college-going patterns likely to result from a Newark Promise. Here, the two program designs will have different effects. To reiterate, currently 55 percent of Newark Public Schools graduates go to college. Of these, 62.1 percent go to two-year programs while 22.2 percent go to public, in-state, four-year programs.

The assumptions of the impact of a Newark Promise on college-going are as follows:

- The percentage of college-going graduates attending public state universities will increase to 27.8 percent in year one and to 34.7 percent in year two, then hold steady.
- Some students who planned to attend a private college or an out-of-state school will go to a public state university instead.
- More students will switch from attending a two-year program to a public, in-state four-year university. The number of students attending two-year programs is modeled to decline to 60.2 percent in year one and 58.4 percent in year two, then hold steady.

To read more about the logic underlying these assumptions, see the Methodological Appendix.

There are a few key pieces of information that would have been helpful to our analysis but were not available. According to data from the Newark Schools Research Collaborative, only 9.0 percent of community college students complete a two-year degree, while 32.5 percent of community college students also enroll in a public four-year program. However, we do not know the number of non-completers who transfer to four-year programs, and we do not know the directions of the transfer—that is, some students transfer from two-year to four-year programs, while others move in the opposite direction. Based on our incomplete knowledge of these trends, the model assumes that 30 percent of students attending community college will transfer to a four-year public, state university with the incentive of a Newark Promise.

The cost model for both program designs also encompasses several other non-school related assumptions:

- **Migration.** Based on national trends, we estimate that 3.4 percent of the city’s families will move annually. Thus, only 66 percent of graduating students will be eligible for a 100 percent scholarship. (Some stakeholders have suggested that migration rates may be higher in Newark than for the nation, although specific rates were not obtained. A higher migration rate would depress eligibility and lower the overall usage and cost of the program.)
- **Cost of college.** Tuition costs are estimated to increase by 4.5 percent a year. The rate of inflation used to adjust public programs (Pell, EOF, and TAG) is estimated at 2.5 percent annually.
- **Availability of financial aid.** In 2010, 82 percent of Newark students were eligible for free or reduced-priced lunch, meaning that they are also eligible for federal and state needs-based aid; we anticipate this number will remain constant over the period of the scholarship. Based on conversations with stakeholders, we are assuming that students eligible for federal/state financial aid will receive the maximum amount in 2013 (\$14,200). Financial aid is capped at the cost of tuition. Not all eligible students will go to college, however. In the chart below, we present our assumptions on the percentage of eligible students attending college. For example, we assume that 100 percent of the students not attending college would have been eligible for federal and state needs-based aid, while 50 percent of the students attending a public 4-year university are eligible. We assume that none of the students going out of state or to a private university are eligible.
- **College completion.** We forecast that community college completions will reach 14.5 percent and completions at four-year colleges and universities will reach 42.6 percent by 2023.

Current College Choice and Aid Eligibility Patterns

Student choice	Estimated # of graduates (2012)	% of graduates	Assumed % eligible for aid	Number of students eligible for aid
Not attending college	1125	45	100	1125
Community college	871	34	95	828
Public, 4-year	312	12	50	156
Private, 4-year, in-state	104	4	0	0
Out of state	117	5	0	0
<b>Total</b>	2528	100	83	2109

**Cost Estimate**

Two sets of cost estimates are presented here. The first is the cost of Program Design No. 1 (four-year institutions only) and Program Design No.2 (any post-secondary program) under a no-growth enrollment scenario. The second estimates costs for both program designs under a 1.5 percent enrollment growth scenario. Costs are forecast for a 10-year period, beginning with the Class of 2013. It takes four years for the programs to become “fully loaded”—that is, with four classes of students enrolled. The current model assumes that college-going students will attend college the year after graduating from high school. However, the Newark Schools Research Collaborative found that only 67 percent of college-going students attend college in the fall after graduating high school. This means that the model’s cost estimates are front-loaded (actual cost is likely to be somewhat lower given the six-year time frame for usage of the Promise).

No Enrollment Change Scenario			
Class	Alternative Scholarship Programs		
	4-yr only	2- and 4-year	Difference
2013	1,984,425	2,130,305	\$ 145,880
2014	3,774,210	3,969,236	\$ 195,026
2015	5,219,771	5,489,083	\$ 269,312
2016	6,462,166	6,794,397	\$ 332,231
2017	6,861,822	7,460,237	\$ 598,415
2018	7,071,232	7,469,502	\$ 398,270
2019	7,437,132	8,053,719	\$ 616,587
2020	7,734,348	8,145,805	\$ 411,456
2021	7,877,602	8,236,741	\$ 359,139
2022	8,457,698	8,850,987	\$ 393,288
2023	9,189,863	9,385,146	\$ 195,283

1.5 Percent Annual Enrollment Growth Scenario			
Class	Alternative Scholarship Programs		
	4-yr only	2- and 4-year	Difference
2013	2,028,488	2,177,607	\$ 149,119
2014	3,918,827	4,121,653	\$ 202,825
2015	5,502,170	5,785,948	\$ 283,779
2016	6,922,166	7,277,529	\$ 355,364
2017	7,523,289	8,173,058	\$ 649,768
2018	7,942,756	8,387,451	\$ 444,696
2019	8,553,310	9,249,921	\$ 696,611
2020	9,113,361	9,597,291	\$ 483,930
2021	9,535,399	9,969,513	\$ 434,114
2022	10,441,735	10,928,432	\$ 486,697
2023	11,447,764	11,686,125	\$ 238,361

To summarize the key points of the above estimates, the annual cost for a Newark Promise will range from *approximately \$6 million to \$11.5 million per year*, depending on enrollment growth assumptions, although costs will be substantially lower in the initial years of the program. There are only small cost differences between a zero-growth and 1.5 percent growth enrollment scenario. In addition, including two-year post-secondary programs in the model adds at most approximately \$700,000 to the cost of the scholarship program, an increase of 8.0 percent. This is because of the low cost of community college and our assumption that 95 percent of the students attending community college are eligible for federal and state needs-based grants. Put another way, there are minimal cost savings from a decision to focus on four-year programs only. This underscores the point that creating incentives to address Newark’s critical needs, rather than cost concerns, should drive the decision about program design.

We will be happy to answer any questions about our methods and findings. Please contact Michelle Miller-Adams at [miller-adams@upjohn.org](mailto:miller-adams@upjohn.org) or George Erickcek at [erickcek@upjohn.org](mailto:erickcek@upjohn.org) for additional information.



## Methodological Appendix

### *Assumptions about college attendance and persistence*

The following two tables show the estimates used in the model for 1) the change in the percentage of students that will attend public college in New Jersey, and 2) the retention rate for these students.

For example, in 2012, it is expected that 50 percent of the college-going high school graduates of the Newark Public Schools will attend Essex County College, while 3.0 percent will attend Kean University. By 2022, we are assuming that a greater percentage of Newark college-going graduates will be attending four-year universities; therefore, only 47 percent of them are expected to enroll at Essex County College while 4.7 percent will attend Kean University.

Regarding retention, as show below, only 32.5 percent of the students attending community college will return for their second year. This will increase to 38 percent by 2022. At the same time, the percent of students starting at a community college and transferring to a four-year university in their third year is 32.5 percent, which remains constant during the forecast period. For students attending a four-year university, we project that in 2012, 58 percent will return for their second year, 46.4 percent will return for their third year and, finally, 37.1 percent will return for their fourth year. These percentages increase to 80.3 percent, 64.2 percent, and 51.4 percent by 2022.



College Retention Assumptions

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Associate Degree</b>													
<b>Percent of students returning to their second year</b>	32.5%	33.0%	33.5%	34.0%	34.5%	35.0%	35.5%	36.0%	36.5%	37.0%	37.5%	38.0%	38.5%
Percent of community college students transferring to a four-year college	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%
<b>Bachelor Degrees</b>													
Percent of students returning to their second year	58.0%	59.7%	61.5%	63.4%	65.3%	67.2%	69.3%	71.3%	73.5%	75.7%	77.9%	80.3%	80.3%
Percent of students returning to their third year	46.4%	47.8%	49.2%	50.7%	52.2%	53.8%	55.4%	57.1%	58.8%	60.5%	62.4%	64.2%	64.2%
Percent of students returning to their fourth year	37.1%	38.2%	39.4%	40.6%	41.8%	43.0%	44.3%	45.7%	47.0%	48.4%	49.9%	51.4%	51.4%

Based on IPEDS statistics for New Jersey Public Universities