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W.E. UPJOHN INSTITUTE
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FINAL REPORT

Ten-Year Cost Estimation of a Proposed Lansing Promise Scholarship

George A. Erickcek
W.E. Upjohn Institute for Employment Research

This report presents a 10-year cost estimation of a universal, place-based scholarship program for the City of Lansing. Cost estimates are presented for the following four scenarios:

1) A universal scholarship for students who reside within the City of Lansing and attend ***Lansing public schools*** only.

2) A universal scholarship for the above population plus students who reside within the City of Lansing and attend ***public charter schools*** located within city boundaries.

3) A universal scholarship for the above population plus students who reside within the City of Lansing and attend ***private schools*** located within city boundaries.

4) A universal scholarship for all students who attend Lansing Community College.

For each of the four scenarios, cost-estimates are provided for both a first-dollar scholarship program and a middle-dollar scholarship program. The first-dollar scholarship program is not means tested and is, thus, open to all eligible students in the City of Lansing. In other words, eligible students do not have to seek additional federal or private funds. The middle-dollar scholarship program would require students and their parents to complete the federal Free Application for Federal Student Aid (FAFSA) form. The scholarship would then fill the gap between federal/state financial aid and the cost of tuition.

Under all three scenarios, the scholarship program has a residency requirement which is presented below in Table 1.

Table 1 Residency Requirement

Length of Attendance	Percent of tuition and fees paid
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

Unfortunately, due to data limitations, this analysis is based on a large number of assumptions. We believe the assumptions are reasonable and most are based on either national/statewide statistics or the experience of the Kalamazoo Promise. All assumptions used in the analysis are presented in greater detail the Appendix. The key assumptions used in the analysis are the following:

1. Although the Promise Scholarship would be available for all students residing in the City of Lansing, the analysis presented here estimates the cost of the scholarship for students attending the Lansing Public Schools or attending a charter or private school in the city. A small but unknown number of students living in the City of Lansing may live within the boundaries of a different school district. In addition, it is possible that some students who attend a charter or private school in the city may live outside the city. In addition, as will be discussed below as of the 2010–11 school year, nearly 2,800 Lansing Public School District students attend classes in surrounding school districts.

   According to the U.S. Census, 18,918 children between the ages of 5 and 17 live in the City of Lansing. Total enrollment in the Lansing Public Schools, charter schools, and private schools for the 2009–10 school year was 18,209. Given that 1) nearly 2,800 district students are attending school elsewhere, 2) a small number of children are home schooled, and 3) that, unfortunately, too many students drop out of high school, it is somewhat surprising that the Lansing's public, charter, and private schools can account for 96 percent of the city's student-age population. This suggests that many of the students attending the city's private and charter schools could live outside the district. Unfortunately, we do not have any information about where the city's private- and charter-school students reside, and we have not made any adjustment for non-city students.

2. We assume the scholarship program will not require any minimum GPA performance in high school or any additional extra-curricular activities for the student. This would lower the cost of the program slightly, while increasing its administrative costs.

3. It is assumed that the scholarship will pay for all tuition and fees at any public, accredited institution in the State of Michigan. Unfortunately, we do not have any information on where college-bound Lansing graduates attend school. In this instance, we based our assumptions on the experience of Kalamazoo where, on average, 86 percent of the eligible graduates use the Promise. In addition, as shown in the Appendix, we used the Kalamazoo college selection pattern as well, except we replaced Lansing Community College for Kalamazoo Valley Community College and Central Michigan University for Western Michigan University.

4. The cost of tuition is forecast to increase by 6.5 percent annually during the 10-year forecast period.

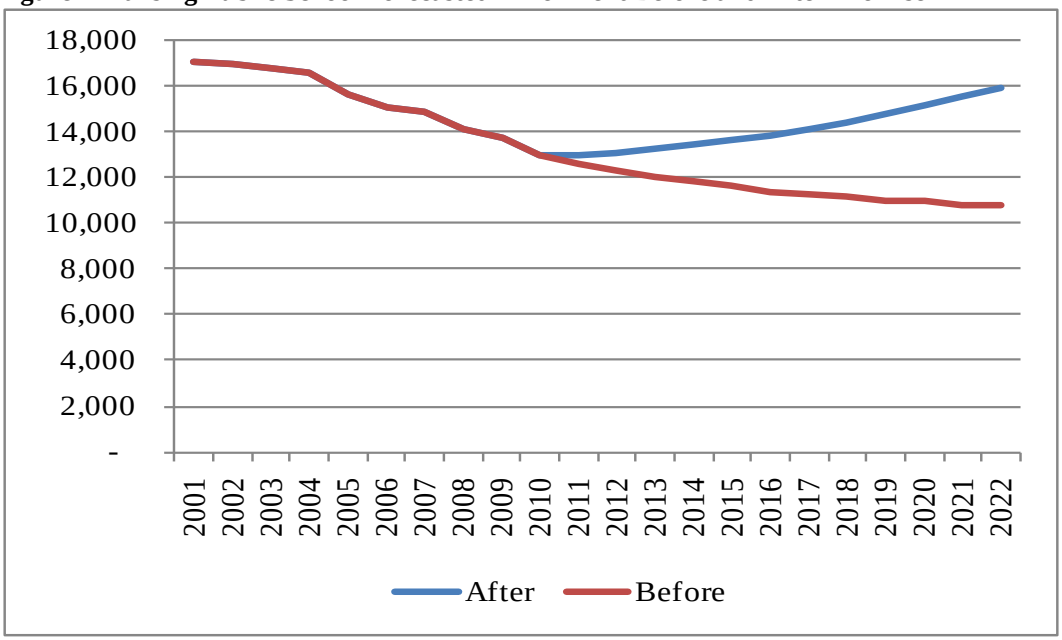
5. The availability of the federal Pell Grant, which is currently $5,500 per year, is means tested. We used the percentage of students taking free- and reduced-price lunches as a proxy for their eligibility for a Pell Grant. We assumed that the value of the Pell Grant will increase by 2.5 percent per year.

6. One of the most difficult challenges in estimating the cost of a scholarship program that has a residency requirement is estimating the length of residency for the students. Of course, individual student information is not available. In this analysis we assumed that 3.4 percent of all families in the Lansing area move in or out of the city, annually, which is (the) national average. If this migration rate is too low it would inflate the cost of the program.

7. In Kalamazoo, the first-dollar Kalamazoo Promise has had a significant impact on enrollments. After the first year, enrollments at Kalamazoo Public Schools increased by 12 percent from its expected level. The Kalamazoo Public Schools program was unique in that it received national attention. Other communities with a Promise Scholarship program have not experienced a similar jump in enrollment.

   However, Lansing is in a unique situation itself, in that for the 2010–11 school year, 2,791 Lansing Public School District students attended out-of-district schools. It is very possible that a portion of these students would return to the Lansing Public Schools if the Promise was available. We assume that enrollment of the Lansing Public Schools would increase by three percent, annually, above the Pre-Promise Forecast (see Figure 1 below). This increase in enrollment would occur due to both an increase of students entering the system, as well as a decline in the flow of students leaving the system.

Figure 1 Lansing Public School Forecasted Enrollment Before and After Promise



8. Unfortunately many college students do not complete their degrees. As shown in the Appendix, we assume that only 30 percent of the students attending community college and 60 percent of the students attending a four-year university will complete their degrees.

9. Finally, we assume that all of the eligible scholarship students will go to college in the fall after their graduation. Of course, it is possible that the Scholarship will allow a student to wait a year or to take time off from college after they enroll in college. It is simply too complicated to model these events.

Results

Scenario One: A universal scholarship for students who reside within the City of Lansing and attend *Lansing Public Schools*.

As shown in the Table 2 below, the cost of the first-dollar scholarship available to students attending Lansing Public Schools would be approximately $5 million during the fourth year and stay at that level during the forecast period. In the middle-dollar scenario, where students attending community college do not dip into the scholarship fund until and if they enter a four-year university in their third years, the cost of the scholarship would reach $2.4 million in the third year and $4.6 million in 2022.

Note that in making this forecast, we accounted for the estimated number of the city's charter school students who enter the district's high schools annually.

Table 2 Lansing Scholarship Program Available for All Students Residing in City and Attending Lansing Public Schools

Year		First dollar		Middle dollar	Difference
2012	$	1,281,258	$	855,696	$425,562
2013	$	2,186,227	$	1,535,599	$650,628
2014	$	3,368,659	$	2,429,446	$939,212
2015	$	4,563,386	$	3,364,686	$1,198,699
2016	$	4,397,218	$	3,296,166	$1,101,052
2017	$	4,618,110	$	3,473,645	$1,144,465
2018	$	4,778,889	$	3,618,039	$1,160,850
2019	$	4,847,164	$	3,698,874	$1,148,290
2020	$	5,381,713	$	4,140,750	$1,240,963
2021	$	5,587,527	$	4,337,301	$1,250,226
2022	$	6,011,628	$	4,684,958	$1,326,669

Scenario Two: A universal scholarship for the above population plus students who reside within the City of Lansing and attend *public charter schools* located within city boundaries.

In this scenario, students who attend public charter schools in the city and live in the city are eligible for the Promise Scholarship based upon their length of residency. The cost of this scholarship program is, of course, greater than the first scenario with the cost hitting $5.7 million in fourth year, and nearly $10 million in 2022, as shown in Table 3.

Finally, in preparing the middle-dollar forecast for this scenario, we assumed that the percentage of charter school students who are eligible for a Pell Grant is the same as Lansing Public School students.

Table 3 Lansing Scholarship Program Available for All Students Residing in the City of Lansing and Attending Public and Charter Schools

Year	First dollar	Middle dollar	Difference
2012	$1,537,648	$1,031,812	$505,837
2013	$2,548,144	$1,799,206	$748,938
2014	$4,164,376	$3,003,791	$1,160,585
2015	$5,727,141	$4,224,591	$1,502,550
2016	$5,985,196	$4,470,676	$1,514,520
2017	$6,547,061	$4,929,615	$1,617,446
2018	$6,982,760	$5,297,854	$1,684,907
2019	$7,356,569	$5,624,835	$1,731,734
2020	$8,103,379	$6,241,345	$1,862,034
2021	$8,809,368	$6,832,363	$1,977,005
2022	$9,632,652	$7,518,835	$2,113,816

Scenario Three: A universal scholarship for the above population plus students who reside within the City of Lansing and attend *private schools* located within city boundaries

In the final and most expensive four-year university scenario, all students residing in the City of Lansing and being taught outside the home are eligible for the scholarship. In the fourth year, the cost of the scholarship increased to nearly $8 million, and it would reach nearly $12 million in 2022, as shown in Table 4. In preparing the cost estimate for the middle-dollar, we assumed that none of the private school students would be eligible for a Pell Grant.

Table 4 Lansing Scholarship Program Available for All Students Residing in City of Lansing and Attending Public, Charter, and Private Schools

Year	First dollar	Middle dollar	Difference
2012	$2,139,195	$1,031,812	$1,107,383
2013	$3,534,973	$1,799,206	$1,735,767
2014	$5,701,195	$3,003,791	$2,697,404
2015	$7,745,139	$4,224,591	$3,520,548
2016	$8,065,864	$4,470,676	$3,595,189
2017	$8,721,851	$4,929,615	$3,792,235
2018	$9,191,439	$5,297,854	$3,893,585
2019	$9,595,461	$5,624,835	$3,970,626
2020	$10,371,624	$6,241,345	$4,130,280
2021	$11,074,816	$6,832,363	$4,242,453
2022	$11,957,742	$7,518,835	$4,438,906

Scenario Four: A universal scholarship for all students who attend Lansing Community College

Finally, we provide a lower-cost alternative that restricts usage of the Lansing Promise to Lansing Community College. No scholarship fund would be available for the third year students transferring to a four-year university. In this scenario, we do not expect any of the Lansing Public School District's students who are currently attending classes elsewhere to switch back to the Lansing Public Schools. Table 5 shows the cost of this reduced scholarship program is only $607,000 in the third year and $714,000 in 2022.

In addition, because the Pell Grant covers the cost of tuition at the community colleges, the cost of the middle-dollar scholarship program is sharply reduced. We assume that 85 percent of the students attending community college will be eligible for a Pell Grant.

It is important to understand that in this scenario the scholarship is limited to only two years. It is very possible that a significant number of students entering community college will be required to attend remedial education classes, which may make it difficult for them to complete their associate's degree within two years.

Table 5 Lansing Scholarship Program for Attending Community College Available for All Students Residing in City and Attending Lansing Public, Charter, and/or Private Schools

Year	First dollar	Middle dollar	Difference
2012	$447,487	$47,549	$399,939
2013	$573,575	$60,171	$513,405
2014	$607,755	$63,971	$543,785
2015	$643,964	$68,545	$575,419
2016	$599,372	$61,194	$538,178
2017	$632,754	$64,687	$568,067
2018	$654,416	$68,088	$586,328
2019	$640,562	$66,438	$574,124
2020	$669,730	$70,333	$599,396
2021	$688,165	$72,769	$615,396
2022	$713,679	$75,076	$638,603

APPENDIX

The following describes the methodology used in estimating the costs of the proposed scholarship programs.

Enrollment Forecast:

The enrollment forecasts for Lansing Public, charter, and private schools are based on a standard- survival cohort where the number of students advancing from one grade to the next is based on the five-year average rate for the period 2005 to 2010. The following are the enrollment forecasts used in the analysis.

Table A-1 Baseline Enrollment Forecast for Lansing Public Schools—Before the Proposed Lansing Promise

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
K	1,253	1,245	1,237	1,230	1,222	1,214	1,207	1,199	1,192	1,184	1,177	1,169	1,162
Grade 1	1,190	1,174	1,166	1,158	1,151	1,143	1,136	1,128	1,121	1,113	1,106	1,099	1,092
Grade 2	1,115	1,087	1,071	1,064	1,056	1,049	1,041	1,034	1,027	1,020	1,012	1,005	998
Grade 3	1,011	1,021	994	978	971	963	956	949	942	935	928	921	914
Grade 4	1,016	960	969	943	928	920	913	906	899	892	885	878	872
Grade 5	977	953	898	907	881	867	860	853	846	839	832	826	819
Grade 6	862	893	870	818	827	803	789	782	775	769	763	756	750
Grade 7	979	853	882	860	811	819	796	783	776	770	764	758	752
Grade 8	933	927	806	835	813	766	774	752	739	734	728	722	716
Grade 9	1,312	1,325	1,319	1,204	1,231	1,211	1,166	1,173	1,152	1,140	1,134	1,129	1,123
Grade 10	982	917	930	924	815	840	821	778	786	765	754	749	743
Grade 11	784	742	680	692	687	582	607	588	548	554	535	524	519
Grade 12	599	533	494	437	448	443	346	369	352	314	320	302	292
TOTAL	13,013	12,629	12,317	12,049	11,840	11,621	11,411	11,295	11,154	11,029	10,938	10,837	10,750

Table A-2 Charter Schools Enrollment Forecast without the Promise

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
K	340	352	365	379	393	407	422	437	453	470	487	505	524
Grade 1	325	307	320	334	348	362	377	392	408	425	442	460	479
Grade 2	272	312	294	307	320	334	349	364	380	396	413	431	449
Grade 3	261	266	306	288	301	315	329	344	359	375	391	408	426
Grade 4	243	264	269	310	291	304	318	333	348	364	380	397	414
Grade 5	218	226	247	252	293	274	288	302	317	332	348	364	381
Grade 6	236	196	205	227	232	275	256	270	285	301	317	333	350
Grade 7	133	192	154	162	183	188	230	211	224	239	253	269	285
Grade 8	102	102	158	121	129	149	154	193	175	188	202	216	231
Grade 9	129	107	106	165	127	135	156	161	202	183	197	211	226
Grade 10	123	128	106	105	163	126	134	155	159	200	182	195	209
Grade 11	120	123	128	106	105	165	126	134	156	161	203	184	197
Grade 12	130	123	126	131	108	107	169	129	138	160	165	209	189
There are no Charter High Schools in Lansing, the shaded area shows our forecast estimates of increase in enrollment to the Lansing public high school due to Charter School 8th grade graduates.													
TOTAL	2,632	2,697	2,783	2,886	2,993	3,143	3,308	3,426	3,606	3,794	3,980	4,182	4,359

Table A-3 Enrollment Forecast for the Private K-12 Schools in the City of Lansing

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
K	193	185	176	169	161	154	147	141	135	129	123	117	112
Grade 1	163	161	153	146	138	131	125	118	112	106	101	95	90
Grade 2	164	153	152	145	137	131	124	118	112	106	100	95	90
Grade 3	163	155	145	144	137	130	123	117	111	106	100	95	90
Grade 4	173	160	152	143	142	135	129	123	117	111	106	101	96
Grade 5	192	175	162	155	146	145	139	132	126	121	115	110	105
Grade 6	183	181	165	152	146	137	136	130	124	118	113	107	102
Grade 7	175	166	164	148	136	130	121	120	114	108	103	98	93
Grade 8	180	171	163	161	145	134	128	119	119	113	107	102	97
Grade 9	180	178	169	162	160	145	134	128	120	119	114	108	103
Grade 10	193	181	180	171	164	162	147	136	130	123	122	116	111
Grade 11	179	179	167	166	158	150	149	134	124	118	110	109	104
Grade 12	213	185	185	173	172	163	156	154	139	128	123	115	114
Total	2,349	2,230	2,134	2,034	1,942	1,847	1,757	1,671	1,583	1,506	1,436	1,370	1,308

Table A-4 Enrollment Forecast for the Lansing Public Schools with the Lansing Promise

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
K	1,253	1,283	1,313	1,344	1,376	1,409	1,442	1,477	1,512	1,546	1,583	1,621	1,659
Grade 1	1,190	1,209	1,239	1,270	1,301	1,334	1,367	1,400	1,435	1,469	1,505	1,542	1,580
Grade 2	1,115	1,121	1,140	1,169	1,200	1,232	1,265	1,298	1,332	1,366	1,401	1,438	1,475
Grade 3	1,011	1,051	1,058	1,076	1,106	1,137	1,168	1,201	1,234	1,267	1,302	1,338	1,374
Grade 4	1,016	990	1,028	1,036	1,055	1,084	1,115	1,147	1,180	1,212	1,247	1,282	1,318
Grade 5	977	982	957	993	1,002	1,020	1,049	1,080	1,112	1,144	1,178	1,212	1,247
Grade 6	862	919	925	902	936	945	962	990	1,021	1,051	1,083	1,116	1,149
Grade 7	979	882	933	941	919	950	960	977	1,004	1,033	1,064	1,095	1,127
Grade 8	933	955	863	909	918	897	926	937	953	979	1,008	1,038	1,069
Grade 9	1,312	1,365	1,387	1,300	1,341	1,351	1,331	1,359	1,369	1,385	1,411	1,439	1,469
Grade 10	982	947	995	1,018	936	973	983	965	991	1,001	1,017	1,042	1,069
Grade 11	784	766	731	777	800	722	755	766	749	773	783	799	823
Grade 12	599	551	532	500	541	564	493	521	532	516	538	548	563
TOTAL	13,013	13,019	13,103	13,236	13,432	13,618	13,818	14,118	14,424	14,744	15,120	15,509	15,923

Because the generosity of the proposed scholarship is dependent upon the student's length of residency in the City of Lansing, it is necessary to estimate the annual migration rate of students in the city. According to the U.S. Census American Community Survey, on average, 3.4 percent of all families move in or out of a community annually.

Currently the graduation rate of Lansing public schools is 60.8 percent. Because of the availability of the Promise Scholarship, we modeled that the District's graduation rate would improve to nearly 64 percent by 2022. Based on the experience of the Kalamazoo Promise, we assumed that 84 percent of the eligible graduates take advantage of the Promise. In other words, 16 percent of the Lansing graduates who are eligible for the Promise, are assumed to either not attend college or choose to attend a private and/or out-of-state school.

The cost of the scholarship program depends upon which universities and colleges the eligible graduate attends. The following estimate is based on the history of the Kalamazoo Promise graduates with the modification of switching Lansing Community College for Kalamazoo Valley Community College and Central Michigan University for Western Michigan University. This was necessary because we could not find any information on where Lansing graduates plan to attend college.

The table below lists the major assumptions used in the model to forecast current and future student success in completing college and using the proposed Lansing Promise.

Of those going to a two-year community college, 33 percent (the national average) go on to a four-year school. At the same time, we are assuming that 85 percent of the students going to the community college are eligible for Pell Grants. We also assume that 35 percent of the students

going on to a four-year university are eligible for a Pell Grant. Currently, 78 percent of the students in the Lansing Public Schools are eligible for free and reduced-price lunch.

Finally, the college completion rates are based on IPEDS data.

Table A-5 Model Assumptions

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Key Assumptions											
Graduation rate of 9th grader	60.8	61.1	61.4	61.7	62.0	62.3	62.6	62.9	63.2	63.5	63.8
Percent attending promise eligible universities and colleges	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
Percent of community college students going on to a four-year university			33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
College and University Completion Rate Assumptions											
Associate's Degree											
Complete the two-year program	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0
Bachelor's Degree											
Attending second year	70.0	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	74.5	75.0
Attending third year	65.0	65.5	66.0	66.5	67.0	67.5	68.0	68.5	69.0	69.5	70.0
Attending fourth year	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5	54.0	54.5	55.0
Free and Reduced-Price Lunch											
Percent of students taking free and reduced-price lunch	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8	70.8
Percent of students going to a community college and eligible for a Pell Grant	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
Percent of students going to a four-year university and eligible for a Pell Grant	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0