

Executive Summary: The Potential Economic Impact of Excluding the Proposition 204 Expansion Group from Medicaid in Arizona¹

- The economic impact of excluding the Proposition 204 Expansion Group from Medicaid (separate to the complete opt-out option) using estimates provided by the Arizona Health Care Cost Containment System that totaled approximately \$2.27 billion was examined.² The table below provides summary results of the potential economic impact.

Cumulative Economic Impact of Excluding the Prop. 204 Expansion Group from Medicaid

Category	Aggregate Impact
Employment (Thousands of Job Years) ³	-457.072
Gross State Product (Billions 2010\$)	-\$46.48
Real Disposable Personal Income (Billions 2010\$)	-\$30.09

- Over the study period, in aggregate terms, approximately 457,000 total job years, \$46 billion (2010\$) in total real GSP as well as \$30 billion (2010\$) in real disposable personal income could be lost, all as a result of eliminating state funding for Medicaid.
- The following table examines employment losses at a more disaggregated level. The healthcare sector would suffer the majority of the reduction in employment due to the concentration of Prop. 204 expenditures in the healthcare sector. This amounts to approximately 13,600 jobs in year one.

¹ Matt Croucher and Tim James, L. William Seidman Research Institute, W. P. Carey School of Business, Arizona State University.

² Once a federal 2:1 match is also included.

³ This is job *years* and not actual jobs. A job year is equivalent to one person having a job for one year.

**Disaggregated Employment Impact of Excluding the Prop. 204
Expansion Group from Medicaid**

Category	Thousands of Jobs		
	Year 1	Year 10	Year 20
Forestry, Fishing, Related Activities, and Other	-0.0194	-0.0076	-0.0089
Mining	-0.0054	-0.003	-0.0037
Utilities	-0.0552	-0.0512	-0.0412
Construction	-2.0614	-1.6522	-0.4903
Manufacturing	-0.4425	-0.2542	-0.2792
Wholesale Trade	-0.5418	-0.3955	-0.297
Retail Trade	-3.8926	-2.9759	-2.2213
Transportation and Warehousing	-0.3331	-0.2439	-0.2255
Information	-0.2968	-0.2206	-0.1721
Finance and Insurance	-1.1743	-0.5403	-0.4397
Real Estate and Rental and Leasing	-1.1714	-1.2859	-1.2054
Professional and Technical Services	-1.4131	-1.2693	-1.1344
Management of Companies and Enterprises	-0.1761	-0.1043	-0.0889
Administrative and Waste Services	-2.0788	-1.3975	-1.0619
Educational Services	-0.2148	-0.2942	-0.3207
Healthcare and Social Assistance	-13.5672	-8.7708	-6.0355
Arts, Entertainment, and Recreation	-0.3408	-0.3718	-0.3923
Accommodation and Food Services	-1.1625	-1.3812	-1.1755
Other Services, except Public Administration	-1.3107	-0.9712	-0.832
Total Non-Farm employment	-30.258	-22.191	-16.426

- Other sectors, such as construction, administrative and waste services and the retail trade would also suffer significant reductions in employment. Combined, these 3 sectors account for 27 percent of the total reduction in employment.⁴

⁴ Much of this reduction is caused by the reduced level of economic activity associated with the initial reduced spending levels. However, some of the reduction will be caused by the population falling relative to the baseline case – thus, there is a smaller market to serve (again relative to the baseline).

- The distribution of job losses associated with the elimination of Prop. 204 is detailed for year one in the table below.

Job Losses Disaggregated by County in Year One

Region	Thousands of Total Jobs	Thousands of Healthcare Jobs	Healthcare Job Losses as a Percentage of Total Employment
Apache County	-0.333	-0.235	1.68%
Cochise County	-0.408	-0.24	1.08%
Coconino County	-0.835	-0.441	1.48%
Gila County	-0.194	-0.111	1.39%
Graham County	-0.117	-0.076	1.34%
Greenlee County	-0.009	-0.003	0.26%
La Paz County	-0.027	-0.013	0.50%
Maricopa County	-19.47	-8.023	1.20%
Mohave County	-0.904	-0.501	1.97%
Navajo County	-0.619	-0.353	2.35%
Pima County	-5.184	-2.428	1.48%
Pinal County	-0.481	-0.272	0.92%
Santa Cruz County	-0.132	-0.059	1.01%
Yavapai County	-0.676	-0.323	1.21%
Yuma County	-0.868	-0.49	1.42%
Total	-30.258	-13.568	1.26%

- Clearly, Maricopa and Pima counties would be heavily affected in absolute terms. However, relative to total employment, all counties apart from Pinal and La Paz would suffer total employment reductions amounting to more than 1 percent of the total.

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Executive Summary: The Potential Economic Impact of Withdrawing from Medicaid in Arizona¹

- Unlike many other state-funded expenditures, for every state dollar spent on Medicaid there is a match by the federal government (often in the ratio 1:2 or higher, state to federal). Thus the total impact of cuts in Medicaid expenditure by the state on the Arizona economy is far greater than the state-determined reduction alone would indicate following any state cut.
- The reduced expenditure estimates used within this study were provided by the Arizona Hospital and Healthcare Association and the Arizona Health Care Cost Containment System. It is assumed state expenditures are approximately \$3.6 billion whilst federal funds contribute an additional \$7.2 billion at the outset of the period examined. Thus an aggregate 1:2 match is assumed. These estimates are combined with expenditure distributions provided by the U.S. Department of Health and Human Services. The following table details the disaggregated expenditures and their corresponding percentages by categories for state and local, as well as federal spending, on Medicaid in 2009.²

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² Latest data available.

Medicaid Expenditures in 2009 (Millions of dollars)

	Federal	Percentage	State and Local	Percentage
Total National Health Expenditures	\$246,983	100.00%	\$126,957	100.00%
Hospital Care	\$90,103	36.48%	\$45,999	36.23%
Physician and Clinical Services	\$27,593	11.17%	\$12,353	9.73%
Other Professional Services	\$3,073	1.24%	\$1,456	1.15%
Dental Services	\$4,839	1.96%	\$2,308	1.82%
Other Health, Residential, and Personal Care	\$42,552	17.23%	\$21,850	17.21%
Home Health	\$15,780	6.39%	\$8,511	6.70%
Nursing Care Facilities and Continuing Care Retirement Communities	\$30,041	12.16%	\$14,915	11.75%
Prescription Drugs	\$13,316	5.39%	\$6,665	5.25%
Durable Medical Equipment	\$2,928	1.19%	\$1,386	1.09%
State	-	0.00%	\$8,270	6.51%
Federal	\$9,927	4.02%	-	0.00%
Net Cost of Private Health Insurance	\$6,831	2.77%	\$3,243	2.55%

Source: U.S. Department of Health and Human Services

- Our analysis estimates that, in the first year that reduced funding occurs, Arizona employment would be approximately 159,000 *lower* relative to a baseline without reduced funding. Real Gross State Product (GSP) would be *lower* relative to the baseline by approximately \$11.6 billion (2010\$), real disposable income would be *lower* relative to the baseline by approximately \$6.4 billion (2010\$) and the Arizona population would be *lower* relative to the baseline by approximately 43,000.
- In the 20th year of the study period (the final year), Arizona employment would be approximately 86,000 *lower* relative to the baseline. Real GSP would be *lower* relative to the baseline by approximately \$9.8 billion (2010\$), real disposable income would be *lower* relative to the baseline by approximately \$7.2 billion (2010\$) and the Arizona population would be *lower* relative to the baseline by 215,000.

- The *cumulative* impact on Arizona's economy over the 20 year study period of eliminating state funds for Medicaid is given below.

Aggregate Economic Impact of Eliminating State Funds for Medicaid

	Aggregate Impact
Employment (Thousands of Job Years) ³	-2,621.97
Gross State Product (Billions 2010\$)	-\$217.07
Real Disposable Personal Income (Billions 2010\$)	-\$145.706

- Over the 20 year study period, in *aggregate terms*, approximately 2,600,000 total person job years would be lost. \$217 billion (2010\$) in total real GSP would also be lost, as well as \$146 billion (2010\$) in real disposable personal income.
- The following table provides a summary of the distribution by sector of the potential employment effects. Examining employment at a more disaggregated level, the healthcare sector will suffer the majority of the reduction in employment - approximately 82,000 jobs in year one. However, other sectors, such as construction, administrative and waste services and retail trade will also suffer significant reductions in employment.⁴

³ This is person job *years* and not actual jobs. A person job year is equivalent to one person's employment for one year.

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Disaggregated Employment Impact of Eliminating State Funding for Medicaid

Category	Thousands of Jobs		
	Year 1	Year 10	Year 20
Forestry, Fishing, Related Activities, and Other	-0.095	-0.035	-0.04
Mining	-0.026	-0.012	-0.016
Utilities	-0.275	-0.255	-0.206
Construction	-9.572	-7.916	-2.484
Manufacturing	-2.037	-1.087	-1.291
Wholesale Trade	-2.528	-1.845	-1.414
Retail Trade	-17.246	-13.64	-10.41
Transportation and Warehousing	-1.556	-1.136	-1.072
Information	-1.391	-1.033	-0.821
Finance and Insurance	-6.423	-3.042	-2.437
Real Estate and Rental and Leasing	-5.451	-6.223	-5.934
Professional and Technical Services	-6.439	-5.848	-5.31
Management of Companies and Enterprises	-0.774	-0.45	-0.405
Administrative and Waste Services	-9.268	-6.257	-4.867
Educational Services	-1.086	-1.464	-1.617
Healthcare and Social Assistance	-81.869	-52.894	-35.661
Arts, Entertainment, and Recreation	-1.626	-1.832	-1.964
Accommodation and Food Services	-5.674	-6.83	-5.834
Other Services, except Public Administration	-6.076	-4.643	-4.054
Total Non-Farm Employment	-159.412	-116.442	-85.837

- Maricopa and Pima counties will suffer the vast majority of job losses.

Healthcare Employment Impacts Disaggregated by County in Year One

Region	Thousands of Jobs	Percentage
Apache County	-1.61	1.97%
Cochise County	-1.293	1.58%
Coconino County	-2.065	2.52%
Gila County	-0.839	1.02%
Graham County	-0.52	0.64%
Greenlee County	-0.045	0.05%
La Paz County	-0.061	0.07%
Maricopa County	-46.555	56.87%
Mohave County	-2.369	2.89%
Navajo County	-1.715	2.09%
Pima County	-17.784	21.72%
Pinal County	-1.608	1.96%
Santa Cruz County	-0.353	0.43%
Yavapai County	-2.361	2.88%
Yuma County	-2.69	3.29%
Total	-81.868	100.00%

- In summary, due in large part to federal matching criteria that does not generally otherwise occur in many other areas of state expenditures, cuts in state-funding for healthcare programs such as Medicaid inevitably lead to *amplified* negative economic impacts on the Arizona economy.

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**The Potential Economic Impact of
Withdrawing from Medicaid in Arizona**

January 2011

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Executive Summary

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- Unlike many other state-funded expenditures, for every state dollar spent on Medicaid there is a match by the federal government (often in the ratio 1:2 or higher, state to federal). Thus the total impact of cuts in Medicaid expenditure by the state on the Arizona economy is far greater than the state-determined reduction alone would indicate following any state cut.
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1. Introduction

The state of Arizona currently faces numerous budget challenges that require a difficult reassessment of spending initiatives and available revenue sources. As a result, a plethora of budget options are under consideration.

Under instruction from the Arizona Hospital and Healthcare Association, the Seidman Research Institute has produced estimates of the economic impact of the elimination of state funding of Medicaid in the Arizona healthcare sector. Our analysis is based on an independent assessment and the conclusions drawn are based on our own analysis.⁷ The scope of the analysis is limited to the issue of job and income changes that occur as a result of changes in the spending on the healthcare sector. Broader issues surrounding pricing, optimal healthcare delivery and the impact on the wellness of the Arizona population are not examined.

The study that follows focuses initially on the direct impact of the healthcare sector in Arizona and how the reduction in spending in that sector could result in reduced income and employment opportunities statewide with secondary effects in all sectors. We also examined the economic impact of excluding the Proposition 204 Expansion Group from Medicaid (separate to the complete opt-out option) using estimates provided by the Arizona Health Care Cost Containment System.

2. Study Method and Scenario Examined

Below is a brief description of the study method employed and the scenario examined to estimate the potential economic impact of eliminating state funding of Medicaid in Arizona.

⁷ See the Appendix for a more detailed discussion on what is and what isn't included in the analysis that follows.

2.1. Study Method

This study makes use of an Arizona-specific version of the Regional Economic Models, Inc. (REMI) regional forecasting model to produce numeric estimates of the impact on the Arizona economy that result from eliminating state funding of Medicaid. The method for estimating the economic impact involves four fundamental steps:⁸

- 1. Preparation of a baseline forecast for the state economy:** This baseline scenario provides a forecast of the future path of the Arizona economy based on a combination of the extrapolation of historic economic conditions and an exogenous forecast of relevant national economic variables.
- 2. Development of a policy scenario:** The policy scenario describes the direct effects (reduced expenditures) that reduced state, and due to matching rules federal, total funding for Medicaid would have on the Arizona economy. It is assumed total reduced expenditures (from state and federal sources) would be approximately \$10.8 billion-nominal 2011 dollars. This consists of \$3,603,757,400 state-funded and \$7,207,514,800 federally-funded - thus a 1:2 match is assumed.⁹ Also it is assumed that the direct impact would stay constant in nominal terms.¹⁰ Finally, it is assumed that no other exogenous change in public policy would occur.
- 3. Preparation of a forecast of the state economy based on the policy scenario:** This alternative forecast provides a simulation of the future path of the Arizona economy, incorporating the effects of the changes specified in the policy scenario.
- 4. Comparison of the baseline and policy scenario forecasts:** The differences between the future values of each variable in the forecast results provide estimates of the nature and

⁸ See Appendix for a more technical discussion surrounding REMI and the policy scenario examined.

⁹ The state figure assumed is the amount requested for FY 2012. See <http://www.azahcccs.gov/reporting/Downloads/BudgetProposals/FY2012/Summary.pdf> for more details.

¹⁰ The U.S. Department of Health and Human services is forecasting that Medicaid expenditures will grow, both in nominal and real terms, over the forecast period. Thus the assumption of constancy in nominal terms is relatively conservative. Some critics may argue that it is the estimated growth in expenditures that will place increased pressure on State coffers that is a cause for concern for policy-makers.

magnitude that eliminating state funding of Medicaid will have on the Arizona economy, relative to the baseline.

3. Simulation Results

Using REMI, the results provided below incorporate the direct economic impacts associated with eliminating state funding for Medicaid in Arizona as well as any indirect economic impacts that could occur.¹¹ Again, it is important to note that all figures are relative to the baseline forecast: no changes to Medicaid funding.¹²

Examining Table 1, in the first year that reduced funding takes place, Arizona employment would be approximately 159,000 *lower* relative to a baseline. Real Gross State Product (GSP) would be *lower* relative to the baseline by approximately \$11.6 billion (2010\$), real disposable income would be *lower* relative to the baseline by approximately \$6.4 billion (2010\$) and the Arizona population would be *lower* relative to the baseline by approximately 43,000.

In the 20th year of the study period (the final year), it is forecast Arizona employment will be approximately 86,000 *lower* relative to the baseline. Real GSP would be *lower* relative to the baseline by approximately \$9.8 billion (2010\$), real disposable income would be *lower* relative to the baseline by approximately \$7.2 billion (2010\$) and the Arizona population would be *lower* relative to the baseline by 215 thousand.

¹¹ An example of an indirect effect is as follows. Any workers who lose their job as a result of reduced health care expenditure will have reduced income to spend on retail goods and services, which would mean the retail sector will shed some workers due to the reduction in overall retail spending.

¹² For instance, if GSP is estimated to be x dollars lower than the baseline case, this does not mean it is x dollars lower than what GSP is today but it is x dollars lower than what GSP is forecast to be in that given year if state funding for Medicaid is eliminated.

Table 1: Economic Impact of Eliminating State Funding for Medicaid

Category	Year 1	Year 5	Year 10	Year 15	Year 20
Total Private Sector Non-Farm Employment (Thousands of Jobs)	-159.412	-147.271	-116.442	-98.073	-85.837
Gross Domestic Product (Billions 2010\$)	-\$11.56	-\$12.14	-\$10.68	-\$9.99	-\$9.75
Real Disposable Personal Income (Billions 2010\$)	-\$6.37	-\$7.66	-\$7.40	-\$7.17	-\$7.20
Population (Thousands)	-42.97	-158.51	-216.03	-225.98	-215.21

3.1. Disaggregated Employment Impact

Examining employment at a more disaggregated level (Table 2), the healthcare sector would suffer the majority of the reduction in employment due to the concentration of Medicaid expenditures in the healthcare sector. This amounts to approximately 81,900 jobs in year one (51 percent of the total reduction in employment).

Other sectors, such as construction, administrative and waste services and retail trade would also suffer significant reductions in employment: combined, these 3 sectors account for 22.6 percent of the total reduction in employment.¹³ By year 20, the healthcare sector could still have an employment level 36,000 jobs below baseline levels. Overall private sector non-farm employment would be 86,000 below the baseline case.

¹³ Much of this reduction is caused by the reduced level of economic activity associated with the initial reduced spending levels. However, some of the reduction will be caused by the population falling relative to the baseline case – thus, there is a smaller market to serve (again relative to the baseline).

Table 2: Disaggregated Employment Impact of Eliminating State Funding for Medicaid

Category	Thousands of Jobs		
	Year 1	Year 10	Year 20
Forestry, Fishing, Related Activities, and Other	-0.095	-0.035	-0.04
Mining	-0.026	-0.012	-0.016
Utilities	-0.275	-0.255	-0.206
Construction	-9.572	-7.916	-2.484
Manufacturing	-2.037	-1.087	-1.291
Wholesale Trade	-2.528	-1.845	-1.414
Retail Trade	-17.246	-13.64	-10.41
Transportation and Warehousing	-1.556	-1.136	-1.072
Information	-1.391	-1.033	-0.821
Finance and Insurance	-6.423	-3.042	-2.437
Real Estate and Rental and Leasing	-5.451	-6.223	-5.934
Professional and Technical Services	-6.439	-5.848	-5.31
Management of Companies and Enterprises	-0.774	-0.45	-0.405
Administrative and Waste Services	-9.268	-6.257	-4.867
Educational Services	-1.086	-1.464	-1.617
Healthcare and Social Assistance	-81.869	-52.894	-35.661
Arts, Entertainment, and Recreation	-1.626	-1.832	-1.964
Accommodation and Food Services	-5.674	-6.83	-5.834
Other Services, except Public Administration	-6.076	-4.643	-4.054
Total Non-Farm Employment	-159.412	-116.442	-85.837

3.2. Employment Impacts across Counties

To examine how the reduction in healthcare expenditures impact healthcare employment across counties, we use the Arizona Health Care Cost Containment System (AHCCCS) population estimates for January 2011.¹⁴ Table 3 re-produces the population estimates used in that analysis.

¹⁴ Implicitly, we are assuming that the expenditure per individual is constant and thus only the number of individuals within a particular county matters.

Table 3: AHCCCS Population Estimates by County for January 2011¹⁵

	Population	Percentage
Apache County	34,130	2.54%
Cochise County	28,302	2.11%
Coconino County	30,862	2.30%
Gila County	15,881	1.18%
Graham County	9,667	0.72%
Greenlee County	1,444	0.11%
La Paz County	5,057	0.38%
Maricopa County	751,137	55.96%
Mohave County	50,210	3.74%
Navajo County	42,231	3.15%
Pima County	212,041	15.80%
Pinal County	52,606	3.92%
Santa Cruz County	16,343	1.22%
Yavapai County	39,233	2.92%
Yuma County	53,067	3.95%
Total	1,342,211	100.00%

Source: AHCCCS

Table 4 provides our estimates of the employment impacts disaggregated by county for year one of the study period.

While the distribution of employment impacts are primarily driven by the distribution of expenditures assumption (in this example the AHCCCS population was used), due to the sector linkages among counties (all sectors and not just the healthcare sector) the distribution of employment impacts across counties are somewhat different from the population distribution alone.

¹⁵ See

http://www.azahcccs.gov/reporting/Downloads/PopulationStatistics/2011/January/Members_by_County_Report.pdf for more details.

Table 4: Employment Impacts Disaggregated by County in Year One

Region	Thousands of Total Jobs	Thousands of Healthcare Jobs	Healthcare Job Losses as a Percentage of Total Employment¹⁶
Apache County	-2.083	-1.61	8.13%
Cochise County	-2.07	-1.293	3.42%
Coconino County	-3.702	-2.065	3.67%
Gila County	-1.254	-0.839	6.00%
Graham County	-0.726	-0.52	5.95%
Greenlee County	-0.076	-0.045	1.31%
La Paz County	-0.129	-0.061	1.13%
Maricopa County	-99.284	-46.555	2.86%
Mohave County	-4.098	-2.369	5.16%
Navajo County	-2.88	-1.715	6.50%
Pima County	-31.324	-17.784	5.08%
Pinal County	-2.617	-1.608	3.09%
Santa Cruz County	-0.707	-0.353	2.70%
Yavapai County	-4.11	-2.361	4.23%
Yuma County	-4.349	-2.69	4.39%
Total	-159.412	-81.868	3.42%

¹⁶ Total employment numbers (2009 being the most recent) were obtained from BLS.

3.3. Aggregate Economic Impact

Table 5 outlines the potential aggregate economic impact of eliminating state funding for Medicaid in Arizona over the twenty year study period.

Table 5: Cumulative Economic Impact of eliminating state funding for Medicaid

Category	Aggregate Impact
Employment (Thousands of Job Years) ¹⁷	-2,621.97
Gross State Product (Billions 2010\$)	-\$217.07
Real Disposable Personal Income (Billions 2010\$)	-\$145.706

Over the study period, in aggregate terms, approximately 2,600,000 total job years, \$217 billion (2010\$) in total real GSP as well as \$146 billion (2010\$) in real disposable personal income would be lost, all as a result of eliminating state funding for Medicaid.

3.4. Economic Impact of Eliminating Proposition 204 Expansion Group

To assess the economic impact of changing the eligibility standards and excluding the Prop. 204 expansion group from the Medicaid program, we adopted the AHCCCS FY 2012 general fund Proposition 204 request of \$755,507,500.^{18,19} This analysis is a separate analysis from all previously presented; we are *only* assuming this Proposition 204 change occurs. Table 6 outlines our results.

¹⁷ This is job *years* and not actual jobs. A job year is equivalent to one person having a job for a period of one year.

¹⁸ See <http://www.azahcccs.gov/reporting/Downloads/BudgetProposals/FY2012/Summary.pdf> for more details.

¹⁹ To remain consistent with all previous analysis we assume a 1:2 federal match, and also assume that the total amount remains constant in nominal terms which is a conservative estimate.

Table 6: Economic Impact of Excluding the Prop. 204 Expansion Group from Medicaid

Category	Year 1	Year 5	Year 10	Year 15	Year 20
Total Private Sector Non-Farm Employment (Thousands of Jobs)	-30.258	-28.16	-22.191	-18.708	-16.426
Gross State Product (Billions 2010\$)	-\$2.50	-\$2.61	-\$2.29	-\$2.13	-\$2.07
Real Disposable Personal Income (Billions 2010\$)	-\$1.35	-\$1.60	-\$1.53	-\$1.47	-\$1.46
Population (Thousands)	-8.167	-30.651	-41.99	-43.959	-41.872

Examining Table 6, in the first year that reduced funding is assumed, Arizona employment would be approximately 30,000 *lower* relative to the baseline of no change. Real Gross State Product (GSP) would be *lower* relative to the baseline by approximately \$2.5 billion (2010\$), real disposable income would be *lower* relative to the baseline by approximately \$1.35 billion (2010\$) and the Arizona population would be *lower* relative to the baseline by approximately 8,200.

In the 20th year of the study period (final year), it is forecast Arizona employment will be approximately 16,000 *lower* relative to the baseline. Real GSP would be *lower* relative to the baseline by approximately \$2.1 billion (2010\$), real disposable income would be *lower* relative to the baseline by approximately \$1.5 billion (2010\$) and the Arizona population would be *lower* relative to the baseline by 42 thousand.

3.4.1. Disaggregated Employment Impact

Examining employment at a more disaggregated level (Table 7), the healthcare sector would suffer the majority of the reduction in employment due to the concentration of Prop. 204 expenditures in the healthcare sector. This amounts to approximately 13,600 jobs in year one (45 percent of the total reduction in employment).

Table 7: Disaggregated Employment Impact of Excluding the Prop. 204 Expansion Group from Medicaid

Category	Thousands of Jobs		
	Year 1	Year 10	Year 20
Forestry, Fishing, Related Activities, and Other	-0.0194	-0.0076	-0.0089
Mining	-0.0054	-0.003	-0.0037
Utilities	-0.0552	-0.0512	-0.0412
Construction	-2.0614	-1.6522	-0.4903
Manufacturing	-0.4425	-0.2542	-0.2792
Wholesale Trade	-0.5418	-0.3955	-0.297
Retail Trade	-3.8926	-2.9759	-2.2213
Transportation and Warehousing	-0.3331	-0.2439	-0.2255
Information	-0.2968	-0.2206	-0.1721
Finance and Insurance	-1.1743	-0.5403	-0.4397
Real Estate and Rental and Leasing	-1.1714	-1.2859	-1.2054
Professional and Technical Services	-1.4131	-1.2693	-1.1344
Management of Companies and Enterprises	-0.1761	-0.1043	-0.0889
Administrative and Waste Services	-2.0788	-1.3975	-1.0619
Educational Services	-0.2148	-0.2942	-0.3207
Healthcare and Social Assistance	-13.5672	-8.7708	-6.0355
Arts, Entertainment, and Recreation	-0.3408	-0.3718	-0.3923
Accommodation and Food Services	-1.1625	-1.3812	-1.1755
Other Services, except Public Administration	-1.3107	-0.9712	-0.832
Total Non-Farm employment	-30.258	-22.191	-16.426

Other sectors, such as construction, administrative and waste services and the retail trade would also suffer significant reductions in employment: combined, these 3 sectors account for 27 percent of the total reduction in employment.²⁰ By year 20, the healthcare sector would still have an employment level 6,000 jobs below baseline levels. Overall, private sector non-farm employment would be 16,000 below the baseline case.

²⁰ Much of this reduction is caused by the reduced level of economic activity associated with the initial reduced spending levels. However, some of the reduction will be caused by the population falling relative to the baseline case – thus there is a smaller market to serve (again relative to the baseline).

3.4.2. Employment Impacts across Counties

Table 8 describes how the job losses will be distributed across counties in year one.

Table 8: Job Losses Disaggregated by County in Year One

Region	Thousands of Total Jobs	Thousands of Healthcare Jobs	Healthcare Job Losses as a Percentage of total Employment
Apache County	-0.333	-0.235	1.68%
Cochise County	-0.408	-0.24	1.08%
Coconino County	-0.835	-0.441	1.48%
Gila County	-0.194	-0.111	1.39%
Graham County	-0.117	-0.076	1.34%
Greenlee County	-0.009	-0.003	0.26%
La Paz County	-0.027	-0.013	0.50%
Maricopa County	-19.47	-8.023	1.20%
Mohave County	-0.904	-0.501	1.97%
Navajo County	-0.619	-0.353	2.35%
Pima County	-5.184	-2.428	1.48%
Pinal County	-0.481	-0.272	0.92%
Santa Cruz County	-0.132	-0.059	1.01%
Yavapai County	-0.676	-0.323	1.21%
Yuma County	-0.868	-0.49	1.42%
Total	-30.258	-13.568	1.26%

3.4.3. Aggregate Economic Impact

Table 9 outlines the potential aggregate economic impact of excluding the Prop. 204 Expansion Group from Medicaid in Arizona over the twenty year study period.

Table 9: Cumulative Economic Impact of Excluding the Prop. 204 Expansion Group from Medicaid

Category	Aggregate Impact
Employment (Thousands of Job Years) ²¹	-457.072
Gross State Product (Billions 2010\$)	-\$46.48
Real Disposable Personal Income (Billions 2010\$)	-\$30.09

Over the study period, in aggregate terms, approximately 457,000 total job years, \$46 billion (2010\$) in total real GSP as well as \$30 billion (2010\$) in real disposable personal income could be lost, all as a result of eliminating state funding for Medicaid.

4. Conclusions

The objective of this study is to provide an assessment of how an elimination of state funds for Medicaid could impact economic activity in Arizona assessed by measures including real gross state product, employment, population and real disposable personal income.

A reduction in healthcare-related expenditures of approximately \$10.8 billion created by reduced state support, which indirectly, due to matching formulas, reduces federal support, for Medicaid, could lead to a significant decrease in economic activity within Arizona.

Given the overall nature of the reduced expenditures, the healthcare sector will suffer a significant reduction in employment levels relative to the base case. In fact, all sectors, especially construction and retail trade, could face varying reductions in employment levels.

The reduction in state-wide employment is caused by the reduction in economic activity associated with (amplified) reduced healthcare expenditures. For instance, healthcare workers who would lose their jobs, thus suffering a reduction in income, would spend less money in the Arizona economy. Also the reduction in economic activity is further dampened by the reduction in population growth as some Arizonans seek employment and a higher quality of

²¹ This is job *years* and not actual jobs. A job year is equivalent to one person having a job for one year.

life elsewhere and/or individuals who previously would have migrated to Arizona decide not to do so.

It is important to note that state-funded healthcare expenditures via programs such as Medicaid receive a federal match – often in ratios of 1:2 (state to federal). This federal matching does not occur in many other areas of state expenditures. Thus, cuts in state-funding for healthcare programs such as Medicaid inevitably lead to amplified negative economic impacts on the overall Arizona economy once the loss in matching federal funds are incorporated.²²

²² Note, here we are merely focusing on the total direct expenditures that may occur when combining state and federal funds. Cuts in other programs may well have amplified effects that are caused by other factors that are not associated with the amount of federal funds received. For instance, cuts in transportation expenditures may lead to longer commute times which could lead to losses in productivity that may potentially cause an amplified reduction in economic activity.

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Appendix

A.1. The REMI Model

REMI is an economic-demographic forecasting and simulation model developed by Regional Economic Models, Inc. REMI is designed to forecast the impact of public policies and external events on an economy and its population. The REMI model is recognized by the business and academic community as the leading regional forecast/simulation tool available.

Unlike most other regional economic impact models, REMI is a dynamic model that produces integrated multiyear forecasts and accounts for dynamic feedbacks among its economic and demographic variables. The REMI model is also an "open" model in that it explicitly accounts for trade and migration flows in and out of the state. A complete explanation of the model and discussion of the empirical estimation of the parameters/equations can be found at www.remi.com.

The operation of the REMI model has been developed to facilitate the simulation of policy changes, such as a tax increase for example, or many other types of events – anything from the opening of a new business to closure of a military base or even a natural disaster. The model's construction includes a large set of policy variables that are under the control of the model's operators. To simulate the impact of a policy change or other event, a change in one or more of the policy variables is entered into the model and a new forecast is generated. The REMI model then automatically produces a detailed set of simulation results showing the differences in the values of each economic variable between the control and the alternative forecast.

The specific REMI model used for this analysis was Policy Insight Model Version PI+ version 1.0 of the Arizona economy leased from Regional Economic Models Inc. by a consortium of State agencies, including Arizona State University, for economic forecasting and policy analysis. The PI+ version 1.0.114 version was delivered with national and local datasets with data through 2005 and also with national and local baseline forecasts prepared by Regional Economic Models Inc. The REMI model incorporates procedures for updating the datasets and the baseline

forecasts with more recent data. The research team performed these procedures to prepare an updated baseline forecast for the Arizona economy, updating the REMI model with data up to 2007 and comparable estimates for 2008 from national and state sources.

A.2. Policy Effects Incorporated into the Analysis

At the request of the Arizona Hospital and Healthcare Association (AzHHA), we assumed a reduction of approximately \$10.8 billion nominal dollars in reduced spending in the Arizona healthcare sector. To distribute these expenditures across sectors, we used national average Medicaid disaggregated expenditures provided by the U.S. Department of Health and Human Services. Table A1 provides the breakdown.

Table A1: Medicaid Expenditures in 2009²³ (Millions of dollars)

	Federal	Percentage	State and Local	Percentage
Total National Health Expenditures	246,983	100.00%	126,957	100.00%
Hospital Care	90,103	36.48%	45,999	36.23%
Physician and Clinical Services	27,593	11.17%	12,353	9.73%
Other Professional Services	3,073	1.24%	1,456	1.15%
Dental Services	4,839	1.96%	2,308	1.82%
Other Health, Residential, and Personal Care	42,552	17.23%	21,850	17.21%
Home Health	15,780	6.39%	8,511	6.70%
Nursing Care Facilities and Continuing Care Retirement Communities	30,041	12.16%	14,915	11.75%
Prescription Drugs	13,316	5.39%	6,665	5.25%
Durable Medical Equipment	2,928	1.19%	1,386	1.09%
State	-	0.00%	8,270	6.51%
Federal	9,927	4.02%	-	0.00%
Net Cost of Private Health Insurance	6,831	2.77%	3,243	2.55%

Source: U.S. Department of Health and Human Services

²³ The latest data available.

A.3. Effects Not Incorporated into the Analysis

It was assumed that no other change in public policy would occur. Thus, no account of the economic impact associated with reductions in expenditure and/or increases in revenue collection elsewhere in the economy to solve the state's budget problem, instead of eliminating state funding of Medicaid, was included. We therefore do not include in the discussion any measures of the benefits that invariably would accrue to other government sectors or to Arizona taxpayers of not spending approximately \$3.6 billion (Prop.204 general funds request for FY 2012) in general fund money on healthcare.

A complete assessment of the economic impact of this policy action would require knowledge of what additional budget reductions and/or tax increases would be required should the proposal be rejected. A \$3.6 billion (Prop.204 general funds request for FY 2012) per annum in reallocated expenditures and or absolution of \$3.6 billion (Prop.204 general funds request for FY 2012) per annum from obligations of Arizona taxpayers has its own benefits which are not measured in this study simply because we don't have the specific information on how the money would be allocated should the proposal be rejected.

However it is important to note that *because of the federal funding matching criteria*, even if issues surrounding how the state funding for Medicaid is obtained (either via potential tax increases and/or state government spending reduction in other areas) are incorporated into the analysis, there is a high probability that cuts to state funding of Medicaid still leads to overall negative economic impacts.

It was also assumed that the reduced expenditure via Medicaid would not be absorbed by private sector expenditure. Given the characteristics of the population that Medicaid serves - many of them being income constrained - it is highly unlikely that this group will have sufficient disposable income to finance some of the reduced state and federal healthcare expenditures themselves.

We do not include within the analysis any estimates of how changes in Federal legislation might influence how healthcare is funded in future years, nor do we conduct any analysis about whether the healthcare sector is more or less efficient in its expenditure of public dollars. All of these issues are well beyond the scope of this study.

Finally, there is no discussion in this report regarding the economic consequences that may stem from the elimination of healthcare coverage to large numbers of Arizonans in terms of the impact of lost worker productivity, sick days, ability to perform when injured, etc.

Glossary

Real Gross State Product (GSP): The real (constant) dollar value of all goods and services produced in Arizona for final demand/consumption.

Person Job Year: A person job year is equivalent to one person having a job for exactly one year.

Real Disposable Personal Income: The household income that is available to be spent after taxes have been paid. Technically speaking, real disposable personal income is the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income, rental income of persons, personal dividend income, personal interest income, and personal current transfer receipts, less personal taxes and contributions for government social insurance.



MEMORANDUM

To: Jim Haynes
Arizona Hospital & Healthcare Association

From: Jill Welch
Daniel Court

Date: January 24, 2011

Re: Verification of Calculations for Study: “The Potential Economic Impact of Withdrawing Medicaid in Arizona” by Tim James & Matt Croucher

Elliott D. Pollack and Company was retained to perform an independent third party review of the calculations performed by the Seidman Research Institute (W.P. Carey School of Business, Arizona State University) for an economic impact study. This particular study is titled “*The Potential Economic Impact of Withdrawing from Medicaid in Arizona*”. The authors of the study utilized a REMI economic-demographic forecasting and simulation model to generate the study’s resulting impacts for both the State of Arizona as a whole and a county-by-county estimate of impacts. Our firm has reviewed the completed study, interviewed the authors of the report, and performed various calculations within our own proprietary model.

The modeling utilized Medicaid budget figures as reported in the AHCCS FY2012 budget request and the figures were approved by the Arizona Hospital & Healthcare Association. The model distributed those monies by county and by type of industry as the initial inputs. The model itself generates losses of employment (direct and “ripple” effects), wages, and population over time. By using the approved initial Medicaid spending as the input and accurately accounting for the dollars by sub-industry and county, our firm verifies that the modeling was performed correctly.

Using a similar methodology, our staff performed preliminary modeling exercises using first the estimated loss of funding for each scenario and secondly using the REMI model’s estimation of employment losses. Our model utilizes IMPLAN multiplier sets (also a nationally accepted economic modeling tool). Through these exercises, our firm is able to confirm that each scenario that was run for the study in question indeed results in the losses of economic activity as reported.

Verifying the calculations performed by the Seidman Institute was the full scope of services requested by our firm. We would also like to qualify this verification by emphasizing the

Elliott D. Pollack & company

following points which may be a repeat of issues brought forth within the original study as well as our own insights:

- By verifying the calculations performed by the authors of the study, it is in no way an opinion or recommendation to the Legislature for budgeting decisions. Our firm maintains neutrality on the subject of optimal distribution of General Fund budgeting. We neither support nor oppose this particular decision.
- In order to run an impact model based on a policy decision, a number of assumptions must be formulated, which naturally act as a “qualifier” to the results. The main assumption for this study states, “It is assumed that no other change in public policy would occur.” It is for this reason, in addition to our stated scope of work, that we do not validate the report in terms of its methodology and assumptions, only that calculations based on those stated assumptions were indeed performed properly. Two main questions arise from this main assumption:
 - o As with any dynamic impact modeling exercise, a host of “what if” scenarios could be formulated which may give the perception that the initial modeling performed is too simplistic. For instance, in the scenario that Arizona completely opts out of the Medicaid program, the full loss of funding would indeed result in the figures of economic loss as cited. However, it is reasonable to assume that alternative solutions would be formulated to address the health care needs of income restricted individuals such as a state run program or private donations. An exhaustive listing of potential cause and effects was beyond the scope of the study.
 - o Also well beyond the scope of the study are the scenarios that could arise from the maintenance of current levels of funding for Medicaid in Arizona. Quite simply, as discussed in Appendix 3 of the Study, the result of not cutting Medicaid funding would likely be either an increase in taxes for additional revenue or a reduction in expenditures of some other category of spending (such as education or corrections). This would result in economic losses as well. However, the federal match component is not an issue with most other policy decisions.