



# **MARICOPA INTEGRATED HEALTH SYSTEM: *Part 2: Economic Impact Analysis, 2015-2043***

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- *Executive Budget Office State of Arizona*
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- *Goodwill Industries*
- *Maricopa Integrated Health System*
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**INTRODUCTION**

This is the second of three reports quantifying the economic impact of Maricopa Integrated Health System (MIHS).

In February 2014, MIHS’ Bond Advisory Committee recommended the issuance of General Obligation Bonds up to a maximum of \$935 million to finance several strategic capital projects. These capital projects will include the replacement of an acute care hospital, the renovation and expansion of Family Health Centers, the expansion of the current Comprehensive Health Center, the addition of two new Comprehensive Health Centers in the East and West Valley, a new behavioral health hospital, and increased ambulatory capacity. The Bond Advisory Committee’s recommendation will be presented to the Maricopa County electorate for ballot-approval in late 2014.

The purpose of this second report is to estimate the future construction and operational economic impacts of MIHS, CY2015-2043,<sup>1</sup> if the \$935 million issuance of General Obligation Bonds is ballot-approved by voters.

**ECONOMIC IMPACT ANALYSIS**

An economic impact analysis can be approached in at least 6 different ways, demonstrated in Figure 1 below.

**Figure 1: Seidman’s 3 x 2 Classification of Economic Impact Models**

	<i>Level of Sophistication</i>		
<i>Degree of Completeness</i>	<b>COUNT GROSS</b>	<b>PARTIAL GROSS</b>	<b>MACROECONOMIC GROSS</b>
	<b>COUNT NET</b>	<b>PARTIAL NET</b>	<b>MACROECONOMIC NET</b>

Figure 1 illustrates two key distinctions.

The first distinction is between gross studies and net economic impact studies.

Studies that are **Gross** in nature only consider the positive impacts of increased economic activity - in this case, the employment and supplier purchases of Maricopa Integrated Health System.

**Net** studies represent a more thorough form of economic modeling because they also account for the trade-offs in the economy which result from incentivizing one specific sector, such as the increase in state taxes required to finance healthcare services.

The second key distinction is between counts, partial (equilibrium) modeling, and macroeconomic (or general equilibrium) modeling.

**Counts** are typically simple tallies of direct measures of economic activities, such as jobs, investments, or sales, without any attempt to capture the impacts of the inter-relationships with other economic sectors.

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<sup>1</sup> CY = Calendar Year.

**Partial models** consider the wider effects of levels of activity in a specific economic sector, because they take into account the indirect and induced effects of the direct changes associated with a business or enterprise in a particular geography. Despite being the most common commercial approach to economic modeling, partial models do not consider the feedback effects of changed levels of an investment or activity, such as the implications for alternative non-healthcare federal and state initiatives if a greater share of tax revenue is diverted to universal healthcare insurance.

Only one type of model attempts to account of every economic interconnection and feedback effect associated with a specific business activity or investment. This is a **Macroeconomic** model, which is often based upon a computable general equilibrium (CGE) model. To the best of the research team's knowledge, a CGE model currently does not exist for Maricopa County and the State of Arizona.

This report therefore estimates the economic impact of MIHS CY2015-2043, based on the assumption that a \$935 million bond recommendation is approved and implemented, using an Arizona-specific REMI model.<sup>2</sup> This is consistent with the Phase 1 report methodology.

REMI is a commercial, partial form of economic impact modeling which traces the full impact - direct, indirect and induced - of a single economic activity (MIHS) on jobs and incomes in a defined economy (in this instance, Maricopa County and the State of Arizona).

The operation of MIHS directly affects the host county and state economy through its employment of physicians, nurses, clinical staff, technicians, administrative and support staff, and management. Direct effects also arise through MIHS' purchase of pharmaceuticals, medical equipment and other supplies.

Indirect effects occur when MIHS' suppliers place upstream demands on other suppliers, or increase their number of employees to meet MIHS' purchasing requirements. These second round impacts only occur because of the existence and operation of MIHS.

Induced effects occur when workers either directly or indirectly associated with the operation of MIHS spend their incomes in the local economy. The sales, income, and jobs that result from household spending of added wage, salary, or proprietor's income are all induced effects.

The cumulative changes in jobs and incomes associated with MIHS' operation are a multiple of the initial direct effects.

The economic impacts in this study are expressed in terms of five key measures: Total Employment; Total Private Non-Farm Employment; Gross State Product (GSP); Real Disposable Personal Income (RDPI); and State Revenues.

Total employment is an estimate of the total number of full-time (or equivalent) jobs in a specific county or state, encompassing every sector and industry, including government and farm workers.

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<sup>2</sup> REMI is a dynamic forecasting and analysis tool, developed by Regional Economic Models Inc., containing detailed industries and incorporates complete inter-industry relationships. Widely recognized by the business and academic communities as the leading economic modeling tool available, Seidman currently uses the REMI model for all projects commissioned by the Arizona Commerce Authority. Seidman is also the only organization currently offering this form of modeling in the state.

Total private non-farm employment is an estimate of the total number of full-time (or equivalent) jobs in a specific county or state, encompassing all sectors and industries but excluding government and farm workers.

Gross State Product (GSP) is the market value of goods and services produced by labor and property in a specific county or state.<sup>3</sup> It is commonly used as an indicator of the economic health of a state or nation.

RDPI is an estimate of the total after-tax income received by any person residing in a specific county or state, deflated by the Personal Consumption Expenditure-Price Index, but available for spending or saving.

State revenue is an estimate of general sales tax, selective sales tax, license taxes, individual and corporate income taxes, other taxes, miscellaneous general revenue, utility revenue, liquor store revenue, insurance trust revenue, intergovernmental revenue and current charges.

Two distinct series of economic impact estimates are provided. The first series is a Partial Gross study as it only takes into account the positive impacts associated with MIHS' employment and supplier purchases, CY2015-2043. The second series is a Partial Net study because it additionally takes into account the trade-offs in the economy that result from financing MIHS, CY2015-2043, such as the state tax, consumer spending, and bond repayment implications.

#### THE PARTIAL GROSS ECONOMIC IMPACTS OF MIHS, CY2015-2043

Table 1 summarizes the employment and supplier inputs provided by MIHS for the Partial Gross REMI analysis.<sup>4</sup>

**Table 1: MIHS Direct Employment and Expenditure Profile, CY2015-2043**

EMPLOYMENT	
Number of Staff (FTE)	3,906 ambulatory and hospital staff, increasing to 4,400 from mid-2018
Total Compensation (Millions 2013 \$)	\$298.6 million, rising to \$319.2 million

ANNUAL CAPITAL EXPENDITURE & OTHER NON-LABOR EXPENDITURE		
	Millions 2013 \$	Time Horizon
Current MIHS System	\$207.2	CY2015 onwards
New CHCs	\$11.2	Mid CY2018 onwards
New FHC, Dental and Retail Pharmacy Operations	\$2.0	Mid-CY2018 onwards
Non-Residential CAPEX	\$627.4	CY2015-Mid CY2019
Producers Durable Equipment CAPEX	\$307.6	CY2016-Mid CY2019

Source: MIHS<sup>5</sup>

<sup>3</sup> GSP excludes the value of intermediate goods and services purchased as inputs to final production. It can also be defined as the sum of employee compensation (wages, salaries and benefits, including employer contributions to health insurance and retirement pensions), proprietor income, property income, and indirect business taxes.

<sup>4</sup> The employment data supplied by MIHS does not include their health plan for Medicaid patients, which is outsourced to a separate entity, or a similar arrangement with District Medical Group. However, MIHS' \$4 million payment to District Medical Group is included in their annual vendor purchasing data. MIHS also operates a joint venture with Mercy Maricopa, which has not been included in this analysis.

<sup>5</sup> Employment and expenditure estimates are supplied by the client in confidential email correspondence on June 20, 2014, and July 22, 2014.

Table 1 shows that approximately \$627.4 million of the \$935 million bond will be spent on non-residential buildings, CY2015-2019, with the balance spent on new equipment, CY2016-2019. The new facilities built as a result of the bond, will employ an estimated additional 494 people from mid-CY2018 onwards.<sup>6</sup>

Table 2 estimates the direct, indirect and induced total employment and total private non-farm employment impacts effects for the State of Arizona on an annual basis. The employment impacts are measured in job years. A job year is equivalent to one person having a full-time job for exactly one year. This means, for example, that one person working at MIHS from CY2015 to CY2043 will account for 29 job years, but only represent 1 job. A cumulative figure is therefore not appropriate.

**Table 2: Statewide Employment Impact of MIHS, CY2015-2043, Expressed in Job Years**

	Total Employment (Job Years)			Total Private Non-Farm Employment (Job Years)		
	Direct Impacts	Indirect/ Induced Impacts	Total Impacts	Direct Impacts	Indirect/ Induced Impacts	Total Impacts
2015	3,906	8,315	12,221	3,906	7,474	11,380
2016	3,906	10,473	14,379	3,906	9,456	13,362
2017	3,906	12,315	16,221	3,906	11,140	15,046
2018	4,153	12,704	16,857	4,153	11,439	15,592
2019	4,400	11,361	15,761	4,400	10,138	14,538
2020	4,400	9,749	14,149	4,400	8,609	13,009
2021	4,400	9,480	13,880	4,400	8,341	12,741
2022	4,400	9,322	13,722	4,400	8,178	12,578
2023	4,400	9,252	13,652	4,400	8,099	12,499
2024	4,400	9,246	13,646	4,400	8,079	12,479
2025	4,400	9,284	13,684	4,400	8,104	12,504
2026	4,400	9,360	13,760	4,400	8,162	12,562
2027	4,400	9,460	13,860	4,400	8,246	12,646
2028	4,400	9,580	13,980	4,400	8,348	12,748
2029	4,400	9,717	14,117	4,400	8,466	12,866
2030	4,400	9,866	14,266	4,400	8,596	12,996
2031	4,400	10,022	14,422	4,400	8,733	13,133
2032	4,400	10,175	14,575	4,400	8,867	13,267
2033	4,400	10,321	14,721	4,400	8,994	13,394
2034	4,400	10,461	14,861	4,400	9,117	13,517
2035	4,400	10,577	14,977	4,400	9,218	13,618
2036	4,400	10,681	15,081	4,400	9,308	13,708
2037	4,400	10,777	15,177	4,400	9,391	13,791
2038	4,400	10,869	15,269	4,400	9,470	13,870
2039	4,400	10,953	15,353	4,400	9,544	13,944
2040	4,400	11,045	15,445	4,400	9,625	14,025
2041	4,400	11,144	15,544	4,400	9,712	14,112
2042	4,400	11,240	15,640	4,400	9,798	14,198
2043	4,400	11,347	15,747	4,400	9,892	14,292

Source: Authors' Calculations

<sup>6</sup> Annual employment and non-labor expenditure has been converted to 2012 fixed values for the REMI model.

The table estimates that in CY2015, MIHS will be responsible for 12,221 direct, indirect, and induced job years across all sectors, including government and farm workers in the State of Arizona. If government and farm workers are excluded from this total figure, MIHS will be responsible for an estimated 11,380 direct, indirect, and induced job years' private non-farm employment in the State of Arizona in 2015.

Over \$627 million of the capital expenditure will be spent on new infrastructure, CY2015-2019. The construction sector job years associated with the bond's capital investment will account for an estimated 14%-18.3% of the rise in indirect and induced private, non-farm job years per annum, CY2016-2019.<sup>7</sup>

In CY2020, the first full calendar year after the completion of the \$935 million capital investment, Table 2 estimates that MIHS will be responsible for 14,149 direct, indirect, and induced job years across all sectors, including government and farm workers in the State of Arizona. If government and farm workers are excluded from this total figure, MIHS will be responsible for an estimated 13,009 direct, indirect, and induced job years' private non-farm jobs in the State of Arizona in CY2020.

For all subsequent years up to and including CY2043, Table 2 estimates that MIHS will be responsible for the generation of 13,646 to 15,747 direct, indirect, and induced jobs years across all sectors per annum, including government and farm workers in the State of Arizona, dependent on the year of study. If government and farm workers are excluded from this total figure, MIHS will be responsible for an estimated 12,479 to 14,292 direct, indirect, and induced job years' private non-farm employment in the State of Arizona, dependent on the year of study.

A cumulative employment impact for the entire study period is not appropriate as the unit of measurement is job years, rather than jobs. Nevertheless, it is fair to state that MIHS will generate on average an estimated 2.4 indirect and induced job years (all sectors) or 2.1 indirect and induced job years (private non-farm employment) statewide throughout the study period for every full-time (or equivalent) year of direct employment at the integrated health care system. Maricopa County, as the host county, will be the primary employment location beneficiary, accounting for an estimated 96% of the direct, indirect and induced job years created (total employment or total private non-farm employment sectors).

Figure 2 illustrates the private, non-farm employment sectors benefitting the most as a result of MIHS. The top five sectors estimated to benefit the most from MIHS' operations in terms of job years will be: Healthcare and Social Assistance (43.2%), Retail Trade (8.8%), Construction (8.2%), Professional and Technical Services (6.9%), and Accommodation and Food Services (6.4%).

Tables 3 and 4 estimate the gross state product (GSP) and real disposable personal income (RDPI) impacts of MIHS' operations for select years in the State of Arizona and Maricopa County.

Table 3 estimates that MIHS will contribute \$1.16 billion GSP to the State of Arizona economy in CY2015. This includes an estimated \$614 million RDPI (both 2013 \$).

During the \$935 million capital investment years, MIHS' statewide GSP contribution will peak in CY2018 at an estimated \$1.63 billion, including an RDPI contribution of \$942 million (both 2013 \$).

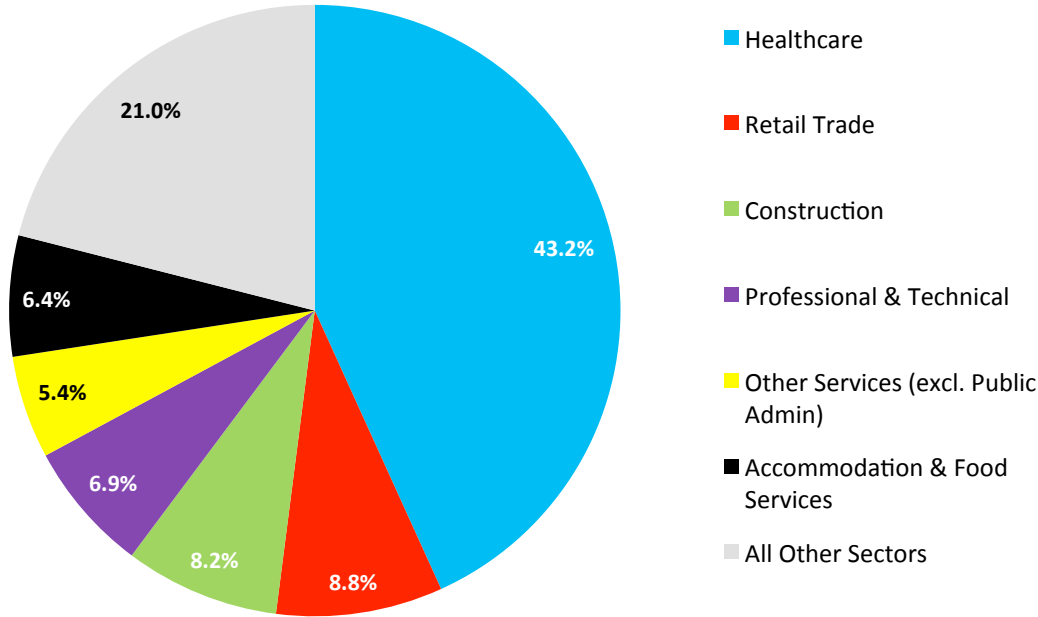
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<sup>7</sup> The CY2015 construction impacts are an estimated 7.5% of the indirect and induced private non-farm employment impacts for that year.

The cumulative statewide GSP contribution of MIHS, CY2015-2043, will be an estimated \$47.1 billion, including an estimated cumulative RDPI of approximately \$30.4 billion (both 2013 \$).

Table 4 estimates that MIHS will contribute \$1.14 billion GSP to the Maricopa County economy in CY2015. This includes an estimated \$590 million RDPI (both 2013 \$).

**Figure 2: Statewide Private Non-Farm Employment Impacts, CY2015-2043**



Source: Authors' Calculations

**Table 3: GSP and RDPI Impacts of MIHS in the State of Arizona, CY2015-2043<sup>8</sup>**

	State Impacts (Billions 2013 \$)											
	2015	2016	2017	2018	2019	2020	2025	2030	2035	2040	2043	Total
GSP	1.16	1.36	1.54	1.63	1.55	1.41	1.44	1.58	1.76	1.93	2.06	47.1
RDPI	0.61	0.75	0.87	0.94	0.92	0.86	0.91	1.02	1.17	1.34	1.46	30.4

Source: Authors' Calculations

**Table 4: GSP and RDPI Impacts of MIHS in Maricopa County, CY2015-2043<sup>9</sup>**

	Maricopa County Impacts (Billions 2013 \$)											
	2015	2016	2017	2018	2019	2020	2025	2030	2035	2040	2043	Total
GSP	1.14	1.34	1.51	1.59	1.51	1.37	1.39	1.52	1.69	1.86	1.97	45.5
RDPI	0.59	0.72	0.84	0.90	0.87	0.82	0.86	0.96	1.09	1.25	1.35	28.5

Source: Authors' Calculations

<sup>8</sup> Cumulative totals may not tally exactly due to rounding up.

<sup>9</sup> Cumulative totals may not tally exactly due to rounding up.



During the \$935 million capital investment years, MIHS’ GSP contribution in Maricopa County will peak in CY2018 at an estimated \$1.59 billion, including an estimated RDPI contribution of \$902 million (both 2013 \$).

The cumulative GSP contribution of MIHS in Maricopa County, CY2015-2043, will be an estimated \$45.5 billion, including an estimated cumulative RDPI of over \$28.5 billion (both 2013 \$).

Table 5 estimates the state revenue implications of MIHS’ operations, CY2015-2043.

Table 5 estimates that MIHS’ operations throughout the study period will cumulatively generate over \$3.3 billion in gross state revenues in the State of Arizona, including approximately \$3.1 billion in Maricopa County (both 2013 \$).

**Table 5: Summary of Cumulative State Gross Revenues, CY2015-2043**

	Maricopa County (Millions 2013 \$)	Other AZ (Millions 2013 \$)	State of Arizona (Millions 2013 \$)
Income Tax	487.1	26.2	513.3
General Sales Tax	670.4	58.1	728.5
Selective Sales Tax	189.7	16.5	206.2
Corporate Income Tax	74.8	4.7	79.5
Rest <sup>10</sup>	1,683.6	147.1	1,830.7
<b>Total</b>	<b>3,105.6</b>	<b>252.6</b>	<b>3,358.2</b>

Source: Authors’ Calculations

**THE PARTIAL NET ECONOMIC IMPACTS OF MIHS, CY2015-2043**

The previous series of economic impact estimates only take into account the positive impacts associated with MIHS’ employment, capital investment, and supplier purchases, CY2015-2043. However, only 45% of MIHS’ CY2013 operations is currently funded by federal sources. A Partial Net analysis is therefore additionally implemented to:

- Take into account the negative economic implications associated with the local funding contribution of MIHS’ direct operations;<sup>11</sup> and
- Reflect the increase in property taxes required to enable MIHS to meet its bond debt repayments.<sup>12</sup>

This second analysis uses the same employment and expenditure inputs listed in Table 1 in conjunction with an assumption that federal sources only meet 45% of MIHS’ annual operational costs throughout the period of analysis, consistent with CY2013. The second analysis also assumes that local residents meet the annual debt repayments for MIHS’ \$935 million bond in full via an increase in property taxes. The bond’s debt repayment schedule financed by the property tax increases is summarized by fiscal year (FY) in Table 6.

<sup>10</sup> Rest includes intergovernmental revenue, charges, insurance trust revenue and other miscellaneous revenue.  
<sup>11</sup> The non-federal sources of finance for MIHS’ annual operating costs are a negative impact in the REMI model as they represent a loss to of local disposable income.  
<sup>12</sup> The property tax increases needed to meet MIHS’ bond repayment obligations are a negative impact as they represent a loss of disposable income.

**Table 6: MIHS Estimated Debt Payment Schedule, FY2016-2043**

Fiscal Year	\$M	Fiscal Year	\$M	Fiscal Year	\$M	Fiscal Year	\$M
FY2016	1.5	FY2023	56.3	FY2030	56.3	FY2037	56.3
FY2017	28.4	FY2024	56.3	FY2031	56.3	FY2038	56.3
FY2018	28.4	FY2025	56.3	FY2032	56.3	FY2039	56.3
FY2019	56.3	FY2026	56.3	FY2033	56.3	FY2040	56.3
FY2020	56.3	FY2027	56.3	FY2034	56.3	FY2041	54.8
FY2021	56.3	FY2028	56.3	FY2035	56.3	FY2042	27.9
FY2022	56.3	FY2029	56.3	FY2036	56.3	FY2043	27.9

Source: Stifel, Nicolaus & Company, Inc.

**Table 7: Statewide Employment Impact of MIHS, CY2015-2043, Expressed in Job Years**

	Total Employment (Job Years)			Total Private Non-Farm Employment (Job Years)		
	Direct Impacts	Indirect/ Induced Impacts	Total Impacts	Direct Impacts	Indirect/ Induced Impacts	Total Impacts
2015	3,906	5,254	9,160	3,906	4,621	8,527
2016	3,906	7,190	11,096	3,906	6,404	10,310
2017	3,906	8,881	12,787	3,906	7,955	11,861
2018	4,153	9,064	13,217	4,153	8,071	12,224
2019	4,400	7,574	11,974	4,400	6,640	11,040
2020	4,400	6,037	10,437	4,400	5,186	9,586
2021	4,400	5,850	10,250	4,400	4,999	9,399
2022	4,400	5,767	10,167	4,400	4,911	9,311
2023	4,400	5,768	10,168	4,400	4,901	9,301
2024	4,400	5,822	10,222	4,400	4,941	9,341
2025	4,400	5,911	10,311	4,400	5,016	9,416
2026	4,400	6,030	10,430	4,400	5,117	9,517
2027	4,400	6,164	10,564	4,400	5,235	9,635
2028	4,400	6,310	10,710	4,400	5,362	9,762
2029	4,400	6,469	10,869	4,400	5,503	9,903
2030	4,400	6,631	11,031	4,400	5,646	10,046
2031	4,400	6,800	11,200	4,400	5,796	10,196
2032	4,400	6,964	11,364	4,400	5,941	10,341
2033	4,400	7,124	11,524	4,400	6,083	10,483
2034	4,400	7,276	11,676	4,400	6,218	10,618
2035	4,400	7,412	11,812	4,400	6,337	10,737
2036	4,400	7,534	11,934	4,400	6,446	10,846
2037	4,400	7,651	12,051	4,400	6,548	10,948
2038	4,400	7,765	12,165	4,400	6,649	11,049
2039	4,400	7,870	12,270	4,400	6,743	11,143
2040	4,400	7,986	12,386	4,400	6,846	11,246
2041	4,400	8,162	12,562	4,400	7,005	11,405
2042	4,400	8,332	12,732	4,400	7,159	11,559
2043	4,400	8,510	12,910	4,400	7,318	11,718

Source: Authors' Calculations

Table 7 estimates the direct, indirect and induced total employment and total private non-farm employment impacts effects for the State of Arizona on an annual basis, taking into account the positive and negative implications of operating MIHS, and meeting the bond debt repayments. The employment impacts are measured in job years. A job year is equivalent to one person having a full-time job for exactly one year.

Table 7 estimates that in CY2015, MIHS will be responsible for 9,160 direct, indirect and induced job years across all sectors, including government and farm workers in the State of Arizona. If government and farm workers are excluded from this total figure, MIHS will be responsible for an estimated 8,527 direct, indirect, and induced job years' private non-farm employment in the State of Arizona in CY2015.

The construction sector jobs associated with the bond's capital investment will account for an estimated 14.5%-19.7% of the rise in indirect and induced private, non-farm job years per annum, CY2016-2019.<sup>13</sup>

In CY2020, the first full calendar year after the completion of the \$935 million capital investment, Table 7 estimates that MIHS will be responsible for 10,437 direct, indirect, and induced jobs across all sectors, including government and farm workers in the State of Arizona. If government and farm workers are excluded from this total figure, MIHS will be responsible for an estimated 9,586 direct, indirect, and induced jobs private non-farm jobs in the State of Arizona in CY2020.

For all subsequent years up to and including CY2043, Table 7 estimates that MIHS will be responsible for the generation of 10,167 to 12,910 direct, indirect, and induced jobs years across all sectors per annum, including government and farm workers in the State of Arizona, dependent on the year of study. If government and farm workers are excluded from this total figure, MIHS will be responsible for an estimated 9,301 to 11,718 direct, indirect, and induced job years' private non-farm employment in the State of Arizona, dependent on the year of study.

A cumulative employment impact for the entire study period is not appropriate as the unit of measurement is job years, rather than jobs. Nevertheless, it is fair to state that MIHS will generate on average an estimated 1.6 indirect and induced job years (all sectors) or 1.4 indirect and induced job years (private non-farm employment) statewide throughout the study period for every full-time (or equivalent) year of direct employment at the integrated health care system. Maricopa County, as the host county, will be the primary employment location beneficiary, accounting for an estimated 96.5% of the direct, indirect, and induced job years created in all employment sectors, increasing to an estimated 97% of the direct, indirect, and induced job years created in all private non-farm employment sectors.

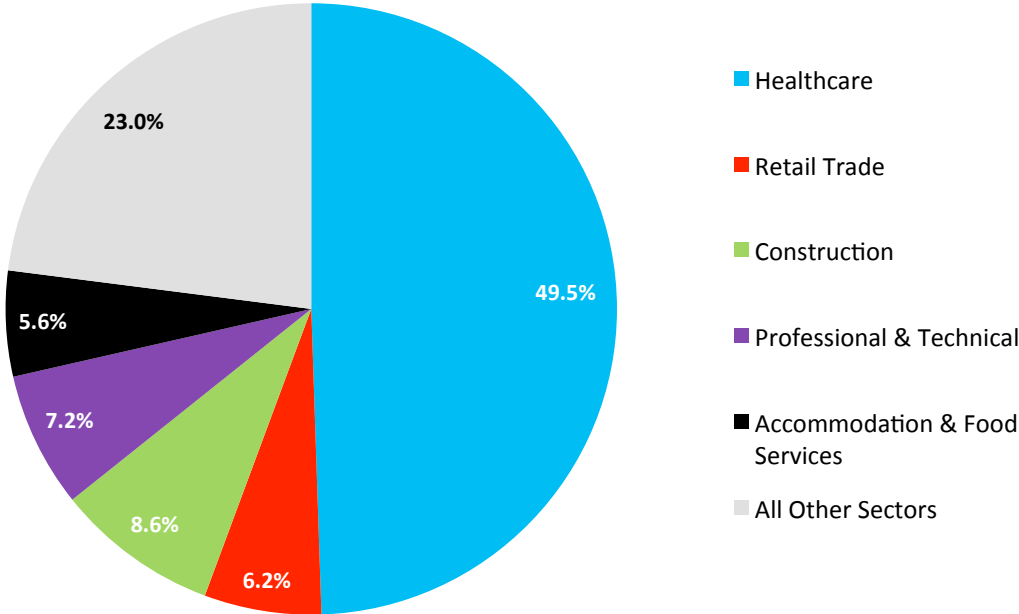
Figure 3 illustrates the private, non-farm employment sectors benefitting the most as a result of MIHS, CY2015-2043. The top five sectors estimated to benefit the most from MIHS' operations in terms of job years will be: Healthcare and Social Assistance (49.5%), Construction (8.6%), Professional and Technical Services (7.2%), Retail Trade (6.2%), and Accommodation and Food Services (5.6%).

Tables 8 and 9 estimate the gross state product (GSP) and real disposable personal income (RDPI) partial net impacts of MIHS for select years in the State of Arizona and Maricopa County.

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<sup>13</sup> The CY2015 construction impacts are an estimated 7.5% of the indirect and induced private non-farm employment impacts for that year.

**Figure 3: Statewide Private Non-Farm Employment Impacts, CY2015-2043**



Source: Authors' Calculations

Table 8 estimates that MIHS will contribute \$873 million GSP to the State of Arizona economy in CY2015. This includes an estimated \$487 million RDPI (both 2013 \$).

During the \$935 million capital investment years, MIHS' statewide GSP contribution will peak in CY2018 at an estimated \$1.28 billion, including an estimated RDPI contribution of \$766 million (both 2013 \$).

The cumulative statewide GSP contribution of MIHS, CY2015-2043, will be an estimated \$36.8 billion, including an estimated cumulative RDPI of approximately \$24.5 billion (both 2013 \$).

**Table 8: GSP and RDPI Impacts of MIHS in the State of Arizona, CY2015-2043<sup>14</sup>**

	State Impacts (Billions 2013 \$)											
	2015	2016	2017	2018	2019	2020	2025	2030	2035	2040	2043	Total
GSP	0.87	1.05	1.22	1.28	1.18	1.05	1.09	1.23	1.39	1.56	1.69	36.8
RDPI	0.49	0.60	0.71	0.77	0.73	0.67	0.72	0.82	0.95	1.10	1.21	24.5

Source: Authors' Calculations

Table 9 estimates that MIHS will contribute \$862 million GSP to the Maricopa County economy in CY2015. This includes an estimated \$468 million RDPI (both 2013 \$).

<sup>14</sup> Cumulative totals may not tally exactly due to rounding up.

**Table 9: GSP and RDPI Impacts of MIHS in Maricopa County, CY2015-2043<sup>15</sup>**

Maricopa County Impacts (Billions 2013 \$)												
	2015	2016	2017	2018	2019	2020	2025	2030	2035	2040	2043	Total
GSP	0.86	1.04	1.20	1.25	1.15	1.02	1.05	1.18	1.34	1.49	1.62	35.5
RDPI	0.47	0.58	0.68	0.73	0.69	0.64	0.68	0.77	0.89	1.02	1.12	23.0

Source: Authors' Calculations

During the \$935 million capital investment years, MIHS' GSP contribution in Maricopa County will peak in CY2018 at an estimated \$1.25 billion, including an estimated RDPI contribution of \$734 million (both 2013 \$).

The cumulative GSP contribution of MIHS in Maricopa County, CY2015-2043, will be an estimated \$35.5 billion, including an estimated cumulative RDPI of \$23 billion (both 2013 \$).

Table 10 estimates the partial net state revenue implications of MIHS, CY2015-2043.

Table 10 estimates that MIHS throughout the study period will cumulatively generate approximately \$2.5 billion in partial net revenues in the State of Arizona, including over \$2.3 billion in Maricopa County (both 2013 \$).

**Table 10: Summary of Cumulative State Net Revenues, CY2015-2043**

	Maricopa County (Millions 2013 \$)	Other AZ (Millions 2013 \$)	State of Arizona (Millions 2013 \$)
Income Tax	393.0	24.8	417.8
General Sales Tax	443.0	25.4	468.4
Selective Sales Tax	125.4	7.2	132.6
Corporate Income Tax	53.1	2.7	55.8
Rest <sup>16</sup>	1,329.7	118.4	1,448.1
<b>Total</b>	<b>2,344.2</b>	<b>178.5</b>	<b>2,522.7</b>

Source: Authors' Calculations

## CONCLUSION

MIHS will continue to exert a significant impact on the State of Arizona and the Maricopa County economies if it can implement a voter-approved \$935 million capital investment program. In short, a Partial Net analysis estimates that MIHS CY2015-2043 will be responsible for the statewide generation of an estimated

- \$36.8 billion GSP, including an estimated \$24.5 billion RDPI (both 2013 \$); and
- \$2.5 billion (2013 \$) in state net revenues.

The Partial Net analysis also estimates that MIHS will generate on average 1.6 indirect and induced job years (all sectors) or 1.4 indirect and induced job years (private non-farm employment) statewide throughout the period of analysis for every full-time or equivalent year of direct employment at the integrated health care system.

<sup>15</sup> Cumulative totals may not tally exactly due to rounding up.

<sup>16</sup> Rest includes intergovernmental revenue, charges, insurance trust revenue and other miscellaneous revenue.

The Partial Net estimates are lower than a Partial Gross study's estimates, but represent a more realistic assessment, as they additionally take into account the state and patient financial contributions for the annual operation of MIHS, CY2015-2043, and also the additional property tax payments incurred to service the \$935 million bond's debt repayments.



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