

# Research: *Impacts of Higher Education Capital Improvements*



Prepared For: Oklahoma State Regents for Higher Education

*March, 2004*

Prepared By: Center for Economic & Business Development

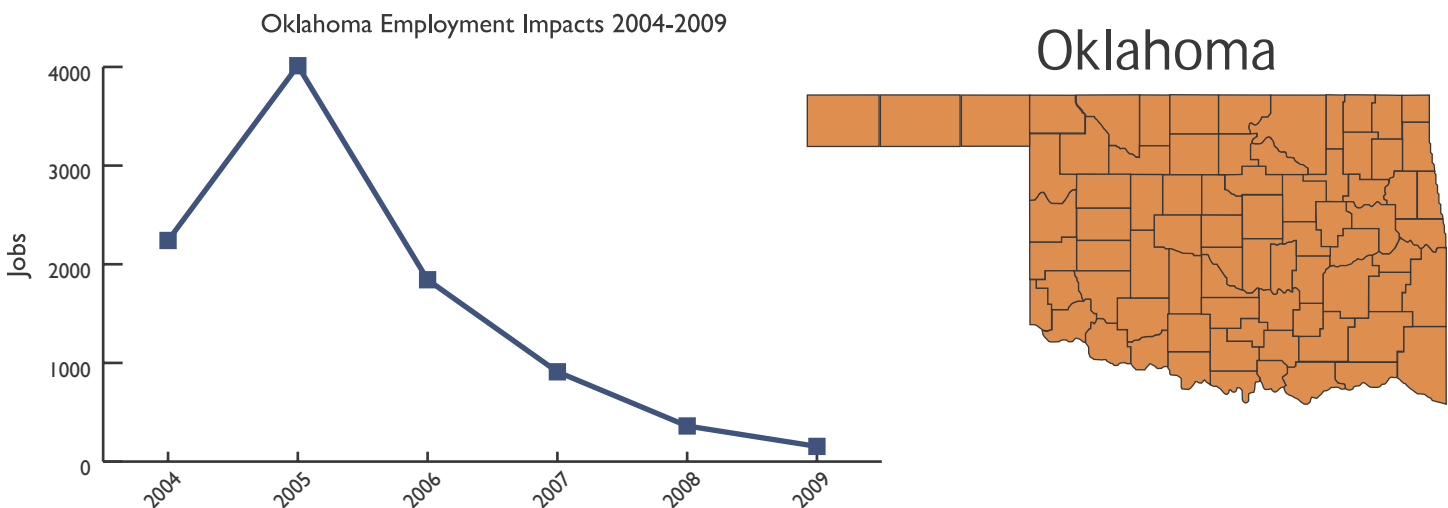


## Economic Impacts upon Oklahoma

The economic impacts of the higher education capital improvements are based upon 140 capital improvement projects occurring at 36 higher education institutions/locations in Oklahoma. These capital improvement projects were simulated as construction sales of higher education facilities to be paid for by a capital bond.

The \$500 million capital bond was modeled to be a 20-year, 4.5% interest capital bond. A new revenue source was used to account for the bond's principal and interest payments.

Total project cost was distributed evenly from 3rd Qtr 2004, when all projects were assumed to begin, to the estimated completion dates for each project. This summary covers the 2004-2009 time frame.



In the first year, 2004 in this simulation, Employment impacts total 2,241 jobs in Oklahoma. Employment impacts peak in 2005 with 4,012 additional jobs. After some of the capital improvement projects are completed, employment impacts begin to decrease. Employment impacts total 1,843 jobs in 2006, 910 jobs in 2007, 361 jobs in 2008, and 154 jobs in 2009 as the economy begins to work towards an equilibrium when all the capital improvement projects are scheduled to be completed. Average employment impacts equal 1,587 jobs over the entire 2004-2009 time frame.

Additionally:

The Construction sector accounts for 59.2% of the average employment impacts over the 2004-2009 time frame

The Service sector accounts for 16.9% of the average employment impacts over the 2004-2009 time frame

The Retail Trade sector accounts for 11.1% of the average employment impacts over the 2004-2009 time frame

The NPV of 2004-2009 Output impacts equal \$737.65 million

The NPV of 2004-2009 Real Disposable Personal Income impacts equal \$187.16 million

# Research: *Impacts of Higher Education Capital Improvements*



Prepared For: Oklahoma State Regents for Higher Education

*March, 2004*

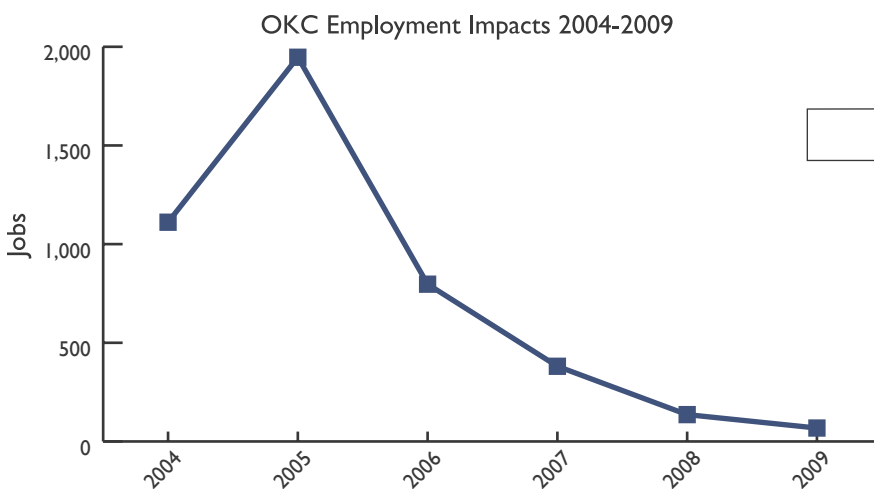
Prepared By: Center for Economic & Business Development



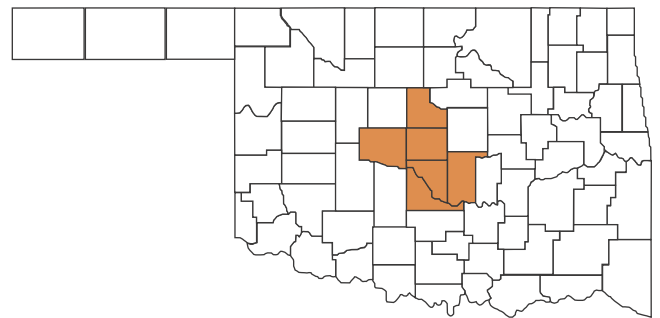
## Economic Impacts upon Oklahoma City

The economic impacts of the higher education capital improvements are based upon 33 capital improvement projects occurring at 9 higher education institutions/locations in the Oklahoma City MSA. The \$500 million capital bond was modeled to be a 20-year, 4.5% interest capital bond. A new revenue source was used to account for the bond's principal and interest payments, and these payment obligations were proportionally distributed through the state according to population.

Total project cost was distributed evenly from 3rd Qtr 2004, when all projects were assumed to begin, to the estimated completion dates for each project. This summary covers the 2004-2009 time frame.



## Oklahoma City MSA



In the first year, 2004 in this simulation, Employment impacts total 1,111 jobs in the Oklahoma City MSA. Employment impacts peak in 2005 with 1,947 additional jobs. After some of the capital improvement projects are completed, employment impacts begin to decrease. Employment impacts total 797 jobs in 2006, 381 jobs in 2007, 136 jobs in 2008, and fall to 68 jobs in 2009 as the economy begins to work towards an equilibrium when all the capital improvement projects are scheduled to be completed. Average employment impacts equal 740 jobs over the entire 2004-2009 time frame.

Additionally:

The NPV of 2004-2009 Output impacts equal \$348.89 million

The NPV of 2004-2009 Real Disposable Personal Income impacts equal \$97.34 million

# Research: *Impacts of Higher Education Capital Improvements*



Prepared For: Oklahoma State Regents for Higher Education

*March, 2004*

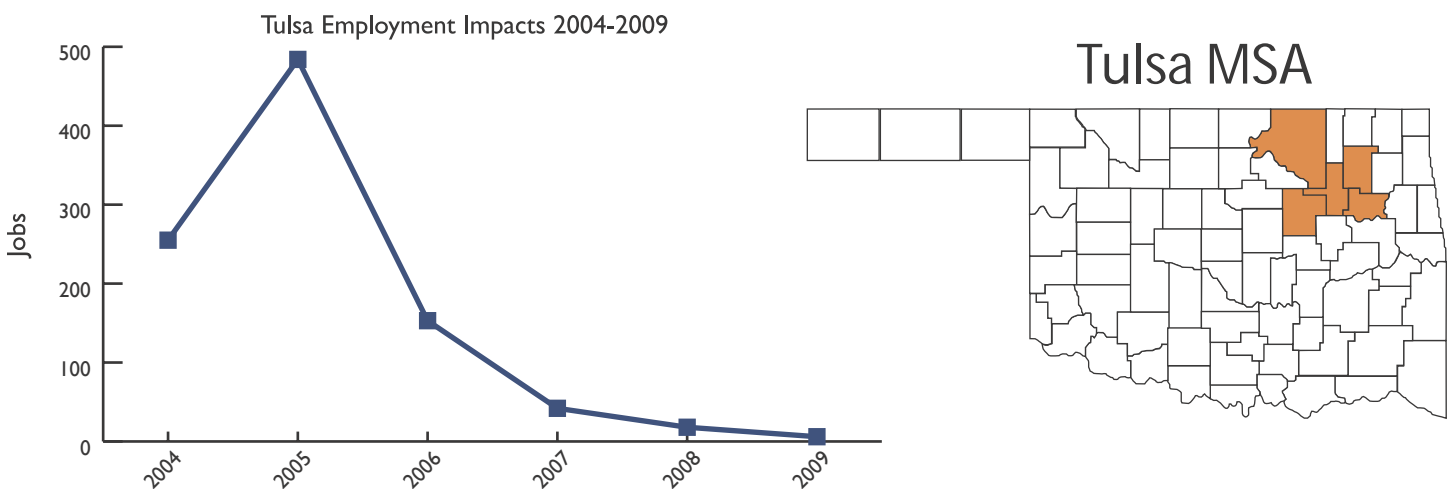
Prepared By: Center for Economic & Business Development



## Economic Impacts upon Tulsa

The economic impacts of the higher education capital improvements are based upon 4 capital improvement projects occurring at 3 higher education institutions/locations in the Tulsa MSA. The \$500 million capital bond was modeled to be a 20-year, 4.5% interest capital bond. A new revenue source was used to account for the bond's principal and interest payments, and these payment obligations were proportionally distributed through the state according to population.

Total project cost was distributed evenly from 3rd Qtr 2004, when all projects were assumed to begin, to the estimated completion dates for each project. This summary covers the 2004-2009 time frame.



In the first year, 2004 in this simulation, Employment impacts total 255 jobs in the Tulsa MSA. Employment impacts peak in 2005 with 484 additional jobs. After some of the capital improvement projects are completed, employment impacts begin to decrease. Employment impacts total 153 jobs in 2006, 42 jobs in 2007, 18 jobs in 2008, and fall to 6 jobs in 2009 as the economy begins to work towards an equilibrium when all the capital improvement projects are scheduled to be completed. Average employment impacts equal 160 jobs over the entire 2004-2009 time frame.

Additionally:

The NPV of 2004-2009 Output impacts equal \$81.72 million

The NPV of 2004-2009 Real Disposable Personal Income impacts equal \$24.24 million

# Research: *Impacts of Higher Education Capital Improvements*



Prepared For: Oklahoma State Regents for Higher Education

*March, 2004*

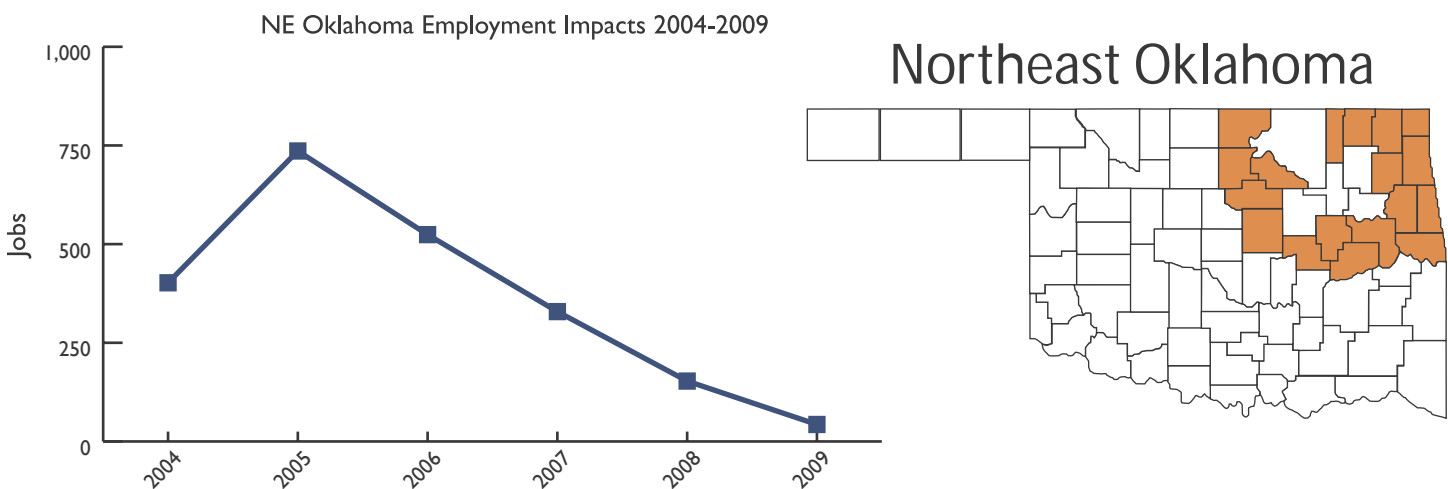
Prepared By: Center for Economic & Business Development



## Economic Impacts upon Northeast Oklahoma

The economic impacts of the higher education capital improvements are based upon 29 capital improvement projects occurring at 8 higher education institutions/locations in Northeast Oklahoma. The \$500 million capital bond was modeled to be a 20-year; 4.5% interest capital bond. A new revenue source was used to account for the bond's principal and interest payments, and these payment obligations were proportionally distributed through the state according to population.

Total project cost was distributed evenly from 3rd Qtr 2004, when all projects were assumed to begin, to the estimated completion dates for each project. This summary covers the 2004-2009 time frame.



In the first year, 2004 in this simulation, Employment impacts total 402 jobs in Northeast Oklahoma. Employment impacts peak in 2005 with 736 additional jobs. After some of the capital improvement projects are completed, employment impacts begin to decrease. Employment impacts total 524 jobs in 2006, 329 jobs in 2007, 153 jobs in 2008, and fall to 43 jobs in 2009 as the economy begins to work towards an equilibrium when all the capital improvement projects are scheduled to be completed. Average employment impacts equal 364 jobs over the entire 2004-2009 time frame.

Additionally:

The NPV of 2004-2009 Output impacts equal \$161.55 million

The NPV of 2004-2009 Real Disposable Personal Income impacts equal \$34.17 million

# Research: *Impacts of Higher Education Capital Improvements*



Prepared For: Oklahoma State Regents for Higher Education

*March, 2004*

Prepared By: Center for Economic & Business Development



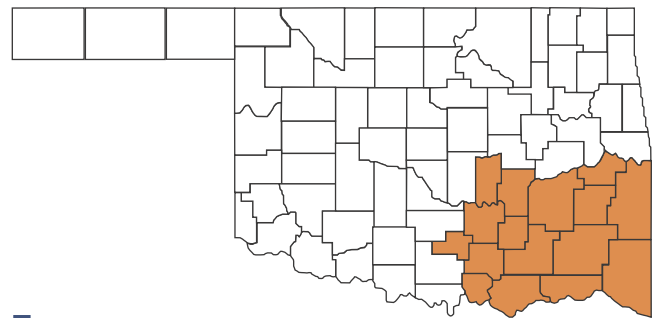
## Economic Impacts upon Southeast Oklahoma

The economic impacts of the higher education capital improvements are based upon 33 capital improvement projects occurring at 7 higher education institutions/locations in Southeast Oklahoma. The \$500 million capital bond was modeled to be a 20-year, 4.5% interest capital bond. A new revenue source was used to account for the bond's principal and interest payments, and these payment obligations were proportionally distributed through the state according to population.

Total project cost was distributed evenly from 3rd Qtr 2004, when all projects were assumed to begin, to the estimated completion dates for each project. This summary covers the 2004-2009 time frame.



### Southeast Oklahoma



In the first year, 2004 in this simulation, Employment impacts total 221 jobs in Southeast Oklahoma. Employment impacts peak in 2005 with 392 additional jobs. After some of the capital improvement projects are completed, employment impacts begin to decrease. Employment impacts total 132 jobs in 2006, 75 jobs in 2007, 29 jobs in 2008, and fall to 17 jobs in 2009 as the economy begins to work towards an equilibrium when all the capital improvement projects are scheduled to be completed. Average employment impacts equal 144 jobs over the entire 2004-2009 time frame.

Additionally:

The NPV of 2004-2009 Output impacts equal \$64.01 million

The NPV of 2004-2009 Real Disposable Personal Income impacts equal \$12.38 million

# Research: *Impacts of Higher Education Capital Improvements*



Prepared For: Oklahoma State Regents for Higher Education

*March, 2004*

Prepared By: Center for Economic & Business Development

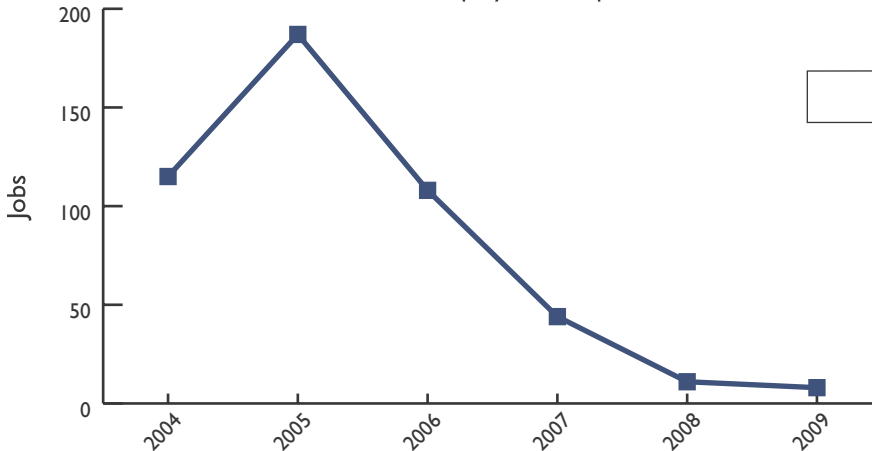


## Economic Impacts upon Southwest Oklahoma

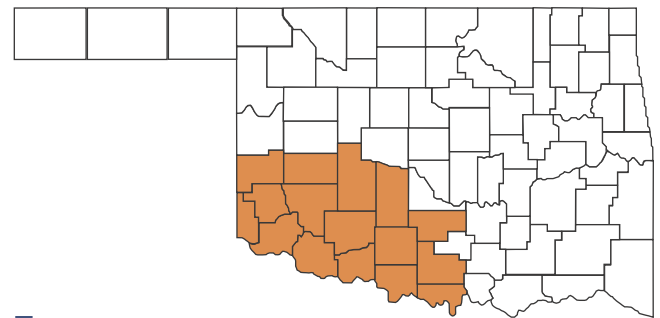
The economic impacts of the higher education capital improvements are based upon 25 capital improvement projects occurring at 6 higher education institutions/locations in Southwest Oklahoma. The \$500 million capital bond was modeled to be a 20-year, 4.5% interest capital bond. A new revenue source was used to account for the bond's principal and interest payments, and these payment obligations were proportionally distributed through the state according to population.

Total project cost was distributed evenly from 3rd Qtr 2004, when all projects were assumed to begin, to the estimated completion dates for each project. This summary covers the 2004-2009 time frame.

SW Oklahoma Employment Impacts 2004-2009



## Southwest Oklahoma



In the first year, 2004 in this simulation, Employment impacts total 115 jobs in Southwest Oklahoma. Employment impacts peak in 2005 with 187 additional jobs. After some of the capital improvement projects are completed, employment impacts begin to decrease. Employment impacts total 108 jobs in 2006, 44 jobs in 2007, 11 jobs in 2008, and fall to 8 jobs in 2009 as the economy begins to work towards an equilibrium when all the capital improvement projects are scheduled to be completed. Average employment impacts equal 79 jobs over the entire 2004-2009 time frame.

Additionally:

The NPV of 2004-2009 Output impacts equal \$37.42 million

The NPV of 2004-2009 Real Disposable Personal Income impacts equal \$8.95 million

Southwestern Oklahoma State University  
100 Campus Drive  
Weatherford, OK 73096



# Research: *Impacts of Higher Education Capital Improvements*



Prepared For: Oklahoma State Regents for Higher Education

*March, 2004*

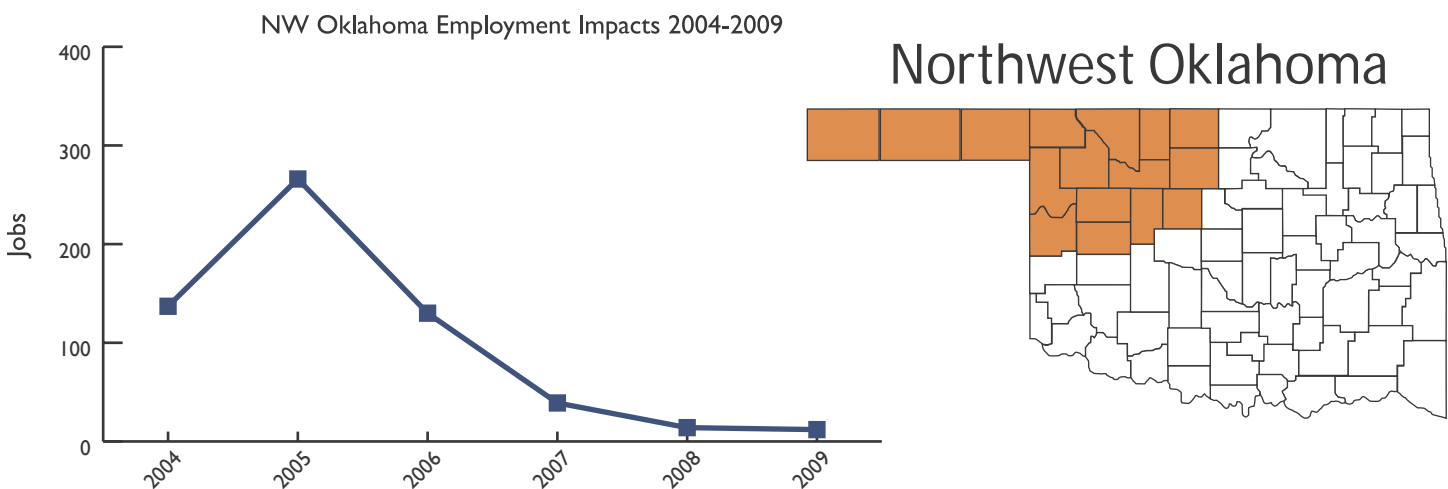
Prepared By: Center for Economic & Business Development



## Economic Impacts upon Northwest Oklahoma

The economic impacts of the higher education capital improvements are based upon 16 capital improvement projects occurring at 4 higher education institutions/locations in Northwest Oklahoma. The \$500 million capital bond was modeled to be a 20-year, 4.5% interest capital bond. A new revenue source was used to account for the bond's principal and interest payments, and these payment obligations were proportionally distributed through the state according to population.

Total project cost was distributed evenly from 3rd Qtr 2004, when all projects were assumed to begin, to the estimated completion dates for each project. This summary covers the 2004-2009 time frame.



In the first year, 2004 in this simulation, Employment impacts total 137 jobs in Northwest Oklahoma. Employment impacts peak in 2005 with 266 additional jobs. After some of the capital improvement projects are completed, employment impacts begin to decrease. Employment impacts total 130 jobs in 2006, 39 jobs in 2007, 14 jobs in 2008, and fall to 12 jobs in 2009 as the economy begins to work towards an equilibrium when all the capital improvement projects are scheduled to be completed. Average employment impacts equal 100 jobs over the entire 2004-2009 time frame.

Additionally:

The NPV of 2004-2009 Output impacts equal \$44.14 million

The NPV of 2004-2009 Real Disposable Personal Income impacts equal \$10.11 million



# Research: *Impacts of Higher Education Capital Improvements*



Prepared For: Oklahoma State Regents for Higher Education

March, 2004

Prepared By: Center for Economic & Business Development



## Summary of Economic Impacts (\$ figures in millions)

	Oklahoma City MSA	Tulsa MSA	Northeast Oklahoma	Southeast Oklahoma	Southwest Oklahoma	Northwest Oklahoma	Oklahoma
Average Employment (2004-2009)	740	160	364	144	79	100	1587
<i>Household Spending (Sum)</i>	\$95.5	\$23.5	\$35.7	\$12.6	\$9.3	\$10.4	\$187.0
<i>Business Spending (Sum)</i>	\$59.7	\$14.0	\$25.9	\$8.1	\$5.8	\$5.9	\$119.3
<i>Government Spending (Sum)</i>	\$9.8	\$2.1	\$4.9	\$2.2	\$1.4	\$1.8	\$22.2
<i>Net Exports (Sum)</i>	\$39.9	\$8.5	\$23.0	\$11.5	\$4.5	\$6.3	\$93.8
Gross Regional Product (Sum)	\$205.0	\$48.1	\$89.5	\$34.3	\$21.0	\$24.3	\$422.3
Intermediate Demand (Sum)	\$176.4	\$40.5	\$90.3	\$35.4	\$20.1	\$23.9	\$386.4
<b>Output (Sum)</b>	<b>\$381.4</b>	<b>\$88.6</b>	<b>\$179.8</b>	<b>\$69.8</b>	<b>\$41.1</b>	<b>\$48.2</b>	<b>\$808.7</b>
<i>Household Spending (NPV)</i>	\$86.2	\$21.4	\$31.7	\$11.4	\$8.4	\$9.4	\$168.4
<i>Business Spending (NPV)</i>	\$55.5	\$13.2	\$23.4	\$7.5	\$5.3	\$5.4	\$110.3
<i>Government Spending (NPV)</i>	\$8.3	\$1.8	\$4.2	\$1.8	\$1.2	\$1.5	\$18.9
<i>Net Exports (NPV)</i>	\$37.0	\$7.9	\$21.0	\$10.7	\$4.2	\$5.9	\$86.8
Gross Regional Product (NPV)	\$187.1	\$44.2	\$80.3	\$31.4	\$19.1	\$22.2	\$384.4
Intermediate Demand (NPV)	\$161.8	\$37.5	\$81.3	\$32.6	\$18.3	\$21.9	\$353.3
<b>Output (NPV)</b>	<b>\$348.9</b>	<b>\$81.7</b>	<b>\$161.6</b>	<b>\$64.0</b>	<b>\$37.4</b>	<b>\$44.1</b>	<b>\$737.7</b>
Personal Income (Sum)	\$147.5	\$37.1	\$54.8	\$19.7	\$14.2	\$16.0	\$289.4
Personal Income (NPV)	\$132.5	\$33.7	\$48.4	\$17.7	\$12.8	\$14.4	\$259.4
Disposable Personal Income (Sum)	\$108.1	\$26.6	\$38.6	\$13.8	\$10.0	\$11.2	\$208.2
Disposable Personal Income (NPV)	\$97.3	\$24.2	\$34.2	\$12.4	\$8.9	\$10.1	\$187.2
Population Impacts (by 2009)	426	86	222	80	49	57	920

Economic impacts reported as sums represent the unadjusted sum of yearly impacts between 2004 and 2009.

Net present value calculations use a 4.5% discount rate and the 2004-2009 time frame.



# Capital Improvement Project Values at Oklahoma's Higher Education Institutions

