



APPLIED ECONOMICS

**ECONOMIC IMPACTS OF THE
OKLAHOMA CAPITAL INVESTMENT BOARD'S
VENTURE INVESTMENT PROGRAM AND
OKLAHOMA CAPITAL ACCESS PROGRAM**

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OCTOBER 2015

1.0 INTRODUCTION

Applied Economics has been retained on behalf of the Oklahoma Capital Investment Board (OCIB or Board) to prepare an updated economic impact statement of their venture investment and capital access programs on the State of Oklahoma from 1992 through June 2015. Applied Economics is an economic consulting firm, based in Phoenix, Arizona, specializing in economic development, economic and fiscal impact assessment, socioeconomic modeling, urban planning and custom software applications. Applied Economics conducts studies and develops models to measure the impacts of a wide variety of activities. These activities can include development land use and policy changes, business-driven economic impacts, and program-driven economic and fiscal impacts.

This analysis is intended to quantify the contributions of the companies assisted by OCIB to the Oklahoma economy. The impacts stem from two programs – the Venture Investment Program and the Capital Access Program. In addition the analysis includes a summary of the impacts of the NBA Hornets who played in Oklahoma City following Hurricane Katrina and received a \$10 million revenue guarantee through an investment syndicate which included OCIB, the City of Oklahoma City and a group of private investors.

Through its Venture Investment Program, OCIB supports investments in private, professionally managed venture capital firms that have committed to building a significant presence within Oklahoma and have a history of producing solid returns for their investors. In addition to supporting local businesses through venture capital, the impacts of supported local jobs at the Oklahoma-based investment management firms are also included in the impact analysis.

The OCIB Capital Access Program provides banks a form of portfolio guarantee, allowing them to stretch their loan capabilities and offer more loans to small businesses in Oklahoma. Both businesses and financial institutions in Oklahoma benefit from the higher volume of small business loans created through the capital access program. Loans generally range in size from \$1,000 to \$700,000 and are used by a wide variety of businesses.

Since 1992, OCIB has assisted 36 Oklahoma companies and nine Oklahoma based investment firms through its venture investment program and 936 companies through its capital access program. These companies range in size from 1 or 2 employees to over 400 employees, although the vast majority are smaller firms. They also represent a broad spectrum of different industries. Startup companies like many of the firms that have benefited from OCIB are the nation's most promising source of new jobs. According to the Kauffman Foundation, not only are startups responsible for much of the net new job growth in the U.S. economy in recent years, but more importantly the majority of the employment they generate remains as these firms age, creating a lasting impact on the economy.

The impact represented here shows a year-by-year snapshot of the companies assisted in each year. In the case of the venture investment program, most companies reported Oklahoma payroll and employment numbers for multiple years and are therefore included in totals for each of the reported years. However, once a company was no longer active in Oklahoma, they were no longer included in the impacts.

The venture investment program includes venture fund investments in 36 Oklahoma based companies between 1993 and 2015 as well as nine locally-based venture firms. In total, they account for \$328.6 million in payroll and about 1,900 employees over this time period.¹ Over the 23 year period these 36

¹ Employee count based on peak employment of each firm during the time period they reported employment and payroll.

companies as a group received more than \$163.0 million in venture capital funding through the work of OCIB portfolio funds.

The capital access program includes data on 467 of the 936 companies that participated between 1992 and 2012. This includes companies that were willing to provide information on their industry type and the number of new jobs they created. For this program, the impact analysis is based on new jobs created during their initial year of participation in the program, rather than total jobs. This approach is taken because companies within the capital access program do not report employment numbers in subsequent years. The 936 companies as a group received approximately \$48.0 million in loans between 1992 and 2012. In this respect, the analysis provides a very conservative estimate of the cumulative impacts given that only 467 of the 936 Oklahoma companies were considered in the analysis. In addition, their impact was only considered for a one-year period even though most of the companies likely operated for multiple years in Oklahoma.

In addition to their regular programs, this analysis also includes information about a revenue guarantee provided by OCIB to the NBA Hornets. Due to the devastation caused by Hurricane Katrina in New Orleans in September 2005, Oklahoma City was approached by the New Orleans Hornets and the National Basketball Association (NBA) to play their 2005-06 season at the Chesapeake Energy Arena in Oklahoma City. To assist in this effort, OCIB participated in a \$10 million revenue guarantee put in place to recruit the team to Oklahoma.

Economic impacts are a way to quantify not only the direct impacts of new jobs, payroll and sales generated by the companies in the program, but also the consequential effects on the state's economy overall. It provides a more robust approach to understanding the return on investment from various types of programs that stimulate economic growth. Economic impacts utilize input-output analysis as a means of examining relationships within an economy, both between businesses and between businesses and final consumers. The resulting mathematical formulae allow for examination of the effects of a change in one or more individual businesses on the entire economy. In order to make these mathematical calculations, the IMPLAN model is used in this analysis. IMPLAN, which is a simple yet robust tool to model economic impacts, is currently used by over 2,000 government agencies, colleges and universities, non-profit organizations, corporations, and business development and community planning organizations and is the most widely employed and accepted regional economic analysis software for predicting economic impacts.

The information and observations contained in this report are based on our present knowledge of the components of development, and of the current physical, socioeconomic and fiscal conditions of the affected areas. All company-specific data was provided by OCIB. Estimates made in this analysis are based on hypothetical assumptions and the current economic structure of the region. However, even if the assumptions outlined in this report were to occur, there will usually be differences between the estimates and the actual results because events and circumstances frequently do not occur as expected. This analysis is based on the best available information and is intended to aid policy makers in evaluating the impact to the state of the Oklahoma Capital Investment Board programs. In no way will Applied Economics be held responsible or have any liability or be subject to damages as a result of this analysis. This report may be used only for the purposes that it was intended.

2.0 SUMMARY OF RESULTS

The Oklahoma Capital Investment Board provides access to a unique set of financial resources for companies looking to develop or expand in Oklahoma. These companies in turn provide on-going economic benefits to the state. These positive impacts include the following:

Economic Impacts

- OCIB has had a total economic impact of close to \$1.90 billion on the Oklahoma economy over the past 23 years as a result of the venture capital and capital access programs, supported local venture investment firms and the NBA Hornets revenue guarantee. These programs assisted over 970 companies during this time period. Data presented in the Appendix is limited to the last 10 years of operation.
- The largest component of the impact is from the venture investment program. The 36 Oklahoma companies that received capital from Board-supported funds provided close to 13,000 job-years over the multi-year period, (or an average of 590 jobs per year) and a total of \$306.1 million in payroll. In addition, the venture investment program supported nine venture firms that were headquartered in Oklahoma.
- As a result of the multiplier effect, the total impact of the companies in the venture investment program on the State of Oklahoma is estimated at \$1.49 billion in increased economic activity, about 20,000 jobs, (or an average of 890 jobs per year) and \$567.6 million in payroll. This includes jobs and payroll at participating companies, as well as jobs and payroll at other local businesses.
- The nine Oklahoma-based venture firms in which OCIB has invested through its venture investment program have employed an average of 17 people per year since 1993. They have created an economic impact of \$99.2 million over the past 23 years, directly and indirectly supporting \$38.3 million in total payroll and 780 total jobs (or an average of 34 jobs per year).
- The capital access program has assisted 936 small and medium sized companies since its inception in 1992. Of these 936 companies, 467 provided enough information to calculate impacts. These 467 companies created about 1,500 new jobs and \$46.4 million in payroll.
- The total economic impact of the capital access program, including additional supported jobs and payroll at other local businesses, was \$244.4 million in increased economic activity, over 2,600 jobs and \$81.9 million in payroll.
- Along with these impacts from developing and expanding Oklahoma companies, OCIB also provided 1/3 of a \$10 million revenue guarantee put in place to recruit the NBA Hornets to Oklahoma for their 2005/06 season. The Hornets organization employed about 100 people (players and front office) with a total payroll of \$60 million, of which an estimated 10 percent was spent in Oklahoma. In addition, they supported \$45.6 million in direct game spending by patrons. The payroll and game spending combined resulted in an annual economic impact of \$71.0 million.²

² City of Oklahoma City.

Revenue Impacts

- In addition to supporting jobs and economic activity, the companies in the capital access and venture investment programs also generated significant state tax revenues over the past 23 years. The participating companies themselves generate sales taxes, property taxes and corporate income taxes in Oklahoma that are not quantified in this analysis. In addition, they generate revenues through their employees. Household spending by employees of participating companies and other supported local businesses has generated an estimated \$9.6 million in state sales tax revenues since 1992. Directly and indirectly supported employees also generated an estimated \$25.2 million in state personal income taxes over the life of the program.

Performance Metrics

- Since its inception, OCIB has supported approximately 3,400 new jobs through the Venture Investment and Capital Access Programs combined. Since inception, the actual dollars contributed by the state (considered cost of OCIB programs to the state) to fund OCIB's programs is \$31.0 million. Therefore, the average cost per direct job is \$9,104. If the indirect jobs created through local multiplier effects are included, the average cost per job drops to \$6,371. It should be noted that the average cost per job would be significantly reduced if retained jobs were included within the analysis. Electing to be conservative, only new job creation has been included.

PERFORMANCE METRICS FOR OCIB PROGRAM 1992 to 2015

	<u>Direct Jobs</u>	<u>Avg Wage</u>	<u>Total Jobs</u>	<u>Avg Wage</u>
New Jobs Created				
Venture Investment Program ¹	1,886	\$25,313	2,215	\$28,662
Capital Access Program	1,514	\$30,647	2,642	\$30,988
Total Cost of OCIB Program to State	\$30,950,000			
Average Cost per Job Created	\$9,104		\$6,371	
Value of New Revenue to State per Job ²	\$5,346		\$7,210	

¹Includes jobs at venture firms and peak employment at all participating companies over the life of the program.

²Includes state personal income and sales tax generated by employees at participating companies.

SUMMARY OF RESULTS

VENTURE INVESTMENT PROGRAM

Venture Fund Investments

Total Investment	\$163,039,764
Number of Participating Companies	36
Payroll (1993 - 2015)	\$306,105,895
Total Employment*	12,975
Average Annual Employment	590
Average Wage per Job	\$23,592

Economic Impacts (1993 - 2015)

Total Output	\$1,490,288,793
Total Payroll	\$567,557,885
Total Jobs (in Job-Years)*	20,361

Venture Investment Firms

Local Firms	9
Average Employment	17
Payroll (1993 - 2015)	\$22,754,714
Average Wage per Job	\$54,502

Economic Impacts (1993 - 2015)

Total Output	\$99,186,240
Total Payroll	\$38,277,636
Average Total Jobs	34

CAPITAL ACCESS PROGRAM

Total Loans	\$48,023,262
Number of Participating Companies**	936
Estimated Payroll (1992 - 2012)	\$46,399,694
New Employment**	1,514
Average Wage per Job	\$30,647

Economic Impacts (1992 - 2012)

Total Output	\$244,421,810
Total Payroll	\$81,885,382
Total Jobs	2,642

NBA HORNETS

Total Loan Guarantee	\$10,000,000
Estimated Payroll Spent in Oklahoma (2005-2006)***	\$6,000,000
Average Wage per Job	\$600,000
Direct Game Spending (38 games)	\$45,568,384

Economic Impacts (2005-2006)

Total Output	\$71,011,462
Total Payroll	\$25,443,000
Total Jobs	229

*Represents total employment in job-years, an average of 564 direct jobs per year and 885 total jobs per year over the multi-year period. Jobs at individual firms may be included multiple times if the company maintained operations in Oklahoma for multiple years.

**Only 467 of the 936 companies submitted sufficient information to be included in the impact.

Employment number shown here is estimated total for those 467 companies.

***Assumes 10 percent of total payroll spent in Oklahoma.

3.0 ECONOMIC IMPACTS

The economic benefits resulting from OCIB's programs include combined impacts of all companies assisted by OCIB since 1992. Economic impacts measure the effects of economic stimuli or expenditures in the local economy. These impacts include direct and indirect jobs, personal income, and economic activity or output that are generated by these companies. Indirect impacts are the result of the multiplier effect and capture supported supplier and consumer businesses and their employees in Oklahoma that benefit from local purchases made by these companies and their employees.

Venture Investment Program

Venture Fund Investments

The venture investment program was initiated in 1993. Since that time, 36 companies have received funding. All total, OCIB has provided these companies with access to over \$163.0 million in venture capital funding over the past 23 years. The companies range in size from 1 employee to over 400 employees. A list of the types of industries and associated employment and payroll for participating companies is shown in Figure 1.

Venture Investment Firms

The program also supported nine venture firms that were headquartered in Oklahoma. These firms currently employ about 29 investment professionals and support staff. Employment and payroll numbers for these firms are in addition to the venture investment program impact totals.

**FIGURE 1
COMPANIES PARTICIPATING IN VENTURE FUND INVESTMENTS
AND VENTURE FIRMS BY INDUSTRY TYPE**

Industry Type	Employment	Payroll
Advertising	130	\$3,486,000
Construction & management services	212	\$12,794,000
Communication services	73	\$12,018,000
Transformers	56	\$9,461,000
Custom programming/software/CAD/design	274	\$58,388,354
Service company	403	\$105,220,000
Health care	187	\$39,970,981
Costume jewelry	93	\$3,391,000
Photo laboratories	60	\$6,800,000
Instruments	17	\$2,472,000
Electronic equipment	44	\$19,999,500
Financial services*	27	\$22,754,714
Waste management	18	\$2,571,559
Administrative services	240	\$13,186,000
Aerospace	3	\$702,000
Biological products/research/medical devices	49	\$15,347,500

Note: Payroll include totals for all years for all companies in that industry type.

Employment includes peak levels during the participation period.

* Payroll for venture firms estimated based on average occupational wages for Oklahoma from the Oklahoma Employment Security Commission.

On average, companies receiving OCIB support through its venture investment program have been active in Oklahoma for about seven years. The data represented here shows a snapshot of the combined economic impact of all companies participating in any given year. For reasons described above, most companies are represented in the impact totals for an average of seven years.

Capital Access Program

The capital access program was initiated in 1992. Since that time, 936 companies have received loans, many more than one loan. The impact from each company is only included for a one-year period even though the participants were likely active in Oklahoma for multiple years. Multi-year data was not included because this information is not available to the Board. An additional factor that adds to the conservative nature of our analysis of the capital access program is that only 467 of the total 936 companies reported employment numbers. Therefore, only 467 of these companies are considered in the study. The total amount of loans funded since 1992 is approximately \$48.0 million. In this analysis, each borrower is counted only one time, even if they received more than one loan. The participants in this program span almost every industry sector (Figure 2). They range in size from 1 to 200 total employees with annual sales ranging from \$2,000 to \$4.9 million. Over the 20 year period from 1992 to 2012, these companies created approximately 1,600 new jobs in Oklahoma.³ Because no new loans were enrolled in the OCAP after 2012, no impact numbers have been included, even though there are a significant number of OCAP companies still operating in the state and generating impacts.

The impacts of these companies stem from two sources. First, companies purchase a variety of goods and services from vendors within the state creating additional demand, jobs and payroll. The amount and type of local purchases depends on the industry type of the participating company. Second, company employees, as well as supported vendor employees, make local purchases of consumer goods. This creates additional demand and supports additional employment and payroll, primarily at retail and personal services establishments.

³ Estimate of new jobs includes companies that did not provide sufficient information to be included in the analysis. The companies included in the analysis account for 1,514 of the approximately 1,600 new jobs.

FIGURE 2
COMPANIES PARTICIPATING IN CAPITAL ACCESS PROGRAM
BY INDUSTRY TYPE

Industry	Borrower Sales	New Jobs Created
Agriculture- Livestock Production	\$1,750,632	21
Agriculture-Crop Production	\$230,000	1
Agricultural Services	\$1,006,453	17
Mining	\$5,070,097	57
Construction	\$24,275,969	192
Utilities	\$175,000	1
Food Processing	\$2,478,480	14
Apparel and Textiles	\$725,154	10
Lumber and Wood Products	\$231,531	10
Furniture & Fixtures	\$2,337,515	29
Printing	\$517,340	4
Chemicals	\$223,000	5
Leather Products	\$70,000	1
Stone, Clay & Glass	\$559,905	10
Primary Metals	\$527,800	1
Fabricated Metals	\$5,723,348	82
Industrial Machinery	\$1,961,069	12
Electronics	na	1
Transportation Equipment	\$1,747,349	9
Instruments	\$100,000	5
Misc Manufacturing	\$622,158	4
Interurban Transportation	\$114,000	1
Motor Freight Transportation	\$8,826,687	40
Water Transportation	\$702,000	2
Air Transportation	na	2
Transportation Services	\$1,171,021	29
Communication Services	\$607,000	2
Refuse Services	\$93,600	51
Wholesale Trade	\$6,815,611	50
Building Materials and Garden Stores	\$409,843	7
General Merchandise Stores	\$146,969	14
Food Stores	\$3,469,074	48
Auto Dealers	\$4,232,000	19
Apparel Stores	\$4,213,252	25
Home Furnishing Stores	\$802,713	13
Eating & Drinking Places	\$7,071,844	261
Misc Retail	\$5,830,012	59
Banking and Credit	\$95,000	1
Real Estate	\$111,039	13
Personal Services	\$1,103,234	61
Business Services	\$5,107,110	91
Auto Repair and Services	\$2,721,347	46
Misc Repair Services	\$2,103,114	8
Motion Pictures and Video Production	\$194,410	6
Amusement and Recreation	\$372,748	13
Health Care	\$2,209,843	43
Legal Services	\$442,225	16
Educational Services	\$14,450	3
Social Services	\$786,790	40
Membership Organizations	\$5,593,403	14
Professional Services	\$1,824,723	19
Other Services	\$2,155,198	31

Note: Figure includes only the 467 companies out of 936 total with sufficient information to be included in the analysis.

NBA Hornets Revenue Guarantee

Due to the devastation caused by Hurricane Katrina in New Orleans in September 2005, Oklahoma City was approached by the New Orleans Hornets and the National Basketball Association (NBA) to play their 2005-06 season at the Chesapeake Energy Arena in Oklahoma City. This temporary relocation created significant economic benefits for the city and the state. To assist in this effort, OCIB participated in a \$10 million revenue guarantee put in place to recruit the team to Oklahoma.

The team played 38 home games in Oklahoma City that year with average attendance of 18,737 per game. This resulted in \$45.6 million of direct game spending by both residents and out of town attendees. In addition, the 100 players and staff of the NBA Hornets spent an estimated 10 percent of their \$60 million payroll in Oklahoma during the season. Both of these types of spending support local businesses and create economic impacts. *Although the Hornets stayed in Oklahoma for a second season, the impact results were only included for the initial year. It is likely that the Hornets would not have been in Oklahoma for the second season without OCIB's support during the initial season, but we have again elected to be conservative with our analysis*

Economic Impact Results

The economic impact results presented here are grouped into direct impacts and total impacts (Figures 3, 4 and 5). Direct output represents the value of production at participating companies. Direct jobs and payroll were provided by OCIB and represent the number of jobs and amount of payroll at the companies participating in the program in a given year. These companies and their employees in turn make additional local purchases that are captured in the total impact estimates. The total impact includes both the direct impacts and the secondary, or indirect and induced impacts created at other local businesses and their employees.

The magnitude of the impact is proportional to the number of companies participating in any given year, the size of those companies, and the types of industries. Some industries generate a much greater multiplier effect than others, depending on the amount of local purchases they are able to make.

**FIGURE 3
ECONOMIC IMPACTS OF OCIB VENTURE INVESTMENT PROGRAM
ON THE STATE OF OKLAHOMA**

**VENTURE FUND INVESTMENTS
Current Dollars**

Year	New Investment	Number of Participating Companies	Direct Impacts			Total Impacts		
			Output	Jobs*	Payroll	Output	Jobs	Payroll
1993	\$250,000	1	\$202,519	3	\$108,000	\$379,100	4	\$165,972
1994	\$0	1	\$247,523	4	\$132,000	\$463,345	5	\$202,855
1995	\$9,380,000	2	\$11,464,572	311	\$3,932,000	\$18,596,561	442	\$6,213,700
1996	\$13,232,000	5	\$14,678,245	391	\$5,570,000	\$24,513,137	582	\$8,707,574
1997	\$12,445,000	9	\$23,922,810	604	\$9,193,000	\$40,735,787	921	\$14,667,222
1998	\$22,369,248	12	\$67,446,900	1,093	\$26,161,000	\$116,481,101	1,735	\$42,093,773
1999	\$21,383,026	13	\$83,250,105	1,056	\$28,822,000	\$141,849,851	1,695	\$47,613,227
2000	\$9,134,000	10	\$74,994,985	788	\$22,208,000	\$125,393,629	1,295	\$38,092,263
2001	\$1,066,000	8	\$46,741,689	694	\$17,388,000	\$78,988,681	1,066	\$27,768,626
2002	\$4,000,000	8	\$33,468,742	594	\$12,453,000	\$56,173,296	903	\$19,987,501
2003	\$464,000	8	\$27,497,436	507	\$9,370,000	\$45,356,603	754	\$15,158,433
2004	\$5,080,000	8	\$33,434,836	532	\$10,899,000	\$54,341,257	773	\$17,658,880
2005	\$489,000	8	\$34,691,742	532	\$11,408,000	\$56,443,819	777	\$18,438,121
2006	\$8,922,000	10	\$38,791,947	629	\$12,918,000	\$64,408,684	958	\$21,149,223
2007	\$4,860,000	11	\$35,848,268	543	\$12,077,667	\$59,626,903	808	\$19,756,473
2008	\$10,031,000	14	\$59,314,050	556	\$14,622,667	\$95,331,797	1,019	\$27,071,157
2009	\$9,117,000	11	\$45,967,072	555	\$15,731,333	\$77,495,321	826	\$24,740,554
2010	\$2,701,040	14	\$44,558,384	513	\$14,684,606	\$74,331,614	745	\$23,261,312
2011	\$3,835,250	15	\$34,645,273	516	\$13,429,106	\$57,364,400	751	\$19,167,339
2012	\$5,157,500	16	\$43,894,728	544	\$16,423,832	\$70,718,036	954	\$40,185,494
2013	\$1,421,800	13	\$45,674,011	524	\$13,715,273	\$73,071,857	895	\$40,222,820
2014	\$3,402,900	16	\$57,688,478	729	\$19,450,273	\$94,552,226	1,207	\$49,486,737
2015	\$14,299,000	16	\$37,481,288	758	\$15,409,137	\$63,671,790	1,246	\$45,748,630
Total	\$163,039,764	na	\$895,905,605	12,975	\$306,105,895	\$1,490,288,793	20,361	\$567,557,885

*Represents the sum of jobs at participating companies over 23 years. Jobs at individual firms may be included multiple times if they participated in multiple years and maintained the same level of employment.

All total, the venture investment program created an economic impact of \$1.49 billion in Oklahoma from 1993 to 2015. The companies assisted through this program created an increase in demand of \$895.9 million that supported \$261.5 million in payroll and close to 7,400 jobs-years *at other local businesses* through their supplier purchases and purchases made by employees. These economic impacts are in addition to the cumulative impacts of close to 13,000 jobs-years and \$306.1 million in payroll that were supported by the companies directly.⁴

The venture capital program has supported nine local Oklahoma-based venture firms. Annual employment related to these firms has ranged from 4 to 29 over the past 23 years. Over the life of the program, these companies have created a total economic impact of \$99.2 million on the Oklahoma economy, supporting \$38.3 million in total payroll at the venture firms and other supported local businesses.

⁴ Note that jobs are counted in job-years and include total employment in each year a company participated in the program.

**FIGURE 4
ECONOMIC IMPACTS OF OCIB VENTURE INVESTMENT PROGRAM
ON THE STATE OF OKLAHOMA**

**VENTURE FIRMS
Current Dollars**

Year	Direct Impacts			Total Impacts		
	Output	Jobs	Payroll	Output	Jobs	Payroll
1993	\$351,427	4	\$152,935	\$660,574	6	\$258,765
1994	\$360,677	4	\$156,961	\$677,962	6	\$265,576
1995	\$369,928	4	\$160,986	\$695,350	6	\$272,387
1996	\$879,597	9	\$382,786	\$1,653,371	15	\$647,670
1997	\$1,752,193	16	\$762,525	\$3,293,584	27	\$1,290,186
1998	\$1,794,222	16	\$780,815	\$3,372,584	28	\$1,321,132
1999	\$1,836,250	16	\$799,105	\$3,451,584	28	\$1,352,078
2000	\$2,020,651	17	\$879,353	\$3,798,201	30	\$1,487,858
2001	\$1,950,866	16	\$848,984	\$3,667,027	29	\$1,436,473
2002	\$2,291,481	18	\$997,214	\$4,307,278	34	\$1,687,277
2003	\$2,334,243	18	\$1,015,823	\$4,387,658	34	\$1,718,764
2004	\$2,224,048	17	\$967,868	\$4,180,525	32	\$1,637,624
2005	\$2,574,664	19	\$1,120,450	\$4,839,576	37	\$1,895,792
2006	\$2,385,815	17	\$1,038,266	\$4,484,598	33	\$1,756,738
2007	\$2,663,066	21	\$1,158,921	\$4,861,879	39	\$1,849,238
2008	\$2,659,111	19	\$1,157,200	\$4,854,660	37	\$1,846,492
2009	\$2,694,349	19	\$1,172,535	\$4,917,661	37	\$1,889,825
2010	\$3,613,208	26	\$1,572,407	\$6,594,740	50	\$2,534,316
2011	\$3,543,515	25	\$1,542,078	\$6,467,538	51	\$2,485,433
2012	\$2,973,723	24	\$1,294,114	\$6,019,385	50	\$2,277,183
2013	\$3,380,634	27	\$1,471,194	\$6,752,426	53	\$2,567,959
2014	\$3,380,634	27	\$1,471,194	\$6,752,426	53	\$2,567,959
2015	\$4,253,389	29	\$1,851,002	\$8,495,652	62	\$3,230,911
Total	\$52,287,690	na	\$22,754,714	\$99,186,240	na	\$38,277,636

Note: Direct payroll estimated based on average occupational wages for Oklahoma from the Oklahoma Employment Security Commission, "Oklahoma Wage Report", 2002-2014.

FIGURE 5
ECONOMIC IMPACTS OF OCIB CAPITAL ACCESS PROGRAM
ON THE STATE OF OKLAHOMA

Current Dollars

Year	Number of Participating Companies	Direct Impacts			Total Impacts		
		Output	Jobs	Payroll	Output	Jobs	Payroll
1992	7	\$5,773,427	33	\$1,456,153	\$9,645,003	74	\$2,847,216
1993	49	\$28,149,166	252	\$8,918,609	\$49,418,972	488	\$16,263,636
1994	33	\$11,991,272	172	\$3,479,294	\$22,108,418	280	\$6,812,613
1995	32	\$16,670,689	163	\$4,536,727	\$31,958,524	325	\$9,585,705
1996	32	\$6,785,043	99	\$2,614,332	\$12,298,954	162	\$4,530,894
1997	33	\$6,697,841	104	\$2,596,747	\$11,949,080	166	\$4,501,759
1998	39	\$6,053,596	90	\$1,979,654	\$10,505,961	140	\$3,515,468
1999	17	\$3,061,350	48	\$1,191,809	\$5,380,843	75	\$2,045,005
2000	36	\$8,899,885	124	\$3,361,710	\$15,657,184	202	\$5,808,408
2001	15	\$2,015,252	23	\$659,246	\$3,525,733	40	\$1,196,876
2002	7	\$975,902	8	\$279,661	\$1,686,029	15	\$527,325
2003	10	\$3,818,957	26	\$887,851	\$6,488,022	53	\$1,785,932
2004	12	\$1,911,947	21	\$763,385	\$3,351,334	38	\$1,295,092
2005	14	\$1,406,307	20	\$533,292	\$2,477,893	32	\$899,655
2006	15	\$10,091,970	71	\$4,023,115	\$15,474,960	141	\$5,762,101
2007	13	\$1,805,218	22	\$564,124	\$3,018,995	34	\$940,950
2008	20	\$3,782,472	49	\$1,497,252	\$6,120,617	69	\$2,204,179
2009	23	\$4,869,070	51	\$1,498,068	\$8,334,492	80	\$2,599,668
2010	23	\$5,006,312	66	\$1,970,681	\$8,493,791	98	\$3,093,316
2011	20	\$5,176,918	37	\$1,660,274	\$8,326,334	64	\$2,608,138
2012	17	\$4,718,674	35	\$1,927,709	\$8,200,674	64	\$3,061,447
Total	467	\$139,661,268	1,514	\$46,399,694	\$244,421,810	2,642	\$81,885,382

All total, the capital access program created an economic impact of \$244.4 million in Oklahoma from 1992 to 2012. No additional loans were made in 2013 or 2014. The companies assisted through this program created an increase in demand of \$104.8 million that supported \$35.5 million in payroll and about 1,100 jobs *at other local businesses* through their supplier purchases and purchases made by employees. These economic impacts are in addition to the 1,500 employees and \$46.4 million in payroll that were created by these companies directly.

Along with the on-going impacts of the venture capital and capital access programs, OCIB was also able to support the significant impacts created by the NBA Hornets during the 2005-06 season in Oklahoma City. Note that these impacts are not included in the figures above. Although this represents a non-recurring impact, it was significant in the 2005-06 fiscal year. The total economic impact of the NBA Hornets is estimated at \$71.0 million. This includes direct game spending generating increased demand of \$45.6 million. There was also an estimated \$6 million in direct payroll spending that created an economic impact of \$25.4 million and supported 229 jobs (100 direct, 129 indirect and induced).⁵

⁵ Note that impacts results for NBA Hornets are based on analysis by City of Oklahoma City, not Applied Economics.

The secondary impacts described above are called multiplier effects. Multiplier effects are a way of representing the larger economic effects on the local economy. The multiplier effects translate an increase in output (loosely defined for service industries as sales, less profits) into a corresponding increase in jobs and personal income or payroll. In essence, the multiplier effect represents the recycling of local spending. This recycling process creates new business opportunities.

The multipliers used in this analysis are from IMPLAN, a national vendor of economic impact software, and are specific to Oklahoma. Industry specific multipliers were used for each type of participating company. The variation in multipliers between the specific industry types is due to the different mix of secondary industries that are affected since multipliers are industry-specific.

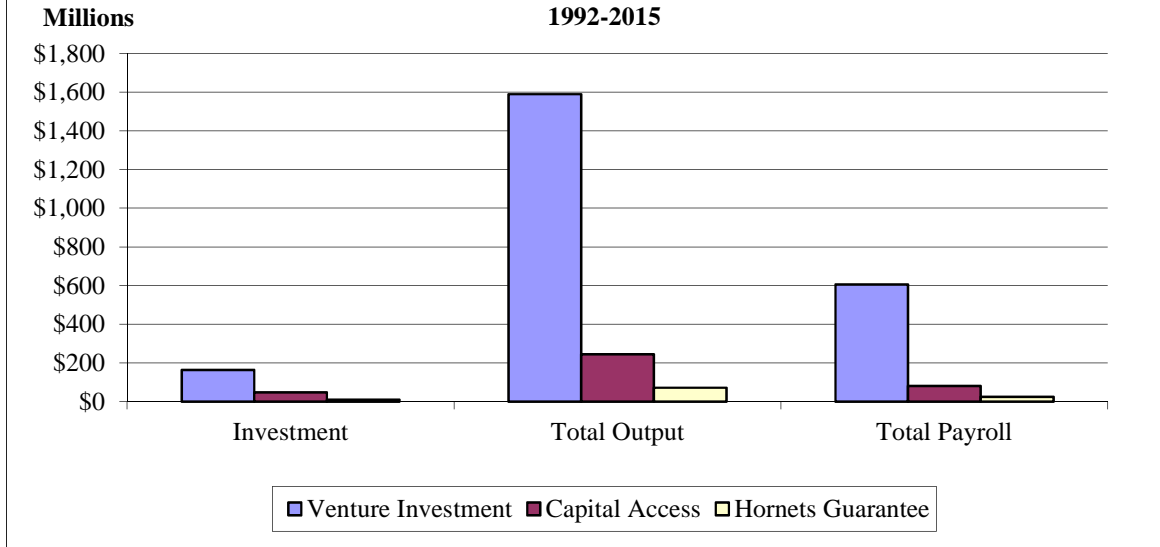
On average, the output multiplier for the venture investment program is 1.66. This means that for every \$1 million of production by the participating companies, an additional \$660,000 in additional economic activity is generated in the local economy, along with 8 jobs at related businesses. On average, the income from these jobs is about \$35,400 per employee.

On average, the output multiplier for the capital access program is 1.75. This means that for every \$1 million of production by the participating companies, an additional \$750,000 in additional economic activity is generated in the local economy, along with 8 jobs at related businesses. On average, the income from these jobs is about \$31,400 per employee.

A summary of the impacts of the two on-going OCIB programs and the NBA Hornets guarantee are shown in Figure 6. The impact of the venture capital firms themselves is included within the venture investment program results. The venture investment program has the larger impact of the two programs due to several factors:

- The venture investment program includes all employment, not just new employment. However, most of these are start up or young companies, and thus the bulk of the jobs created are new. As a result, the average number of direct jobs attributed to companies in the venture investment program is larger. In general, the capital access program includes many very small companies.
- Companies in the venture investment program may be counted multiple times, once for each year they were an active Oklahoma company, whereas companies in the capital access program are only counted in the single year in which they receive a loan. It is very likely that many of the companies that participated in the capital access program over the past 20 years are still in operation in Oklahoma, but their information has not been provided to OCIB on an on-going basis. As a result, the cumulative impacts of the companies in the capital access program are understated.
- Despite the overall difference in magnitude of impacts between the two programs, the capital access program actually has a higher average multiplier due to the larger share of manufacturing companies versus services. Manufacturers typically make more supply purchases than service providers due to their material-intensive nature.
- Figure 6 also includes the economic impact of the NBA Hornets loan guarantee, which produced a significant economic impact during the 2005/2006 season. The impacts of the Hornets include both the impacts of the Hornets organization and their employees, as well as the impacts of tourism spending by game attendees.

FIGURE 6
TOTAL OCIB ECONOMIC IMPACT BY PROGRAM
1992-2015



4.0 REVENUE IMPACTS

In addition to creating a substantial economic impact in Oklahoma, the new jobs generated by OCIB programs also result in additional tax revenues to the state. This analysis quantifies the revenue impacts created by employees through state sales and personal income taxes. The results shown here include the Capital Access Program, the Venture Fund Investments and Venture Firms and the NBA Hornets.

Employees at participating companies, and other local employees that are supported by the additional economic activity, pay state personal income taxes on their earnings, as well as state sales taxes on a portion of their local purchases. Using the program data and the results from the economic impact analysis, it is possible to estimate the revenue impacts. All total, direct and indirect employees supported by OCIB companies have generated an estimated \$35.0 million in state revenues since 1992 (Figure 7). *This impact does not include additional sales and corporate income taxes paid by the companies directly to the state of Oklahoma. This information was not reported to OCIB by the participating firms.*

FIGURE 7
REVENUE IMPACTS OF OCIB PROGRAM

Year	Direct Impacts									Total Impacts								
	Capital Access			Venture Investment			NBA Hornets			Capital Access			Venture Investment			NBA Hornets		
	CAP Payroll	VIP Payroll	Sales Tax	Personal Income Tax	Sales Tax	Personal Income Tax	Sales Tax	CAP Payroll	VIP Payroll	Sales Tax	Personal Income Tax	Sales Tax	Personal Income Tax	Sales Tax				
1992	\$1,456,153	\$0	\$20,313	\$64,265	\$0	\$0	\$0	\$2,847,216	\$0	\$39,719	\$120,989	\$0	\$0	\$0				
1993	\$8,918,609	\$260,935	\$124,415	\$369,690	\$3,640	\$11,235	\$0	\$16,263,636	\$424,737	\$226,878	\$660,282	\$5,925	\$18,391	\$0				
1994	\$3,479,294	\$288,961	\$48,536	\$108,887	\$4,031	\$12,297	\$0	\$6,812,613	\$468,431	\$95,036	\$240,250	\$6,535	\$20,288	\$0				
1995	\$4,536,727	\$4,092,986	\$63,287	\$171,361	\$57,097	\$74,604	\$0	\$9,585,705	\$6,486,087	\$133,721	\$371,217	\$90,481	\$142,038	\$0				
1996	\$2,614,332	\$5,952,786	\$36,470	\$96,318	\$83,041	\$135,843	\$0	\$4,530,894	\$9,355,244	\$63,206	\$171,497	\$130,506	\$228,511	\$0				
1997	\$2,596,747	\$9,955,525	\$36,225	\$92,953	\$138,880	\$250,504	\$0	\$4,501,759	\$15,957,407	\$62,800	\$168,110	\$222,606	\$422,886	\$0				
1998	\$1,979,654	\$26,941,815	\$27,616	\$65,726	\$375,838	\$950,274	\$0	\$3,515,468	\$43,414,905	\$49,041	\$126,407	\$605,638	\$1,542,806	\$0				
1999	\$1,191,809	\$29,621,105	\$16,626	\$42,533	\$413,214	\$1,115,377	\$0	\$2,045,005	\$48,965,305	\$28,528	\$76,310	\$683,066	\$1,866,769	\$0				
2000	\$3,361,710	\$23,087,353	\$46,896	\$122,026	\$322,069	\$861,923	\$0	\$5,808,408	\$39,580,121	\$81,027	\$216,925	\$552,143	\$1,505,073	\$0				
2001	\$659,246	\$18,236,984	\$9,196	\$24,598	\$254,406	\$643,064	\$0	\$1,196,876	\$29,205,099	\$16,696	\$45,472	\$407,411	\$1,050,747	\$0				
2002	\$279,661	\$13,450,214	\$3,901	\$11,325	\$187,630	\$429,478	\$0	\$527,325	\$21,674,778	\$7,356	\$21,171	\$302,363	\$717,290	\$0				
2003	\$887,851	\$10,385,823	\$12,386	\$35,650	\$144,882	\$305,045	\$0	\$1,785,932	\$16,877,196	\$24,914	\$71,510	\$235,437	\$528,528	\$0				
2004	\$763,385	\$11,866,868	\$10,649	\$31,339	\$165,543	\$374,335	\$0	\$1,295,092	\$19,296,504	\$18,067	\$51,917	\$269,186	\$653,189	\$0				
2005	\$533,292	\$12,528,450	\$7,439	\$19,191	\$174,772	\$409,708	\$0	\$899,655	\$20,333,913	\$12,550	\$33,197	\$283,658	\$706,048	\$0				
2006	\$4,023,115	\$13,956,266	\$56,122	\$183,322	\$194,690	\$422,308	\$270,000	\$5,762,101	\$22,905,960	\$80,381	\$241,363	\$319,538	\$729,956	\$270,000				
2007	\$564,124	\$13,236,588	\$7,870	\$19,268	\$184,650	\$426,822	\$0	\$940,950	\$21,605,712	\$13,126	\$33,741	\$301,400	\$735,933	\$0				
2008	\$1,497,252	\$15,779,867	\$20,887	\$56,158	\$220,129	\$560,822	\$0	\$2,204,179	\$28,917,650	\$30,748	\$84,203	\$403,401	\$1,026,458	\$0				
2009	\$1,498,068	\$16,903,868	\$20,898	\$55,134	\$235,809	\$623,177	\$0	\$2,599,668	\$26,630,379	\$36,265	\$100,114	\$371,494	\$1,003,397	\$0				
2010	\$1,970,681	\$16,257,013	\$27,491	\$68,754	\$226,785	\$570,887	\$0	\$3,093,316	\$25,795,627	\$43,152	\$111,476	\$359,849	\$941,142	\$0				
2011	\$1,660,274	\$14,971,184	\$23,161	\$69,097	\$208,848	\$498,965	\$0	\$2,608,138	\$21,652,772	\$36,384	\$105,126	\$302,056	\$696,265	\$0				
2012	\$1,927,709	\$17,717,946	\$26,892	\$81,075	\$247,165	\$603,924	\$0	\$3,061,447	\$42,462,677	\$42,707	\$123,690	\$592,354	\$1,694,583	\$0				
2013	na	\$15,186,468	na	na	\$211,851	\$480,798	\$0	na	\$42,790,779	na	na	\$596,931	\$1,746,674	\$0				
2014	na	\$20,921,468	na	na	\$291,854	\$663,985	\$0	na	\$52,054,696	na	na	\$726,163	\$2,043,893	\$0				
2015	na	\$17,260,139	na	na	\$240,779	\$453,937	\$0	na	\$48,979,541	na	na	\$683,265	\$1,965,234	\$0				
Total	\$46,399,694	\$328,860,609	\$647,276	\$1,788,671	\$4,587,605	\$10,879,308	\$270,000	\$81,885,382	\$605,835,521	\$1,142,301	\$3,174,965	\$8,451,406	\$21,986,100	\$270,000				

Note: Total revenue impacts include direct revenues.

Supported direct and indirect employees associated with OCIB programs have generated about \$9.6 million in state sales tax revenues since 1992, or an average of \$417,000 per year. This includes sales taxes generated by direct employees at participating companies and employees at supported local businesses. Taxable employee expenditures are calculated by multiplying total personal income times 31 percent, times the state sales tax rate of 4.5 percent.⁶ An additional \$270,000 in state sales tax revenues accrued during the 2005-06 Hornets season from NBA Hornets players and other employees who spent an estimated 10 percent of their income in Oklahoma.

Employees at participating companies and at supported local businesses also pay personal income taxes in Oklahoma estimated at \$25.2 million since 1992, or an average of \$1.1 million per year. State income tax revenues are calculated using the average personal income per employee for direct and indirect

⁶ According to the Census Bureau Consumer Expenditure Survey, persons in the average income range of supported employees spend about 31 percent of their income on taxable goods.

employees, adjusted for a standard deduction and personal exemption, times the graduated state tax rate schedule times the number of employees.

Both the venture capital and capital access programs create significant annual impacts on the Oklahoma economy. The Oklahoma Capital Investment Board not only helps to start and expand local companies, but also supports job growth at other local supplier companies. In addition, these new jobs generate increased payroll, spending and tax revenues that support the state's economy.

APPENDIX
10 YEAR IMPACT RESULTS
2006 TO 2015

**10 YEAR ECONOMIC IMPACTS OF OCIB PROGRAM
ON THE STATE OF OKLAHOMA**

Capital Access Program

Year	Direct Impacts			Total Impacts		
	Output	Jobs	Payroll	Output	Jobs	Payroll
2006	\$10,091,970	71	\$4,023,115	\$15,474,960	141	\$5,762,101
2007	\$1,805,218	22	\$564,124	\$3,018,995	34	\$940,950
2008	\$3,782,472	49	\$1,497,252	\$6,120,617	69	\$2,204,179
2009	\$4,869,070	51	\$1,498,068	\$8,334,492	80	\$2,599,668
2010	\$5,006,312	66	\$1,970,681	\$8,493,791	98	\$3,093,316
2011	\$5,176,918	37	\$1,660,274	\$8,326,334	64	\$2,608,138
2012	\$4,718,674	35	\$1,927,709	\$8,200,674	64	\$3,061,447
2013	\$0	0	\$0	\$0	0	\$0
2014	\$0	0	\$0	\$0	0	\$0
2015	\$0	0	\$0	\$0	0	\$0
Total	\$35,450,634	331	\$13,141,223	\$57,969,863	550	\$20,269,800

OCIB takes a conservative approach when calculating the impacts generated by OCAP participants in that payroll and job information is only included for the initial year of the business loan. Because no new loans were enrolled in the OCAP after 2012, no impact numbers have been included even though a significant number of OCAP companies are still operating in the state.

Venture Investment Program

Venture Fund Investments and Venture Firms

Year	Direct Impacts			Total Impacts		
	Output	Jobs*	Payroll	Output	Jobs	Payroll
2006	\$41,177,763	646	\$13,956,266	\$68,893,282	991	\$22,905,960
2007	\$38,511,333	564	\$13,236,588	\$64,488,782	846	\$21,605,712
2008	\$61,973,162	575	\$15,779,867	\$100,186,456	1,055	\$28,917,650
2009	\$48,661,422	574	\$16,903,868	\$82,412,982	863	\$26,630,379
2010	\$48,171,592	538	\$16,257,013	\$80,926,354	795	\$25,795,627
2011	\$38,188,788	540	\$14,971,184	\$63,831,938	802	\$21,652,772
2012	\$46,868,451	567	\$17,717,946	\$76,737,421	1,004	\$42,462,677
2013	\$49,054,645	550	\$15,186,468	\$79,824,283	948	\$42,790,779
2014	\$61,069,112	755	\$20,921,468	\$101,304,652	1,260	\$52,054,696
2015	\$41,734,677	786	\$17,260,139	\$72,167,442	1,308	\$48,979,541
Total	\$475,410,943	6,095	\$162,190,806	\$790,773,593	9,872	\$333,795,793

*Represents the sum of jobs at participating companies over 23 years. Jobs at individual firms may be included multiple times if they participated in multiple years and maintained the same level of employment.

Combined Programs

Year	Total Impacts			Total Impacts		
	Output	Jobs	Payroll	Output	Jobs	Payroll
2006	\$51,269,733	717	\$17,979,381	\$84,368,242	1,133	\$28,668,061
2007	\$40,316,551	586	\$13,800,712	\$67,507,777	880	\$22,546,661
2008	\$65,755,633	624	\$17,277,119	\$106,307,073	1,124	\$31,121,829
2009	\$53,530,492	625	\$18,401,936	\$90,747,474	943	\$29,230,047
2010	\$53,177,904	604	\$18,227,694	\$89,420,145	893	\$28,888,944
2011	\$43,365,706	577	\$16,631,458	\$72,158,272	865	\$24,260,910
2012	\$51,587,125	602	\$19,645,655	\$84,938,095	1,068	\$45,524,124
2013	\$49,054,645	550	\$15,186,468	\$79,824,283	948	\$42,790,779
2014	\$61,069,112	755	\$20,921,468	\$101,304,652	1,260	\$52,054,696
2015	\$41,734,677	786	\$17,260,139	\$72,167,442	1,308	\$48,979,541
Total	\$510,861,577	6,426	\$175,332,029	\$848,743,456	10,423	\$354,065,592