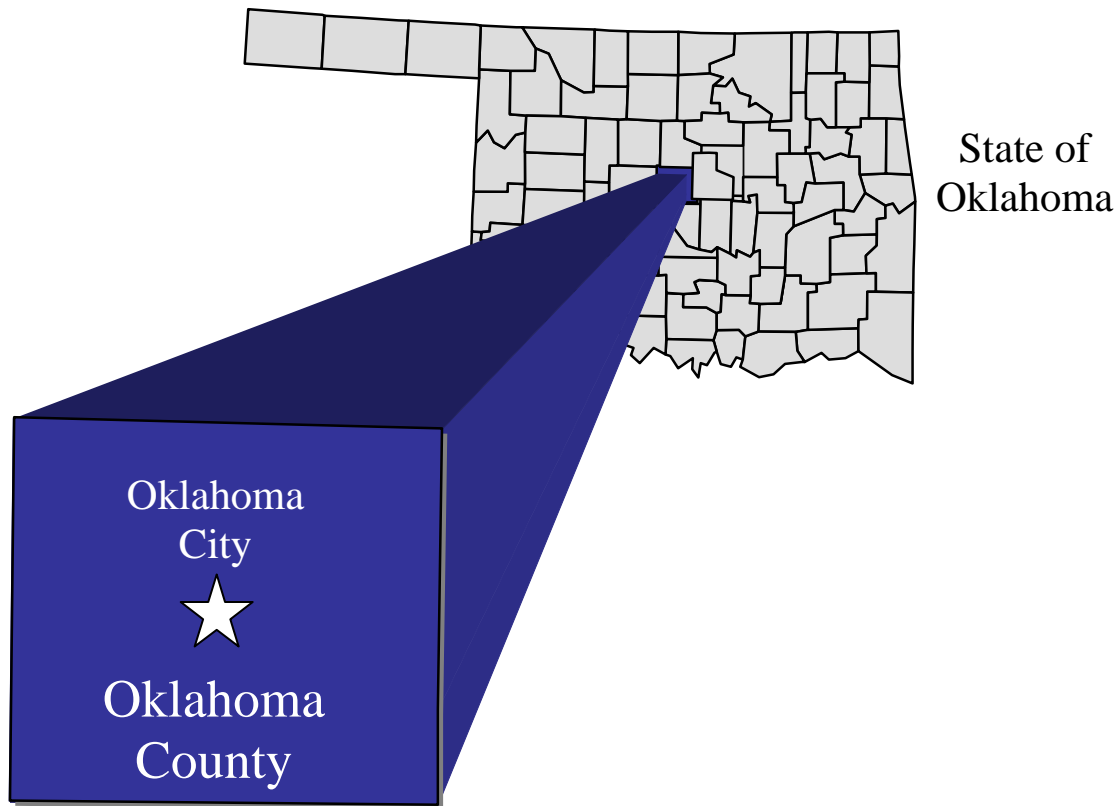


The Economic Impact of the Oklahoma League for the Blind on Oklahoma City, Oklahoma



Prepared by the National Center for Rural Health Works
Oklahoma Cooperative Extension Service
Oklahoma State University

January 2006

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on Oklahoma City, Oklahoma**

A Study Prepared for:

Oklahoma League for the Blind

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EXECUTIVE SUMMARY

A study of the economic impact of the Oklahoma League for the Blind (OLB) shows that OLB has a large impact on Oklahoma City, Oklahoma. The study “The Economic Impact of the Oklahoma League for the Blind on Oklahoma City, Oklahoma” was requested by OLB and conducted by Cheryl F. St. Clair and Gerald A. Doeksen from the National Center for Rural Health Works, Oklahoma Cooperative Extension Service at Oklahoma State University.

The Oklahoma League for the Blind is a multi-functional non-profit organization. The organization’s role includes providing employment, advocating for services and benefits, and providing rehabilitation services, children’s services, and community outreach programs for the blind and vision impaired. Ultimately, the Oklahoma League for the Blind envisions facilitating independence and improving the quality of life for Oklahomans who are blind or vision impaired.

OLB employs a number of people and provides incomes for Oklahomans that have difficulty finding and retaining employment because they are blind or vision impaired. The data utilized does not include service contracts from McConnell Air Force Base. The overall objective of this study is to measure the economic impact of OLB on the economy of Oklahoma City.

The Oklahoma League for the Blind contributes directly to the economy of Oklahoma City through the creation of jobs, payroll, and industry output. The OLB contributes much more than these direct impacts. Secondary impacts were calculated through the use of an economic model that derives employment, income, and output multipliers. The secondary impacts are the

jobs, payroll, and output generated in other businesses in Oklahoma City as a result of the activities of the OLB.

The direct jobs created by OLB are 67. The secondary employment is estimated at 63 jobs, for a total employment impact of 130. The direct income (payroll) of OLB is \$1,984,864 and the secondary income generated is \$2,064,259, for a total income impact of \$4,049,123. The direct industry output of OLB is approximately \$11,000,000. With a secondary output of \$9,900,000, the total industry impact of OLB is estimated at \$20,900,000.

The impact of OLB on retail sales and sales tax collections is estimated based on the total income impact and the local retail sales capture ratio of 42.4% for Oklahoma County. The total retail sales impact is estimated at \$1,716,828. This results in state sales tax of \$77,257 and Oklahoma City sales tax of \$66,527, for a total in sales tax impact of \$143,784. This is the sales tax generated from the income impact of the Oklahoma League for the Blind.

The economic impact of the Oklahoma League for the Blind upon the economy of Oklahoma City is tremendous. OLB employs a large number of residents with 70% of the employment being blind or vision impaired. The secondary impact occurring in the community is extremely large. If OLB increases or decreases in size, OLB is greatly affected as well as the economy of Oklahoma City. Often overlooked is the fact that non-profit organizations have such large contributions to the economic health of the community economy, as well as being beneficial to their special interest groups.

The Economic Impact of the Oklahoma League for the Blind on Oklahoma City, Oklahoma

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OLB employs a number of people and provides incomes for Oklahomans that have difficulty finding and retaining employment because they are blind or vision impaired. The data utilized does not include service contracts from McConnell Air Force Base. The overall objective of this study is to measure the economic impact of OLB on the economy of Oklahoma City. The specific objectives of this report are to:

1. summarize the direct economic activities of OLB;
2. review concepts of community economics and multipliers; and
3. estimate the secondary impacts of OLB on Oklahoma City's economy.

No recommendations will be made in this report.

The Direct Economic Activities

Employment, wages and salaries (payroll), and total industry expenditures (output) are the important direct economic activities created by OLB in the Oklahoma City economy. OLB employs 67 full-time and part-time employees and has an estimated payroll including benefits of \$1,984,864 (**Table 1**). These jobs and wages and salaries are in the areas of manufacturing,

Table 1
 Direct Economic Activities
 of the Oklahoma League for the Blind, 2005

	Employment					Payroll
	Blind Full- Time	Part- Time	Sighted Full- Time	Part- Time	Total	Total
OLB Main Facility	26	4	10	2	42	\$1,668,690.80
Tinker Switchboard	4	6	1	1	12	\$151,807.20
Tinker Warehouse	4	0	6	0	10	\$95,812.56
IRS	1	0	0	0	1	\$26,059.68
USMS	1	0	0	0	1	\$26,346.48
Heartland	1	0	0	0	1	\$16,147.20
TOTALS	37	10	17	3	67	\$1,984,863.92

facilities support services, rehabilitation services, warehousing and storage, and fundraising.

The total industry expenditures (output) of the organization for 2005 was \$11,000,000.

In summary, OLB is vitally important as an employer and is extremely important to the Oklahoma City economy. Over 70% of OLB's employees are blind or vision impaired. OLB, as an industry, produces \$11,000,000 in total output or total industry expenditures. OLB and the employees of OLB purchase a large amount of goods and services from businesses in the Oklahoma City area. These impacts are referred to as secondary impacts or benefits to the economy. Before the secondary impacts of the health sector are discussed, basic concepts of community economics will be discussed.

Some Basic Concepts of Community Economics and

Income and Employment Multipliers

Figure 1 illustrates the major flows of goods, services, and dollars of any economy. The foundation of a community's economy are those businesses which sell some or all of their goods and services to buyers outside of the community. Such a business is a basic industry. The flow of products out of, and dollars into, a community are represented by the two arrows in the upper right portion of **Figure 1**. To produce these goods and services for "export" outside the community, the basic industry purchases inputs from outside of the community (upper left portion of **Figure 1**), labor from the residents or "households" of the community (left side of **Figure 1**), and inputs from service industries located within the community (right side of **Figure 3**). The flow of labor, goods, and services in the community is completed by households using their earnings to purchase goods and services from the community's service industries (bottom of **Figure 1**). It is evident from the interrelationships illustrated in **Figure 1** that a change in any

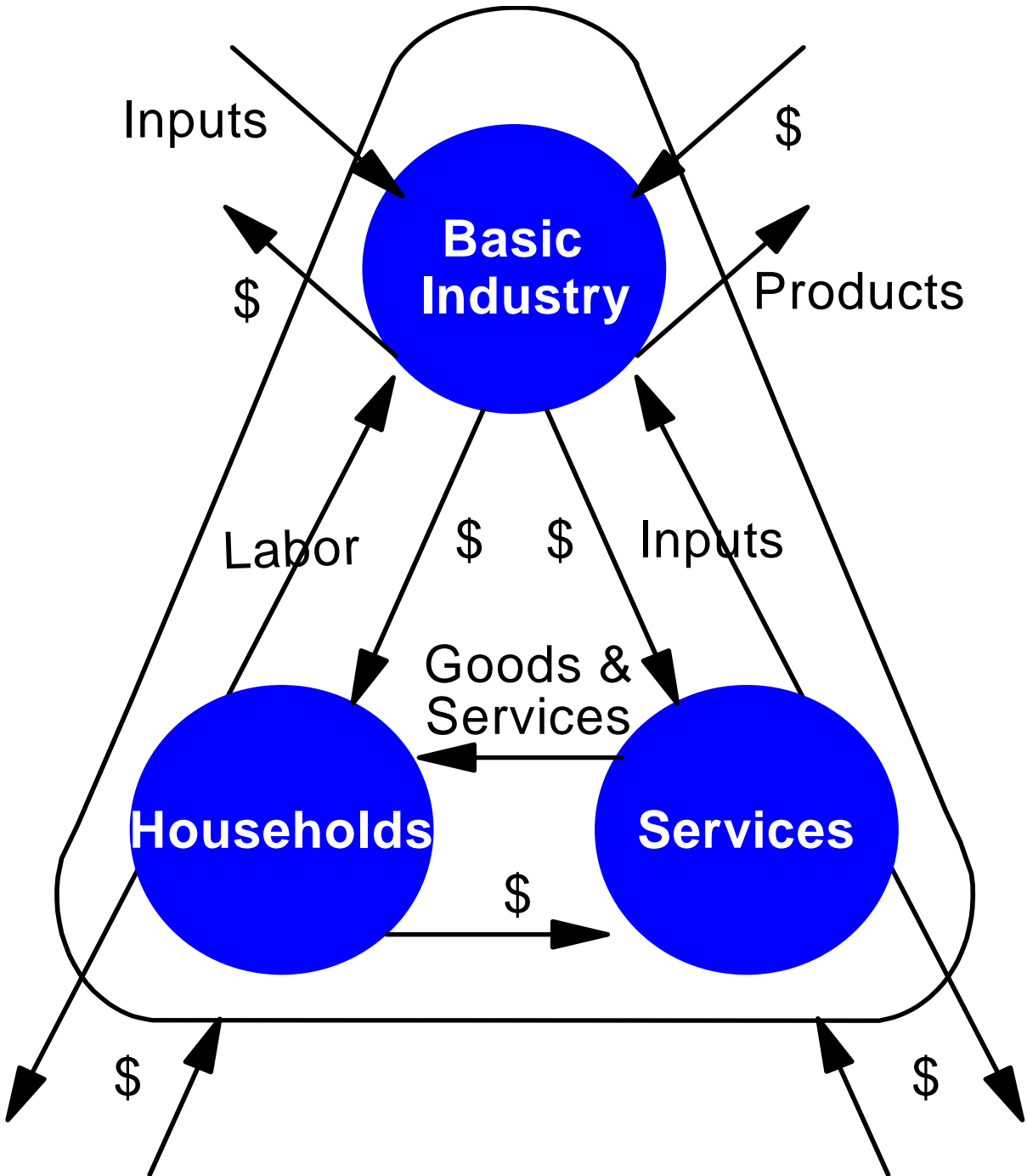


Figure 1.
Community Economic System

one segment of a community's economy will have reverberations throughout the entire economic system of the community.

Consider, for instance, the closing of a manufacturing plant. The manufacturing plant will no longer pay employees and dollars going to households will stop. Likewise, the manufacturing plant will not purchase goods from other businesses and dollar flow to other businesses will stop. This decreases income in the "households" segment of the economy. Since earnings would decrease, households decrease their purchases of goods and services from businesses within the "services" segment of the economy. This, in turn, decreases these businesses' purchases of labor and inputs. Thus, the change in the economic base works its way throughout the entire local economy.

The total impact of a change in the economy consists of direct, indirect, and induced impacts. Direct impacts are the changes in the activities of the impacting industry, such as the closing of a manufacturing plant. The impacting business, such as the manufacturing plant, changes its purchases of inputs as a result of the direct impact. This produces an indirect impact in the business sectors. Both the direct and indirect impacts change the flow of dollars to the community's households. The households alter their consumption accordingly. The effect of this change in household consumption upon businesses in a community is referred to as an induced impact.

A measure is needed that yields the effects created by an increase or decrease in economic activity. In economics, this measure is called the multiplier effect. Multipliers are used in this report. An employment multiplier is defined as:

the ratio between direct employment, or that employment used by the industry initially experiencing a change in final demand and the direct, indirect, and induced employment.

An employment multiplier of 3.0 indicates that if one job is created by a new industry, 2.0 jobs are created in other sectors due to business (indirect) and household (induced) spending.

Secondary Impacts of OLB on the Economy of Oklahoma City

Employment, income, and output multipliers for the area have been calculated by use of the IMPLAN model. It was developed by the U.S. Forest Service and is a model which allows for development of national, state, regional, county, and zip code area multipliers. Additional information on IMPLAN is included in the appendix.

Multipliers were derived from IMPLAN that relate to each type of employment at OLB. Specific industry sectors utilized from IMPLAN include:

- Grantmaking and giving and social advocacy
- Facilities support services
- Miscellaneous wood product manufacturing
- Wholesale trade
- Warehousing and storage

Table 2 illustrates the employment impact of OLB. The employment multipliers for each component of OLB are shown in the fourth column of **Table 2**. The employment multiplier of 2.00 for the administrative personnel was derived from the IMPLAN sector, Grantmaking and giving and social advocacy. This multiplier indicates that for each job created in administration at OLB, 1.00 jobs are created throughout the area due to business (indirect) and household (induced) spending. Applying the employment multiplier to the 18 administrative employees at OLB yields an estimate of 18 secondary jobs created in other businesses and sectors as a result

Table 2
Employment Impact of OLB

Type of Job	IMPLAN Sector Designation	Employment Impact			
		Direct	Multiplier	Secondary	TOTAL
Administrative	Grantmaking & giving & social advocacy....	18	2.00	18	36
Rehabilitation Services	Facilities support services	3	2.05	3	6
Wood Products	Miscellaneous wood product mfg	7	1.96	7	14
Fire Hose Products	Wholesale trade	7	1.93	7	14
First Aid Kits	Wholesale trade	7	1.93	7	14
Switchboard Services	Facilities support services	12	2.05	13	25
Warehousing & Storage	Warehousing and storage	10	1.54	5	15
Services	Facilities support services	1	2.05	1	2
Services	Facilities support services	1	2.05	1	2
Cups – Packaging & Shipping	Wholesale trade	<u>1</u>	1.93	<u>1</u>	<u>2</u>
		67		63	130

of the administrative jobs at OLB. The total employment impact of the administrative personnel at OLB is estimated at 36 jobs.

Each type of job at OLB has been matched with an IMPLAN sector and the multipliers have been applied to calculate the secondary and total employment for each job group. The total jobs at OLB are 67 full-time and part-time jobs which represent the direct impact of OLB. The multipliers are applied to each type of job and the secondary employment impact is a total of 63 jobs. The total employment impact of the OLB is estimated at 130 jobs.

The income impact of OLB is illustrated in **Table 3**. The income multipliers for each component of OLB are shown in the fourth column of **Table 3**. The income multiplier of 2.19 for the administrative personnel was derived from the IMPLAN sector, Grantmaking and giving and social advocacy. This multiplier indicates that for each dollar of income from administrative personnel at OLB, 1.19 dollars are generated throughout the area due to business (indirect) and household (induced) spending. Applying the income multiplier to the income of the administrative personnel of \$1,039,817 yields an estimate of \$1,241,673 in secondary income created in other businesses and sectors as a result of the income from administrative jobs at OLB. The total income impact of the administrative personnel at OLB is estimated at \$2,281,490 income to the Oklahoma City economy.

The income for each type of job at OLB has been matched with an IMPLAN sector and the multipliers have been applied to calculate the secondary and total income for each job group. The total payroll and benefits at OLB is \$1,984,864; this represents the direct income impact of OLB. The multipliers are applied to each type of job and the secondary income impact of OLB is estimated for a total of \$2,055,663 in income generated in other businesses and industries in

Table 3
Income Impact of OLB

Type of Job	IMPLAN Sector Designation	Income Impact			
		Direct	Multiplier	Secondary	TOTAL
Administrative	Grantmaking & giving & social advocacy....	\$1,039,817	2.19	\$1,241,673	\$2,281,490
Rehabilitation Services	Facilities support services	\$78,609	1.92	\$72,455	\$151,064
Wood Products	Miscellaneous wood product mfg	\$183,422	2.52	\$278,047	\$461,469
Fire Hose Products	Wholesale trade	\$183,422	1.57	\$104,828	\$288,250
First Aid Kits	Wholesale trade	\$183,422	1.57	\$104,828	\$288,250
Switchboard Services	Facilities support services	\$151,807	1.92	\$139,922	\$291,729
Warehousing & Storage	Warehousing and storage	\$95,813	1.59	\$56,377	\$152,190
Services	Facilities support services	\$26,060	1.92	\$24,019	\$50,079
Services	Facilities support services	\$26,346	1.92	\$24,284	\$50,630
Cups – Packaging & Shipping	Wholesale trade	<u>\$16,147</u>	1.57	<u>\$9,229</u>	<u>\$25,376</u>
		\$1,984,864		\$2,055,663	\$4,040,527

the Oklahoma City economy. The total income impact of the OLB is estimated at \$4,040,527, representing total income generated in Oklahoma City resulting from OLB.

The output impact of OLB is illustrated in **Table 4**. The total expenditures or total output of the OLB was \$11,000,000 for 2005. These total expenditures were distributed to IMPLAN sectors based on the distribution of payroll and benefits of the OLB, as illustrated in columns 2, 3, and 4 of **Table 4**. The output multipliers for each component of OLB are shown in the fifth column of **Table 4**. The output multiplier of 2.04 for the administrative personnel was derived from the IMPLAN sector, Grantmaking and giving and social advocacy. This multiplier indicates that for each dollar of output from administrative personnel at OLB, 1.04 dollars of output or total expenditures are created throughout the Oklahoma City area due to business (indirect) and household (induced) spending. Applying the output multiplier to the output attributed to the administrative employees of \$5,762,605 yields an estimate of \$5,918,034 in secondary output created in other businesses and sectors as a result of the output from administrative jobs at OLB. The total output impact of the administrative personnel at OLB is estimated at \$11,680,639 in total expenditures in the Oklahoma City economy.

The output attributed to each type of job at OLB has been matched with an IMPLAN sector and the multipliers have been applied to calculate the secondary and total output for each job group. The total output at OLB is \$11,000,000; this represents the direct output or total expenditures of OLB. The multipliers are applied to each output category and the secondary output of OLB is estimated at a total of \$9,953,157 in output or total expenditures generated in other businesses and industries in the Oklahoma City economy. The total output impact of the OLB is estimated at \$20,953,157, representing total output or expenditures generated in Oklahoma City as a result of the existence of OLB.

Table 4
Output Impact from OLB

IMPLAN Sector Designation	Income	Based on Income	Output Impact			
			Direct	Multiplier	Secondary	TOTAL
Grantmaking & giving & social advocacy...	\$1,039,817.08	52.4%	\$5,762,605	2.04	\$5,918,034	\$11,680,639
Facilities support services	\$78,609.24	4.0%	\$435,648	1.87	\$381,087	\$816,735
Miscellaneous wood product manufacturing	\$183,421.56	9.2%	\$1,016,511	1.76	\$772,924	\$1,789,435
Wholesale trade	\$183,421.56	9.2%	\$1,016,511	1.66	\$674,320	\$1,690,831
Wholesale trade	\$183,421.56	9.2%	\$1,016,511	1.66	\$674,320	\$1,690,831
Facilities support services	\$151,807.20	7.6%	\$841,307	1.87	\$735,940	\$1,577,247
Warehousing and storage	\$95,812.56	4.8%	\$530,988	1.91	\$483,112	\$1,014,100
Facilities support services	\$26,059.68	1.3%	\$144,421	1.87	\$126,334	\$270,755
Facilities support services	\$26,346.48	1.3%	\$146,011	1.87	\$127,724	\$273,735
Wholesale trade	<u>\$16,147.20</u>	<u>0.8%</u>	<u>\$89,487</u>	1.66	<u>\$59,362</u>	<u>\$148,849</u>
	\$1,984,864.12	100.0%	\$11,000,000		\$9,953,157	\$20,953,157

Income also has an impact on retail sales. The impact of OLB on retail sales and sales tax collections is estimated based on the total income impact and the local retail sales capture ratio of 42.4% for Oklahoma County (**Table 5**). The total retail sales impact is estimated at \$1,716,828. This results in state sales tax of \$77,257 and Oklahoma City sales tax of \$66,527, for a total in sales tax impact of \$143,784. This is the sales tax generated from the income impact of the Oklahoma League for the Blind.

Summary

The economic impact of the Oklahoma League for the Blind upon the economy of Oklahoma City is tremendous. OLB employs a large number of residents with 70% of the employment being blind or vision impaired. The secondary impact occurring in the community is extremely large. If OLB increases or decreases in size, OLB is greatly affected as well as the economy of Oklahoma City. Often overlooked is the fact that non-profit organizations have such large contributions to the economic health of the community economy, as well as being beneficial to their special interest groups.

Table 5
 Economic Impact of the Oklahoma League for the Blind
 on the Economy of Oklahoma City, Oklahoma, 2005

Employment			
Direct Employment		Secondary Employment	Total Employment
67		63	130
Income (or Payroll)			
Direct Income		Secondary Income	Total Income
\$1,984,864		\$2,064,259	\$4,049,123
Output (Total Revenues)			
Direct Output		Secondary Output	Total Output
\$11,000,000		\$9,900,000	\$20,900,000
Total Retail Sales and Sales Tax			
County Retail Sales Tax Capture Ratio	Total Retail Sales	State Sales Tax	OKC Sales Tax
42.40%	\$1,716,828	\$77,257	\$66,527

References

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- [2] Alward, G., Sivertz, E., Olsen, DI, Wagnor, J., Serf, D., and Lindall, S. Micro IMPLAN Software Manual. Stillwater, MN. University of Minnesota Press. 1989.
- [3] Miernyk, W.H. The Element of Input-Output Analysis. New York, NY; Random House. 1965.
- [4] Doeksen, Gerald A., Johnson, Tom, and Willoughby, Chuck. Measuring the Economic Importance of the Health Sector on a Local Economy: A Brief Literature Review and Procedures to Measure Local Impacts. Southern Rural Development Center. SRDC Pub. No. 202. 1997.
- [5] Minnesota IMPLAN Group, Inc. User's Guide, Analysis Guide, Data Guide: IMPLAN Professional Version 2.0 Social Accounting & Impact Analysis Software, 2nd Edition, June 2000.

APPENDIX A

Model and Data Used to Estimate Employment and Income Multipliers

Appendix A

Model and Data Used to Estimate Employment and Income Multipliers

A computer spreadsheet that uses state IMPLAN multipliers was developed to enable community development specialists to easily measure the secondary benefits of the health sector on a state, regional or county economy. The complete methodology, which includes an aggregate version, a disaggregate version, and a dynamic version, is presented in Measuring the Economic Importance of the Health Sector on a Local Economy: A Brief Literature Review and Procedures to Measure Local Impacts (Doeksen, et.al., 1997). A brief review of input-output analysis and IMPLAN are presented here.

A Review of Input-Output Analysis

Input-output (I/O) (Miernyk, 1965) was designed to analyze the transactions among the industries in an economy. These models are largely based on the work of Wassily Leontief (1936). Detailed I/O analysis captures the indirect and induced interrelated circular behavior of the economy. For example, an increase in the demand for health services requires more equipment, more labor, and more supplies, which, in turn, requires more labor to produce the supplies, etc. By simultaneously accounting for structural interaction between sectors and industries, I/O analysis gives expression to the general economic equilibrium system. The analysis utilizes assumptions based on linear and fixed coefficients and limited substitutions among inputs and outputs. The analysis also assumes that average and marginal I/O coefficients are equal.

Nonetheless, the framework has been widely accepted and used. I/O analysis is useful when carefully executed and interpreted in defining the structure of a region, the interdependencies among industries, and forecasting economic outcomes.

The I/O model coefficients describe the structural interdependence of an economy. From the coefficients, various predictive devices can be computed, which can be useful in analyzing economic changes in a state, a region or a county. Multipliers indicate the relationship between some observed change in the economy and the total change in economic activity created throughout the economy.

MicroIMPLAN

MicroIMPLAN is a computer program developed by the United States Forest Service (Alward, et al., 1989) to construct I/O accounts and models. Typically, the complexity of I/O modeling has hindered practitioners from constructing models specific to a community requesting an analysis. Too often, inappropriate U.S. multipliers have been used to estimate local economic impacts. In contrast, IMPLAN can construct a model for any county, region, state, or zip code area in the United States by using available state, county, and zip code level data. Impact analysis can be performed once a regional I/O model is constructed.

Five different sets of multipliers are estimated by IMPLAN, corresponding to five measures of regional economic activity. These are: total industry output, personal income, total income, value added, and employment. Two types of multipliers are generated. Type I multipliers measure the impact in terms of direct and indirect effects. Direct impacts are the changes in the activities of the focus industry or firm, such as the closing of a hospital. The focus business changes its purchases of inputs as a result of the direct impacts. This produces indirect impacts in other business sectors. However, the total impact of a change in the economy consists of direct, indirect, and induced changes. Both the direct and indirect impacts change the flow of dollars to the state, region, or county's households. Subsequently, the households alter their consumption accordingly. The effect of the changes in household consumption on

businesses in a community is referred to as an induced effect. To measure the total impact, a Type II multiplier is used. The Type II multiplier compares direct, indirect, and induced effects with the direct effects generated by a change in final demand (the sum of direct, indirect, and induced divided by direct). IMPLAN also estimates a modified Type II multiplier, called a Type III multiplier that also includes the direct, indirect, and induced effects. The Type III multiplier further modifies the induced effect to include spending patterns of households based on a breakdown of households by nine difference income groups.

Minnesota IMPLAN Group, Inc. (MIG)

Dr. Wilbur Maki at the University of Minnesota utilized the input/output model and database work from the U. S. Forest Service's Land Management Planning Unit in Fort Collins to further develop the methodology and to expand the data sources. Scott Lindall and Doug Olson joined the University of Minnesota in 1984 and worked with Maki and the model.

As an outgrowth of their work with the University of Minnesota, Lindall and Olson entered into a technology transfer agreement with the University of Minnesota that allowed them to form MIG. At first, MIG focused on database development and provided data that could be used in the Forest Service version of the software. In 1995, MIG took on the task of writing a new version of the IMPLAN software from scratch. This new version extended the previous Forest Service version by creating an entirely new modeling system that included creating Social Accounting Matrices (SAMs) – an extension of input-output accounts, and resulting SAM multipliers. Version 2 of the new IMPLAN software became available in May of 1999. For more information about Minnesota IMPLAN Group, Inc., please contact Scott Lindall or Doug

Olson by phone at 651-439-4421 or by email at info@implan.com or review their website at www.implan.com.