The Economic Impact of Health Services on the Economy of Sumter County, Alabama

Hospitals

Nursing Homes

Community

Physicians, Dentists, Etc.

Pharmacies

Other Services

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National Association of Counties Project
Funded by the federal Office of Rural Health Policy

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Sumter County, Alabama

through

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Medical facilities have a tremendous medical and economic impact on the county in which they are located. This is especially true with health care facilities, such as hospitals and nursing homes. These facilities not only employ a number of people and have a large payroll, but they also draw into the county a large number of people from rural areas that need medical services. The overall objective of this study is to measure the economic impact of health services on the economy of Sumter County. The specific objectives of this report are to:

1. discuss national trends in health care;
2. review county demographic and economic data;
3. summarize the direct economic activities of health services in Sumter County;
4. review concepts of county economics and multipliers; and
5. illustrate the economic impact of health services on the economy of Sumter County.

No recommendations will be made in this report.

National Health Trend Data

The health care sector is an extremely fast-growing sector in the United States, and based on the current demographics, there is every reason to expect this trend to continue.

Data in **Table 1** provide selected expenditure and employment data for the United States.

Several highlights from the national data are:

- In 1970, health care services as a share of the national gross domestic product (GDP) were 7.2 percent and increased to 16.2 percent in 2007;
- Per capita health expenditures increased from $356 in 1970 to $7,421 in 2007;
- Employment in the health sector increased over 324.0 percent from 1970 to 2007; and
- Annual increases in employment from 2003 to 2007 ranged from 2.0 percent to 2.7 percent.

Table 1
United States Health Expenditures and Employment Data
1970-2007; Projected for 2008, 2011, 2014 and 2017

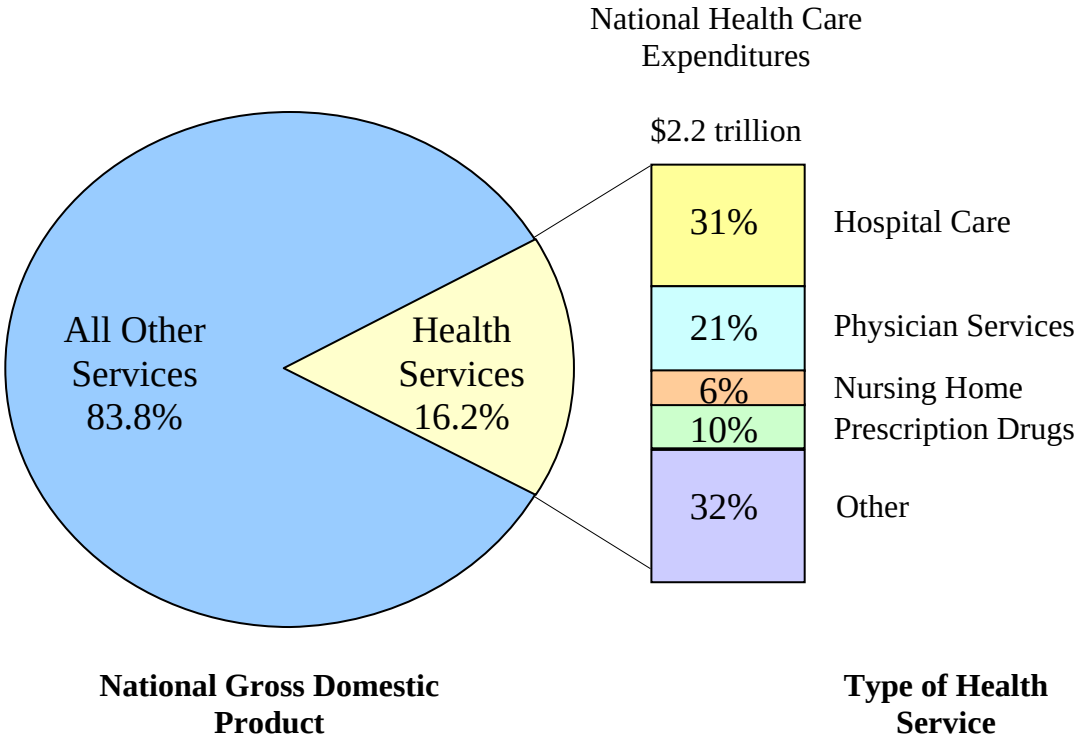
Year	Total Health Expenditures ($Billions)	Per Capita Health Expenditures ($)	Health as % of GDP (%)	Health Sector Employment (000)	Avg. Annual Increase in Employment (%)
1970	$74.9	$356	7.2%	3,052 [a]	
1980	253.4	1,100	9.1%	5,278 [a]	7.3%
1990	714.1	2,814	12.3%	7,814 [a]	4.8%
2000	1,353.2	4,789	13.8%	10,858 [a]	3.9%
2001	1,469.4	5,149	14.5%	11,188 [a]	3.0%
2002	1,602.3	5,560	15.3%	11,536 [a]	3.1%
2003	1,734.9	5,967	15.8%	11,817 [b]	N/A
2004	1,854.8	6,319	15.9%	12,055 [b]	2.0%
2005	1,980.6	6,687	15.9%	12,314 [b]	2.1%
2006	2,112.7	7,062	16.0%	12,602 [b]	2.3%
2007	2,241.2	7,421	16.2%	12,946 [b]	2.7%
Projections					
2008	2,394.3	7,868	16.6%		
2011	2,905.1	9,322	17.4%		
2014	3,523.6	11,043	18.4%		
2017	4,277.1	13,101	19.5%		

SOURCES: U.S. Department of Labor, Bureau of Labor Statistics (www.bls.gov [January 2009]); U. S. Department of Commerce, Bureau of Economic Analysis (www.bea.gov [January 2009]); U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services, National Health Expenditures 1970-2007 and National Health Expenditure Projections 2007-2017 (www.cms.hhs.gov [January 2009]).
N/A - Not Available.
[a] Based on Standard Industrial Classification (SIC) codes for health sector employment.
[b] Based on North American Industry Classification System (NAICS) for health sector employment.

For the future, the U. S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, predicts that health care expenditures will account for 18.4 percent of GDP by 2014 and increase to 19.5 percent of GDP in 2017. Per capita health care expenditures are projected to increase to $11,043 in 2014 and to $13,101 in 2017. Total health expenditures are projected to increase to almost $4.3 trillion in 2017.

Figure 1 illustrates 2007 health expenditures by percent of gross domestic product and by type of health service. The largest health service type was hospital care, representing 31.0 percent of the total. The next largest type of health services was physician services with 21.0 percent of the total.

Figure 1
National Health Expenditures
as a Percent of Gross Domestic Product
and by Health Service Type, 2007



County Demographic and Economic Data

The study is based on the medical service area that includes all of Sumter County, Alabama. Sumter County is located in the southwestern part of Alabama. **Table 2** shows the populations for towns and cities in Sumter County, for Sumter County, and for the state of Alabama. Livingston city is the county seat of Sumter County and the largest population center, followed closely by York city. Livingston had a population of 3,527 in 1990, decreased 6.5 percent to 3,297 in the 2000 census, and is estimated to have decreased an additional 8.9 percent from 2000 to 2007. York city experienced similar decreases in population from 1990 to 2000 and 2000 to 2007, as well as the balance of the county and Sumter County. The state increased population during these same time periods.

Table 2
Census Populations, Population Estimates, and Percent Changes for Sumter County Towns and Cities, Sumter County, and the State of Alabama

	Census Population		Estimated Population	10 Years	7 Years
	1990	2000	2007	'90-'00	'00-'07
Cuba town	396	363	322	-8.3%	-11.3%
Emelle town	44	31	28	-29.5%	-9.7%
Epes town	267	206	186	-22.8%	-9.7%
Gainesville town	452	220	200	-51.3%	-9.1%
Geiger town	274	161	146	-41.2%	-9.3%
Livingston city	3,527	3,297	3,002	-6.5%	-8.9%
York city	3,138	2,854	2,526	-9.1%	-11.5%
Balance of Sumter County	8,076	7,666	6,896	-5.1%	-10.0%
Sumter County	16,174	14,798	13,306	-8.5%	-10.1%
State of Alabama	4,040,587	4,447,100	4,626,595	10.1%	4.0%

SOURCE: 1990 & 2000 Census Population, 2007 Census Population Estimates, U.S. Census Bureau (www.census.gov [February 2009]).

Table 3 shows the projected populations for both Sumter County and the state of Alabama from the 2000 census year through 2010, 2015, 2020, and 2025. Sumter County is projected to decrease in population through 2025, while the state of Alabama is projected to increase in population during the same time period.

Table 3
Population, Projected Population and Projected Percent Changes for Sumter County and the State of Alabama

	Census Population	Projected Population			
	2000	2010	2015	2020	2025
Sumter County	14,798	13,855	13,538	13,273	13,051
State of Alabama	4,447,100	4,596,330	4,663,111	4,728,915	4,800,092
		Percent Change			
		10 Years '00-'10	15 Years '00-'15	20 Years '00-'20	25 Years '00-'25
Sumter County		-6.37%	-8.51%	-10.31%	-11.81%
State of Alabama		3.36%	4.86%	6.34%	7.94%

SOURCE: 2000 Census Population, U.S. Census Bureau (www.census.gov [February 2009]); University of Alabama in Huntsville (http://resadmin.uah.edu/ [February 2009]).

Table 4 compares the employment and payroll for the health services sector to the total of all other sectors for both Sumter County and the state of Alabama. From the data, health services employment increased 33.3 percent from 1998 to 2006 in Sumter County, while total county employment decreased by 10.6 percent. Health services as a percent of total county employment increased from 9.9 percent in 1998 to 14.7 percent in 2006, compared to the state's

Table 4
Employment and Payroll for County Business Patterns*
Sumter County and the State of Alabama

Based on NAICS[1]	Health Services Employment	Total County Employment	Health Services as a % of Total County Employment	Health Services as a % of Total State Employment
	Employment			
1998	336	3,402	9.9%	12.5%
1999	274	3,129	8.8%	12.5%
2000	274	2,880	9.5%	12.2%
2001	274	2,805	9.8%	12.8%
2002	278	2,813	9.9%	13.3%
2003	402	2,951	13.6%	13.9%
2004	440	3,109	14.2%	13.9%
2005	416	3,065	13.6%	13.7%
2006	448	3,041	14.7%	13.6%
% Change '98 - '06	33.3%	-10.6%		

Based on NAICS[1]	Health Services Payroll ($1,000s)	Total County Payroll ($1,000s)	Health Services as a % of Total County Payroll	Health Services as a % of Total State Payroll
	Payroll			
1998	4,991	68,761	7.3%	14.2%
1999	4,945	65,182	7.6%	13.7%
2000	4,932	60,831	8.1%	13.5%
2001	5,167	60,475	8.5%	14.1%
2002	4,521	62,471	7.2%	14.8%
2003	6,523	67,907	9.6%	15.3%
2004	7,640	71,184	10.7%	15.3%
2005	8,188	83,375	9.8%	14.8%
2006	9,594	88,750	10.8%	15.0%
% Change '98 - '06	92.2%	29.1%		

Source: U.S. Census Bureau, County Business Patterns; 1998-2006 data (www.census.gov [February 2009]).

[1] The Health Care and Social Assistance NAICS sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. Industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector shared this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

* Data from County Business Patterns exclude self-employed persons, employees of private households, railroad employees, agricultural production workers, and for most government employees (except for those working in wholesale liquor establishments, retail liquor stores, Federally-chartered savings institutions, Federally-chartered credit unions, and hospitals).

health services portion of state employment increasing from 12.5 percent in 1998 to 13.6 in 2006. Health services payroll in Sumter County grew 92.2 percent from 1998 to 2006, while the total county payroll increased by 29.1 percent. Health services as a percent of total county payroll grew from 7.3 percent in 1998 to 10.8 percent in 2006, compared to the state's health services payroll as a percentage of total state payroll increasing from 14.2 percent in 1998 to 15.0 percent in 2006.

The Direct Economic Activities

Employment and payroll are the important direct economic activities created in Sumter County from the health services sector. The health services sector is divided into the following components:

- Hospitals
- Offices of Physicians, Dentists, and Other Health Practitioners
- Nursing and Residential Care Facilities
- Pharmacies
- Other Health and Medical Services

The total health services sector in Sumter County employs 365 full- and part-time employees and has an estimated payroll including benefits of $11.8 million (**Table 5**). The hospital component employs 97 people with an annual payroll of $2.9 million. The hospital sector includes Hill Hospital of Sumter County. Hill Hospital of Sumter County is a 33-bed acute care critical access hospital, providing inpatient and outpatient care, physician clinic and rural health center, home health, inpatient detox unit, and a 24/7 emergency room.

The physicians, dentists, and other health professionals' component includes 41 total employees with income of $2.2 million. This component includes four primary care physician practices, a podiatry practice, a weight loss clinic, a sports medicine clinic, two dental practices and one ophthalmology practice.

Table 5
Direct Economic Activities of Health Services
on the Economic of Sumter County, Alabama

Health Service	Total Full- & Part-Time Employment	Total Income*
Hospital (Includes Hill Hospital, a 33-bed acute care critical access hospital, providing inpatient and outpatient care, physician clinic and rural health center, home health, inpatient detox unit & 24-hour emergency room)	97	$2,908,139
Physicians, Dentists, & Other Health Professionals (Includes four primary care physician practices, a podiatry practice, a weight loss clinic, a sports medicine clinic, two dental practices & one ophthalmology practice)	41	$2,161,501
Other Health & Medical Services (Includes one nursing and assisted living facility, one pharmacy in two locations, emergency medical services [ambulance], health department, department of human resources, a mental health agency, a drug rehabilitation facility, school nurse, a health and wellness center & one medical equipment provider)	227	$6,720,863
Total Health Services	**365**	**$11,790,503**

SOURCE: All employment data and income data for hospital only from local decision makers; all other income estimated from state average salaries from U. S. Department of Labor, Bureau of Labor Statistics, May 2007 State Occupational Employment and Wage Estimates for Alabama (www.bls.gov [March 2009]).
* Income is defined as all personal income including wages, salaries, proprietor income, and benefits.

The components of nursing and residential care facilities and pharmacies have been combined with the other health and medical services' component to ensure the privacy of individual providers due to the small number of providers. This component includes 227 employees with income of $6.7 million. The other health and medical services' component includes one nursing and assisted living facility, one pharmacy business located in two cities, emergency medical services (ambulance), health department, department of human resources, a mental health agency, a drug rehabilitation facility, school nurse, a health and wellness center, and one medical equipment provider.

Notably, many rural counties have a large number of elderly, and the ranchers and farmers often retire in the towns. Thus, nursing and residential care facilities are an important component of the health services sector. In summary, the health services sector is vitally important as a county employer and important to the county's economy. The health services sector definitely employs a large number of residents. The health services sector and the employees in the health services sector purchase a large amount of goods and services from businesses in Sumter County. These impacts are referred to as secondary impacts or benefits to the economy. Before the secondary impacts of the health services sector are discussed, basic concepts of county economics will be discussed.

Some Basic Concepts of County Economics and Income and Employment Multipliers

Figure 2 illustrates the major flows of goods, services, and dollars of any economy. The foundation of a county's economy are those businesses which sell some or all of their goods and services to buyers outside of the county. Such a business is a basic industry. The flow of products out of, and dollars into, a county are represented by the two arrows in the upper right portion of **Figure 2**. To produce these goods and services for "export" outside the county, the basic industry purchases inputs from outside of the county (upper left portion of **Figure 2**), labor from the residents or "households" of the county(left side of **Figure 2**), and inputs from service industries located within the county (right side of **Figure 2**). The flow of labor, goods, and services in the county is completed by households using their earnings to purchase goods and services from the county's service industries (bottom of **Figure 2**). **Figure 2** illustrates that a change in any one segment of a county's economy will have reverberations throughout the entire economic system of the county.

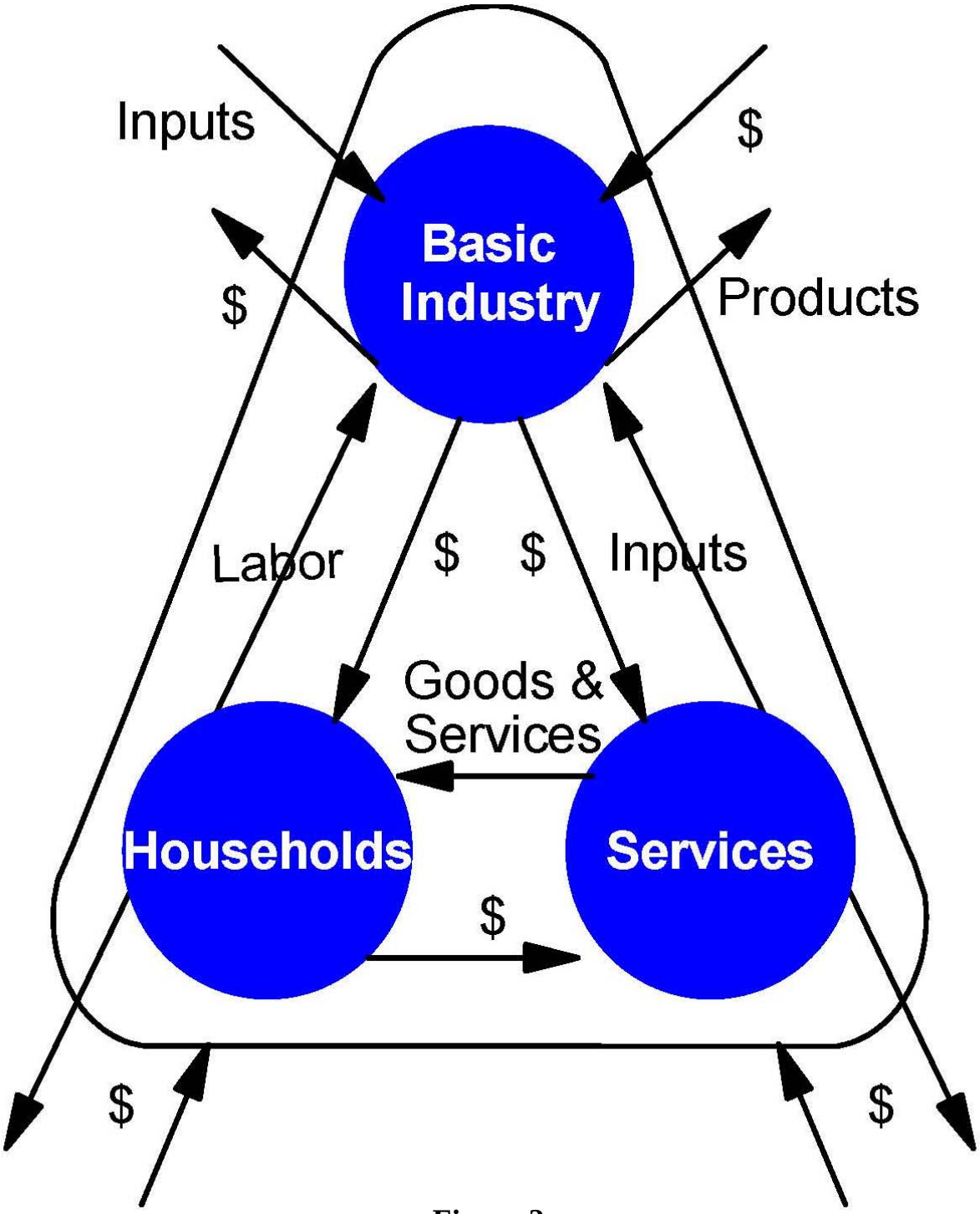


Figure 2.
County Economic System

Consider, for instance, the closing of a hospital. The services sector will no longer pay employees and dollars going to households will stop. Likewise, the hospital 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 hospital. The impacting business, such as the hospital, 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 county's households. The households alter their consumption accordingly. The effect of this change in household consumption upon businesses in a county 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 Health Services on the Economy of Sumter County, Alabama

Employment and income 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 county multipliers. Additional information on IMPLAN is included in **Appendix A**.

The employment multipliers for the components of the health services are shown in **Table 6**. The employment multiplier for the hospital component is 1.30. This indicates that for each job created in that sector, a 0.30 job is created throughout the area due to business (indirect) and household (induced) spending. The employment multipliers for the other components are also shown in **Table 6**.

Table 6
Employment Impact of Health Services
on the Economic of Sumter County, Alabama

Health Sector Component	Number of Employees	Employment Multiplier	Secondary Impact	Total Impact
Hospital	97	1.30	29	126
Physicians, Dentists, & Other Health Professionals	41	1.26	11	52
Other Health & Medical Services*	227	1.19	43	270
TOTALS	**365**		**83**	**448**

SOURCE: Local employment data for all health services; multipliers from IMPLAN 2007 data, Minnesota IMPLAN Group, Inc. [www.implan.com].

*The multiplier for Other Health & Medical Services is based on three sectors from IMPLAN.

Applying the employment multipliers to the employment for each of the components yields an estimate of each component's employment impact on Sumter County (**Table 6**). For example, the hospital component has employment of 97 employees; applying the employment multiplier of 1.30 to the employment number of 97 brings the total employment impact of the

hospital component to 126 employees (97 x 1.30 = 126). The secondary impact of the hospital component is 29 employees (97 x 0.30 = 29); these are the jobs created in other industry sectors in the Sumter County economy as a result of the spending of the hospital and the spending of the 97 hospital employees. The offices of physicians, dentists and other health professionals have a direct impact of 41 employees and after the application of the multiplier of 1.26, the secondary impact is 11 employees and the total impact comes to 52 employees. The other health and medical services' component has a direct impact of 227 full- and part-time employees. With the application of the multiplier of 1.19, the total employment impact is 270 with a secondary impact of 43. The total employment impact of health services in Sumter County is estimated to be 448 employees with a secondary employment impact of 83 employees.

The income multiplier for the hospital component is 1.28 (**Table 7**). This indicates that for each dollar created in that sector, $0.28 are created throughout the area due to business (indirect) and household (induced) spending. The income multipliers for the other health services' components are also given in **Table 7**.

Table 7
Income[1] Impact of Health Services
on the Economy of Sumter County, Alabama

Health Service	Direct Impact	Income Multiplier	Secondary Impact	Total Impact	Retail Sales	2% County Gen'l Sales Tax
Hospital	$2,908,139	1.28	$814,279	$3,722,418	$904,548	$18,091
Physicians, Dentists, etc.	$2,161,501	1.15	$324,225	$2,485,726	$604,031	$12,081
Other Health etc.	$6,720,863	1.17	$1,142,547	$7,863,410	$1,910,809	$38,216
TOTALS	**$11,790,503**		**$2,281,051**	**$14,071,554**	**$3,419,388**	**$68,388**

SOURCE: Hospital income provided by local sources; income data for all other health services (except hospital) were estimated utilizing state average incomes from the U. S. Department of Labor, Bureau of Labor Statistics, May 2007 State Occupational Employment and Wage Estimates for Alabama (March 2009 [www.bls.gov]); multipliers from 2007 IMPLAN data, Minnesota IMPLAN Group, Inc. [www.implan.com].

[1] Income is defined as all personal income including wages, salaries, proprietor income, & benefits.

[2] The multiplier for Other Health & Medical Services is based on three sectors from IMPLAN.

Applying the income multipliers to the income (wages, salaries, and proprietor income plus benefits) for each of the components yields an estimate of each component's income impact on Sumter County (**Table 7**). The hospital component has a total payroll of $2.9 million; applying the income multiplier of 1.28 brings the total hospital income impact to $3.7 million ($2.9 million x 1.28 = $3.7 million). The secondary income impact from the hospital component is $814,279, which is the income generated in the other industry sectors in the Sumter County economy due to the hospital spending and the hospital employees' spending. All the income multipliers are applied to the income for each component and the resulting secondary and total income impacts are shown for each component. The total secondary income impact of health services in Sumter County is estimated to be $2.3 million, with the total income impact of health services in Sumter County estimated to be $14.1 million (**Table 7**).

Income also has an impact on retail sales. If the county ratio between retail sales and income continues as in the past several years, then direct and secondary retail sales generated by health services and its employees equals $3.4 million (**Table 7**). Each of the components' income impacts were utilized to determine the retail sales and a 2.0 percent county sales tax collection for each component. Then the health services' components are totaled to determine the direct and secondary retail sales generated by health services. A 2.0 percent county sales tax collection is estimated to generate $68,388 in Sumter County as a result of the total income impact (**Table 7**). This estimate is probably low, as many health care employees will spend a larger proportion of their income in local establishments that collect sales tax. The bottom line is that health services not only contribute greatly to the medical health of the county, but also to the economic health of the county.

Summary

The economic impact of health services upon the economy of Sumter County is tremendous. Health services employ a large number of residents, similar to a large industrial firm. The secondary impact occurring in the county is extremely large and measures the total impact of health services. If the health services increase or decrease in size, the medical health of the county as well as the economic health of the county are greatly affected. For the attraction of industrial firms, businesses, and retirees, it is crucial that the area have quality health services. Often overlooked is the fact that prosperous health services contribute to the economic health of the county.

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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.