

## The Economic Impact of LMU-DCOM on the State & Regional Economies

Medical Colleges are many things to many people. Aside from training physicians, they are large consumers, provide opportunities for entertainment and cultural experiences and contribute to the fund of knowledge through research.

Economically, medical colleges are important to local, state and regional economies. Colleges impact the economy when they hire staff, enhance lifetime incomes of their graduates, and spin off and attract research and industrial enterprises. A large portion of the revenues generated by a college will be returned to the local community. Local expenditures support jobs, create additional wages and salaries and provide tax revenues that are vital to the local economy. As these dollars continue to be spent in the community, the multiplier effect generated by a college becomes clear.

### Impact of Medical College

The first objective of this study was to measure the economic impact from Lincoln Memorial University-DeBusk College of Osteopathic Medicine (LMU-DCOM) on the State of Tennessee and the primary impact region identified as 14 counties in Tennessee, 10 counties in Kentucky and 3 counties in Virginia. The impact comes from four activities; 1) operations, 2) construction, 3) student spending and 4) visitor spending.

LMU-DCOM started its first class of 150 students in August 2007. In four years (2011) LMU-DCOM will be fully operational. The study estimated the total impacts for both the first year of operation (FY 2008) and FY 2011. A computer program (IMPLAN) measured the secondary jobs

and income (wages, salaries and benefits) from medical school activities. Data in **Table 1** present the direct impacts, multipliers and total impacts that LMU-DCOM will have on the State of Tennessee in 2011. The cost estimates are likely conservative as they are based on 2006 numbers and have not been inflated.

### Operations

This impact represents the operational activities of the medical college. It is estimated that LMU-DCOM will employ 75 people and have a payroll of over \$8.0 million. The employment multiplier of 1.61 indicates that for each LMU-DCOM employee, another 0.61 job will be created in the state due to employee spending. Likewise, the income multiplier measures the secondary impact on income. The total operational impact will be 121 jobs and \$12.4 million in income.

### Construction

Construction impacts only occur that year and are not recurring. Approximately \$24.0 million were spent on new construction and building improvements in the last three fiscal years with projected \$3.0 million per year for the next three years. Construction operations impact the local community and surrounding region as contractors purchase materials and employ workers, many of whom travel from other towns and spend part of their wages on food, drink and lodging.

### Student Spending

These costs represent only the non-university portion of student spending by full-time students. Tuition, fees, campus housing and a large portion of book purchases are captured through college operations.

**Table 1**  
**LMU-DCOM Economic Impacts on the State of Tennessee, FY 2011**

Activity	Employment			Income <sup>1</sup>		
	Direct Impact	Multiplier	Total Impact	Direct Impact	Multiplier	Total Impact
Operations	75	1.61	121	\$8,024,470	1.54	\$12,357,684
Construction	33	1.72	57	\$1,290,000	1.70	\$2,193,000
Student	64	1.85	118	\$2,629,577	1.83	\$4,812,126
Visitor	<u>25</u>	1.44	<u>36</u>	<u>\$541,593</u>	1.76	<u>\$953,204</u>
<b>2011 TOTAL</b>	<b>197</b>		<b>332</b>	<b>\$12,485,640</b>		<b>\$20,316,014</b>

<sup>1</sup> Income includes wages, salaries and benefits

### Visitor Spending

Colleges attract a large number of visitors for various events. These visitors spend dollars that contribute to the local economy.

### Total Impacts

Total estimate for FY 2011 is 197 direct jobs. When including the secondary impacts, the total employment impact will be 332 jobs. The direct income activities are estimated at \$12.5 million with the total income impact from LMU-DCOM on the State of Tennessee of over \$20.3 million.

The study also estimated retail sales and state sales tax generated from total income. From LMU-DCOM activities, \$5.9 million in retail sales will be generated and about \$411,161 in state sales tax will be collected with the current 7.0 percent rate.

Results for the primary impact region are only slightly smaller compared to the state impacts illustrating that most of the spending activity occur in this region.

### **Impact of Physicians on the State**

The graduates of LMU-DCOM will contribute to the health of residents in Tennessee. It is estimated that 70 percent of a typical graduating class will practice in Tennessee and 30 percent will practice in rural Tennessee. Therefore a class of licensed D.O.s will also contribute to the economies of the State and many rural communities. The second objective of this study is to estimate the economic contribution of a typical class of graduates. The first class of students will graduate in 2008 and complete residency programs in 2014.

Previous research estimated the impact of primary care physicians in underserved rural areas of Oklahoma.<sup>1</sup> The economic impact of a typical class is estimated using data from that study. Results found each physician creates 17 jobs and generates income of \$722,000 from practice visits and hospital inpatient and outpatient services.

**Table 2** presents the employment, income and

<sup>1</sup> See Footnote below

retail sales impact of a typical LMU-DCOM graduated physician.

**Table 2**  
**Impact of a Typical LMU-DCOM Graduate**

<u>Employment Impact (per graduate)</u>		
Jobs <sup>1</sup>		17
Multiplier	2.06	
<b>TOTAL Employment Impact</b>		<b>35</b>
<u>Income Impact (per graduate)</u>		
Income <sup>1</sup>		\$722,000
Multiplier	1.51	
<b>TOTAL Income Impact</b>		<b>\$1,090,220</b>
Retail Sales		\$338,622
Sales Tax (7.0)		\$23,704

<sup>1</sup> The Economic Impact of a Rural Primary Care Physician

Applying this impact to 105 physicians (70% of 150 graduates) practicing in Tennessee yields a total impact of 3,675 jobs and over \$114 million in income for the State of Tennessee (**Table 3**.)

**Table 3**  
**Impact of LMU-DCOM Graduating Class**

<u>Employment Impact (practicing in Tennessee)</u>		
Jobs		35
Graduates	x105	
<b>TOTAL Employment Impact</b>		<b>3,675</b>
<u>Income Impact (practicing in Tennessee)</u>		
Income		\$1,090,220
Graduates	x105	
<b>TOTAL Income Impact</b>		<b>\$114,473,100</b>
Retail Sales		\$35,555,345
Sales Tax (7.0)		\$2,488,874

The 45 (30% of 150 graduates) new physicians practicing in rural areas will have an estimated impact of 1,575 jobs and \$49.1 million in wages, salaries and benefits in rural Tennessee.

In summary, the number of Tennessee counties currently identified as medical shortage areas clearly indicate the need for physicians. In addition to the LMU-DCOM graduates providing much needed medical services, they will also contribute significantly to the economic strength of rural Tennessee and to the entire state

For a complete copy of "The Economic Impact of Lincoln Memorial University-DeBusk College of Osteopathic Medicine on the State and Regional Economies" or "The Economic Impact of a Rural Primary Care Physician," see the National Center for Rural Health Website ( www.ruralhealthworks.org)