

# The Economic Impact of Lake Superior State University on Chippewa County and Surrounding Region

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## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	2
INTRODUCTION AND METHODOLOGY .....	3
REPORT AND FINDINGS .....	4
TOTAL EXPENDITURES AND IMPACT .....	4
DIRECT OPERATING EXPENDITURES AND IMPACT .....	5
CAPITAL SPENDING AND IT'S IMPACT .....	6
STUDENT HOUSING EXPENDITURES BASED ON TYPE OF HOUSING .....	6
IMPACT OF STUDENT HOUSING EXPENDITURES .....	7
VISITOR SPENDING AND IT'S IMPACT .....	8
PER STUDENT IMPACT .....	8
NON-ECONOMIC IMPACT .....	9
INFRASTRUCTURE .....	9
STUDENT INVOLVEMENT .....	9
RESEARCH AND DEVELOPMENT .....	10
CONCLUSION .....	11

## EXECUTIVE SUMMARY

Lake Superior State University (LSSU) continues to be a major stimulus for economic growth in Chippewa County and surrounding region in Michigan and northern Ontario. However, its accurate measurement has not been completed for some time. In the fall of 2012, Dr. David Finley, Dean of the Lukenda School of Business and Engineering, engaged Professor Robert Boston and student Katie Weckesser to assess the economic impact of the LSSU's operating and capital spending and compile this report.

The study shows that direct spending by LSSU, its students, and University-generated visitors to Chippewa County is approximately \$113 million per year, making it responsible for almost 1400 jobs or roughly 9% of employment in Chippewa County. As well, the study notes many non-economic but important benefits of LSSU, such as its impact on infrastructure, student outreach, and research and development.<sup>1</sup>

LSSU is among the brightest stars in Chippewa County's economic development future. What's more, LSSU's impact extends beyond the county. The economic sustainability of the Eastern Upper Peninsula, northern lower Michigan, and northern Ontario have an arterial link to LSSU that cannot be underestimated. Each student arriving on campus brings with him or her over \$45,000 per year in economic activity, corresponding to one-half a job for area residents. Given this impact, opportunities to sustain and grow LSSU should be pursued with vigor.

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<sup>1</sup> Economagic info @ <http://www.economagic.com/em-cgi/data.exe/blsla/laucn26033003>

## INTRODUCTION AND METHODOLOGY

### INTRODUCTION

This is a report of the economic impact Lake Superior State University (LSSU) has on the City of Sault Sainte Marie and direct surrounding area. LSSU provides a variety of benefits as it is the knowledge center of Chippewa County, and it produces instant economic impact through employment and spending. This economic study helps to describe the benefits by measuring this impact and provides an accurate source document that may be used in presentations made to local, state and federal government officials, alumni, and local businesses.

LSSU is located in Sault Sainte Marie, the largest city in Chippewa County. As stated in the U.S. Census, Chippewa County consists of 1,558 square miles of land along Lake Superior in the North East corner of the Upper Peninsula. Containing a population of 38,917\* and a labor force of 16,047, Chippewa County has not experienced any type of major economic expansion for over ten years. While 88.7% of Chippewa County residents aged 25 and higher have earned a high school diploma, only 17.9% have attained a bachelor's degree or higher. This small pool of college graduates may be reflected in the average income level of county residents. The per capita income, in 2011 dollars, is \$20,744 with the median household income being \$41,108. Not only are income levels low, but to further reflect the modest educational achievement, 17.7% of Chippewa County's population lives below the poverty line.<sup>2</sup>

### METHODOLOGY

Data used to conduct this study was taken from the audited 2011/2012 LSSU financial statements and collected via personal interviews with various LSSU department leaders during the fall of 2012. That being said, some data values were not available, and therefore some assumptions were made. When this situation arose, the accuracy of the assumptions was paramount in arriving at a data point. It is the authors' opinion that this is the best available data; given the time and resource constraints and that any deviations would have a minimal impact on the output variables.

The Bureau of Economic Analysis's Regional Input-Output Modeling System (RIMS II) was applied to the data to arrive at the output variables. The RIMS II multipliers utilized in this study were those valid for Chippewa, Mackinac and Luce counties in the Upper Peninsula. These

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<sup>2</sup> 2012 estimate, based off 2010 census @ <http://quickfacts.census.gov/qfd/states/26/26033.html>

multipliers are output-based, industry-specific, numerical values that assess the economic effect that a one-dollar increase in output will create for a given industry. In an effort to "best estimate" LSSU's impact, different industry multipliers were applied to different areas of spending i.e. a real estate multiplier was used on the housing portion of student expenditures. Because of this differentiation among spending categories, RIMS multipliers provide useful and accurate information when evaluating the economic effect on output, household earnings, and jobs to an area.

This report will examine the economic effects generated directly as a result of LSSU. This is a study encompassing a marginal analysis, in essence the value-added by the existence of LSSU, which is ultimately imperfect. However, it represents the most appropriate option for this type of study, given available data and time constraints.

## REPORT AND FINDINGS

**TABLE #1: EXPENDITURES AND IMPACT**

SOURCE	EXPENDITURE	OUTPUT \$	EARNINGS \$	EMPLOYMENT
OPERATING	\$42,607,976	\$62,846,765	\$24,572,020	972
CAPITAL	\$1,301,515	\$1,991,188	\$708,805	21
STUDENT	\$31,455,097	\$37,632,878	\$6,089,707	249
VISITORS	\$7,637,500	\$10,603,141	\$3,220,734	145
<b>TOTAL</b>	<b>\$83,002,088</b>	<b>\$113,073,972</b>	<b>\$34,591,266</b>	<b>1387</b>

Table #1 illustrates the total economic impact of LSSU on Chippewa County broken down by source of spending. The total output impact of LSSU is estimated to be approximately \$113 million per year, making it responsible for almost 1400 jobs or roughly 9% of the jobs in the county. Since 2000 there has been a decline of over 1600 salary/wage jobs in Chippewa County, magnifying the importance of LSSU as a stable source of employment.<sup>3</sup> The remainder

<sup>3</sup> Data Sources: U.S. Department of Commerce. 2011. Bureau of Economic Analysis, Regional Economic Information System, Washington, D.C. Table CA30.

of this study will further break down individual sources of spending as defined by the RIMS II multiplier categories to provide a more informative view of the impact of various spending sources on economic activity and employment.

<b>TABLE #2: DIRECT OPERATING EXPENDITURES AND IMPACT</b>				
<b>SOURCE</b>	<b>EXPENDITURE</b>	<b>OUTPUT IN \$</b>	<b>EARNINGS IN \$</b>	<b>EMPLOYMENT</b>
<b>NET WAGES</b>	<b>\$27,784,741</b>			
<b>OPERATING SUPPLIES</b>	<b>\$12,098,948</b>			
<b>BOND PRINCIPAL AND INTEREST</b>	<b>\$2,724,287</b>			
<b>TOTAL DIRECT OPERATING EXPENDITURES</b>	<b>\$42,607,976</b>	<b>\$62,846,765</b>	<b>\$24,572,020</b>	<b>972</b>

Table #2 above illustrates a more detailed stratification of the effect of Direct Operating Expenditures of LSSU. The RIMS II multipliers associated with "Colleges (611A00)" were used in the calculation of output, earnings and jobs. The use of this industry specific multiplier provides a more accurate estimation of economic impact than the methodology used in previous studies. Referring back to Table #1 values, readers can discern that the Operating Expenditures category accounted for 56% of the total dollar output and yet generated 70% of the total employment impact. Universities, as with most service related industries, are very labor intensive and therefore are an excellent source of jobs on an input/output basis. The added benefit from an economic development perspective is that the jobs created by and at the University are of mid-to-high skill-level and will have a higher average income relative to private sector service-related jobs. Chippewa County's per capita income is approximately 35% less than the U.S. average already. The importance of attracting, growing, and supporting high income jobs is obvious for the vitality of this region.

**TABLE #3: CAPITAL SPENDING AND IT'S IMPACT**

SOURCE	EXPENDITURE	OUTPUT \$	EARNINGS \$	JOBS
CAPITAL IMPROVEMENTS	\$1,301,515	\$1,991,188	\$708,805	21

During the reviewed time frame, LSSU had minimal capital improvement projects underway. Table #3 reflects the impact of these capital expenditures. However, this table does provide the reader with an idea of the economic impact of two pending capital improvements on campus: the South Hall Renovation Project and the Norris Center renovation. Construction (#230000) RIMS II multipliers were used in the calculation of output, earnings, and jobs in the table above. With an output multiplier of over 1.5 and a jobs multiplier of over 15 per million dollars, it is obvious that construction projects totaling \$16 million will have a dramatic effect on the regional economy. Based on available multipliers, these two campus renovations will create approximately 250 jobs during the construction phase, and the renovated facilities will be drawing cards for prospective students for years to come.

**TABLE #4: STUDENT HOUSING EXPENDITURES BASED ON TYPE OF HOUSING<sup>4</sup>**

TYPE OF HOUSING	# OF STUDENTS	EXPENDITURE INCLUDING FOOD	BOOKS/SUPPLIES AND MISC. EXPENDITURES	TOTAL PER STUDENT EXPENDITURE	TOTAL EXPENDITURE BY HOUSING TYPE
UNIVERSITY HOUSING	909	\$8481	\$3090	\$11571	\$10,518,039
RENTAL HOUSING	1868	\$6512	\$3690	\$10202	\$19,057,336
FAMILY HOUSING	261	\$4112	\$3090	\$7202	\$1,879,722
<b>TOTALS</b>	<b>3038</b>				<b>\$31,455,097</b>

<sup>4</sup> LSSU Student Housing Office

**TABLE #5: IMPACT OF STUDENT HOUSING EXPENDITURES**

<b>HOUSING TYPE</b>	<b>EXPENDITURE</b>	<b>OUTPUT</b>	<b>EARNINGS</b>	<b>EMPLOYMENT</b>
<b>UNIVERSITY HOUSING</b>	<b>\$10,518,039</b>			
<b>RENTAL HOUSING</b>	<b>\$19,057,336</b>			
<b>FAMILY HOUSING</b>	<b>\$1,879,722</b>			
<b>TOTALS</b>	<b>\$31,455,097</b>	<b>\$37,632,878</b>	<b>\$6,089,707</b>	<b>249</b>

Tables #4 and #5 illustrates the impact on output, earnings and jobs as a result of student housing. The RIMS II multipliers used for this part of the study were under the category of "Real Estate" (531000). Though this category has only a slightly lower multiple than "Colleges" for output, the jobs multiplier is much lower and this is reflected in the small number of jobs created for the large dollar value of student housing. However, it is very important to realize at this juncture the important role that student rental housing has had on maintaining market values in the Sault Sainte Marie housing market. Though not addressed in this study, the author feels confident in stating that student housing as a result of the presence of LSSU has provided positive causal effect on real estate values in the city. The population since 2000 has remained stable in the area; however, the total employment has decreased by over 900.<sup>5</sup> The loss of more than 1600 wage and salary jobs has been partially offset by nearly 700 new proprietors, providing strong evidence of entrepreneurship in the region.

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<sup>5</sup> <http://headwaterseconomics.org/wphw/wp-content/eps-profiles/26033%20-%20Chippewa%20County%20MI%20Measures.pdf>



**TABLE #6: VISITOR SPENDING AND IT'S IMPACT**

SOURCE		OUTPUT \$	EARNINGS \$	JOBS
TOTAL VISITORS	23,500			
TOTAL VISITOR DAYS	58,750			
TOTAL VISITOR EXPENDITURES	\$7,637,500	\$10,603,141	\$3,220,734	145

Table #6 notes visitor spending which was the most difficult variable to estimate. Very few statistics are kept by LSSU or the City of Sault Sainte Marie regarding the number of visitors who come to LSSU for educational, athletic, professional or other reasons. Because of this, the author chose to estimate the number of visitors to campus on an event basis. Student orientation, commencement, athletics and conferences were just a few of the activities that were considered. Estimated daily expenditures from the local Economic Development Corporation of \$130 per day were used in the visitor spending calculation. This amount may be very conservative given the daily rate used in other studies.

**TABLE #7: PER STUDENT IMPACT**

SOURCE	OUTPUT \$	JOBS
TOTAL ECONOMIC IMPACT	\$113,073,972	1387
NUMBER OF STUDENTS	2500 <sup>6</sup>	
VALUE PER STUDENT	\$45,230	0.55

Table #7 illustrates the economic impact that each individual LSSU student has on Chippewa County. Each new student attending LSSU brings with him/her the equivalent of over \$45,000

<sup>6</sup> LSSU Admissions Office(estimated full time equivalency)

per year, corresponding to one-half a job for county residents. These numbers reflect not only the importance of LSSU today, but the economic growth opportunity that it offers to area residents in the future. Economic development has become the name of the game in the State of Michigan, with most areas fighting for a smaller number of companies looking to relocate or build. Sault Sainte Marie and Chippewa County can grow, one student at a time, by focusing resources on the enhancement of LSSU as a preferred regional university.

## **NON-ECONOMIC IMPACT**

LSSU is not only an economic contributor through being an intellectual learning center, but actively provides Chippewa County and surrounding region with various non-economic benefits such as infrastructure, student outreach, and research and development.

## **INFRASTRUCTURE**

Located within the park-like setting of the LSSU campus are various facilities open for public use. Among those most frequented are the Norris Center, the Arts building, and the Cisler Center. These facilities offer area residents an incredible range of sports, exercise, cultural, meeting, and banquet options to enjoy with minimal cost. Such facilities would not be self-sustaining in Sault Sainte Marie without the presence of LSSU. In a city of 17,000 people, it is because LSSU exists that we have facilities for indoor racquet sports, an indoor 200-yard running and walking track, competition-sized pool, an incredible arts and entertainment center and a top quality arena. These facilities increase the quality of life of residents, and they are a definite selling factor in attracting new employers and professionals to the area.

The students and faculty at LSSU also support ancillary operations that include, but are not limited to, Barnes and Noble bookstore, Little Lakers KinderCare, and Sodexo Food Services. These entities also provide employment (accounted for in the previous calculations) and serve as resources for the regional community.

## **STUDENT INVOLVEMENT**

There are over 70 LSSU student organizations and clubs intertwined with the community. Many of these entities perform outreach and service as a component of their charter. Thus, they provide important civic service to Chippewa County and beyond. As an example, the LSSU

Investment Club successfully partnered with the I-500 Snowmobile Race organization this year to foster local advertising support for this major winter tourism attraction. The LSSU Accounting Club prepares tax returns for many residents of the City free of charge through the VITA program. These are just two examples of how LSSU students have intertwined with residents to strengthen the fabric of Chippewa County.

## **RESEARCH AND DEVELOPMENT**

LSSU houses several laboratories and centers which contribute to the economic vitality of the region (Eastern Upper Peninsula, northern lower Michigan, northern Ontario, and beyond), both directly and indirectly. Three of these entities are highlighted below.

The LSSU Environmental Analysis Laboratory (EAL) was created in 2002 to meet the biological, chemical, and physical testing and research needs of the region. As the only full service environmental lab, the EAL offers a wide range of analytical services to its clients including sample collection, inorganic and organic analysis in a variety of matrices, as well as genetic, microscopy & microanalysis, project design, and project implementation consultation.

LSSU's Aquatic Research Laboratory (ARL) is an off-campus research and educational facility situated just a mile away on the St. Marys River. The mission of the ARL is to combine education and research on aquatic biota and their associated habitats within the Great Lakes basin to serve the academic, scientific, and public communities.

LSSU's Product Development Center provides the necessary engineering design tools, engineering staff, materials analysis, product packaging guidance, software development and other services to the develop a functioning prototype. This program has assisted numerous entrepreneurs and second-stage companies to create and market their products. Additionally, student projects assist regional companies in their product or process development, while others serve as the basis for launching new businesses.

In sum, research studies by faculty and student projects across campus improve the quality of life in the Eastern Upper Peninsula and around the world.

## CONCLUSION

As a key anchor institution in Sault Ste. Marie, Lake Superior State University (LSSU) is a vital leader in the fiscal well-being of Chippewa County and the surrounding region. This study has illustrated the numerous benefits that the University generates for all members of the community, both economic and non-economic in nature.

LSSU is not only one of the supporting pillars of Chippewa County, but its economic importance is felt throughout the Upper Peninsula, lower northern Michigan, northern Ontario, and beyond. The nominal dollar impact of approximately \$113 million per year may be better put into perspective when one considers that LSSU is responsible for nearly 9% of the employment in Chippewa County. Mathematically, this means that nearly one out of every eleven jobs in the county is a result of LSSU's presence.

It is critical that government officials, alumni, local businesses, and area residents recognize the economic, sustaining force, and value of LSSU. Moreover, LSSU and her students contribute significantly to the academic, sports, exercise, cultural, meeting, and banquet opportunities available in the region. Given this impact, opportunities to sustain and grow this institution of higher education should be pursued and supported with vigor.