
The Economic Impact of Fort Hays State University on the Local Economy: Fiscal Year 2011

Dr. Tom Johansen, Dr. Kathleen Arano and Dr. Samuel Schreyer



The Economic Impact of Fort Hays State University on the Local Economy: Fiscal Year 2011

A university education alters the path of people's lives. It helps them fulfill their aspirations to become artists, business and organizational leaders, teachers, health care professionals, and more. A university education is widely recognized as an investment that pays a lifetime of dividends in the form of better jobs and higher incomes.

The economic impact reported in this study used two approaches in estimating the economic impact of Fort Hays State University on the local economy – Ellis County.

The Caffrey-Isaacs method, which was used in prior studies estimating the economic impact of FHSU, produced a total economic impact estimate of **\$209,695,045**.

The IMPLAN method produced an estimate of **\$161,785,995**.

The total economic impact of the university upon the local economy is determined by combining a direct impact with an indirect impact and an induced impact.

- The direct impact is the sum of all local expenditures associated with the university, which was estimated to be **\$116,497,247**.
- The indirect impact is the additional business spending to support the initial expenditure, which was estimated to be **\$23,299,449**.
- The induced impact is the additional expenditures resulting from the incomes created by the direct impact, which was **\$69,898,348**.

The total economic impact for FY 2011 (the fiscal year starting July 1, 2010, and ending June 30, 2011) was between **\$161,785,995** and **\$209,695,045**.

IMPLAN also estimates the university impact from the perspective of its impact on the local community through generation of various tax revenues.

- Employee Compensation (social insurance taxes) was **\$217,915**.
- Indirect Business Tax (sales, property, motor vehicle, etc.) was **\$3,212,588**.
- Households (motor vehicle, property, etc.) was **\$2,291,831**.
- Corporations (dividends and corporate profits tax) was **\$497,582**.

The Economic Impact of Fort Hays State University on the Local Economy: Fiscal Year 2011

Dr. Tom Johansen, Dr. Kathleen Arano, and Dr. Samuel Schreyer

INTRODUCTION

Fort Hays State University Strengthens the Economy of Today and Tomorrow

The state of Kansas investment in the development of human capital through Fort Hays State University has multiple long-term economic benefits. These benefits include a better educated state work force that results in both productivity and earnings gains.

There is a consistent positive correlation between the education level within a state and the per capita income for that state. Analogous to the development of human capital is the transfer of technology and know-how to businesses, non-profit and civic organizations, as well as to government agencies.

University employees provide regional leadership as they serve on committees and boards in various organizations providing technical expertise and resources, and they engage in other service activities. Also, local businesses benefit from easy access to a large supply of part-time and full-time workers. This benefit is especially important when labor markets are tight due to low unemployment rates.

Sports events, cultural activities and educational programs are available to the general public and provide intangible benefits to the region by improving local residents' quality of life. Quantifying these long-term, multifaceted benefits is beyond the scope of this study.

The purpose of this study is to determine the approximate magnitude of the economic impact of Fort Hays State University upon the Hays and Ellis County local economy in FY 2011. The models used in this study are input-output models upon which data can be readily obtained. The IMPLAN software system is also used to estimate the economic impact based on Bureau of Economic Analysis (BEA) data. These models include only university-related expenditures. The spending units are identified as the university, faculty and staff, students, visitors,

food service, the bookstore, the FHSU Foundation, and the Athletic Association. Discussion of spending estimates, data sources and assumptions are presented below for each of these units. The total of these expenditures is called the "direct impact," which is a primary source of the economic impact of the university upon its local economy.

The National Bureau of Economic Research (NBER) determined that the trough in business activity in the U.S., which represents the lowest point in a period of economic contraction, occurred in June 2009. This marks the official end of the recession that started in December 2007. The most recent estimates from the Bureau of Economic Analysis (BEA) reports a 5.1 percent decrease in real GDP over the six quarters of contraction from 2008 to the first half of 2009. Most macroeconomic indicators point to a slow recovery from the recession. The economic recovery slowed down in 2011, with real GDP increasing by 1.7 percent, compared to the 3 percent increase in 2010. The slowdown in 2011 reflected declines in inventory investment and government spending.

In Kansas, the most recent numbers indicate a 2.1 percent growth in real GDP in 2010, slightly lower than the 2.6 percent growth posted in 2009-2010. The annual growth rate of real GDP from 2000-2010 was 1.5 percent in Kansas; the nation was 1.6 percent. Per capita personal income rose 4.3 percent nationally in 2011, with Kansas rising 3.86 percent at \$40,481, ranking 23rd in the nation.

The price index for GDP, which reflects inflation, increased 2.5 percent in 2011, slightly higher than the 1.5 percent increase in 2010. The overall U.S. inflation rate, measured by the change in the CPI, was up in 2011 at 3.2 percent compared to 1.6 percent in 2010. Generally, the Kansas economy is less volatile than the overall national economy.

Unemployment in 2011 for the U.S. was a slight improvement at 8.9 percent or 13.75 million unemployed compared to the unemployment rate of 9.6 percent in 2010. Kansas unemployment rate has been consistently lower than the U.S. average in 2011, which was steady at 6.9 percent in January 2011 and down to 6.4 percent in December 2011,

with an average of 6.7 percent for the year. The average Kansas unemployment rate for 2010 was 7.1 percent.

The largest industry in Kansas in 2010 was the government, which accounted for 15.3 percent of Kansas GDP, up 2 percent from the previous year. Real estate and rental and leasing was the second largest industry, which accounted for 9.7 percent of Kansas GDP. The largest contributor to the growth rate in real GDP for Kansas however came from wholesale trade, followed by durable goods manufacturing.

The slow economic recovery, both nationally and in Kansas, has affected the economic impact of FHSU on the Kansas economy. With a reduction in spending by FHSU and its constituents during the past three years, the economic impact of FHSU to the local economy has decreased.

Economic Impact Methodology Used in this Study

How a regional economy responds to changes in economic activity is largely determined by the buy-sell relationships among companies located within that region. Input-Output (I-O) models estimate inter-industry relationships in a region by measuring the distribution of inputs purchased and output sold by each industry. Using I-O models, it is possible to calculate how the impact of one dollar “ripples” throughout the regional economy, creating additional expenditures and jobs.

An economic multiplier is a measure of the ripple effect that an initial expenditure has on the regional economy. The Caffrey-Isaacs approach was developed in 1971 for the American Council of Education to provide a framework for estimating economic impact. Economic information required by this model includes spending by faculty, staff, students, the university and constituents.

Other economic activities occurring because of the university location and facilities are also estimated. Local government income and spending changes due to the existence of the university adds to the impact. The multiplier depends on local business effects, the value of property related to the university, the costs and benefits to the local government, wages, and jobs created. In practice, multipliers are often estimated based on similar studies or averages.

Universities purchase goods and services from local businesses, which in turn purchase inputs and services from other local businesses. These increased sales result in increased employment of local citizens. The expenditures represent the multiplier effect of the university’s

expenditures. This same multiplier effect is also associated with the university’s expenditures on construction and capital improvement projects as well as the expenditures of faculty, staff and students on local goods and services.

Caffrey-Isaacs Method

FHSU expenditures are associated with the following categories: the university, faculty and staff, students, visitors, food service, the bookstore, the Memorial Union, the FHSU Foundation, and the Athletic Association. Expenditures for FY 2011 are associated with spending to local businesses in Ellis County and the city of Hays.

The broader impact of FHSU spending on the region or state is not considered in this study. Assumptions, data sources and other issues are specifically identified in this presentation to assist in making the needed corrections for future economic impact studies.

University Expenditures (Other than Employment)

University operating expenditures, obtained from the FHSU Annual Report, were **\$39,317,660** for FY 2011. Next, the proportion of these expenditures spent locally is applied. Some university expenditures are required to use state contracted vendors, so these expenditures are not likely to be local.

Currently, computer access to data that track expenditures by vendor address or zip code is unavailable. For this report, 55 percent of expenditures are assumed to be local expenditures. This percentage is consistent with that used in other studies. This gives a figure of **\$21,624,713** in local expenditures.

Faculty and Staff Expenditures

This estimate includes total spending on local purchases of goods and services by university faculty and staff. Payroll records were used to calculate employee net pay. Only those faculty and staff that reside in the local area were considered in this study; that is, those who live beyond the contiguous borders of Ellis County were not included because their spending would most likely not occur in Ellis County.

Net pay to faculty and staff is defined as the gross pay minus all deductions that result in the paycheck received by the employee. Payroll deductions include required withholdings such as federal and state income tax, social security, and Medicare taxes. Also withheld was the required state retirement employee contribution, which was 5.5 percent for unclassified and 4 percent for classified employees. Health and supplementary life insurance is

deducted, and employees can elect to have voluntary tax-sheltered supplementary retirement annuity payments withheld. Other voluntary deductions may include: deferred compensation, flexible spending accounts, medical and dependent care, long-term care insurance, parking fees,

organizational dues, athletic ticket payments, United Way donations, Foundation donations, Learning Quest and savings bonds.

The total net pay for each classification of employee, living in Ellis County and the four contiguous counties, is presented in Table 1.

Table 1: FHSU Employee Net Pay

Employee Type	Number of Employees	Net Pay
Nine-Month Unclassified (Faculty)	220	\$8,649,175
12-Month Unclassified	225	\$8,396,978
Regular Classified (with benefits)	285	\$6,188,325
Total Fac/Staff Net Pay	730	\$23,234,478

Source: University Payroll

Other categories of employees that also have to be considered are temporary classified and temporary unclassified employees. The temporary classified employee is a part-time employee who may work in a variety of capacities for the university, including secretarial, clerical, maintenance, custodial, etc. Temporary unclassified employees are usually associated with teaching responsibilities, either in a part-time capacity teaching on-campus or teaching classes offered through the Virtual College. The total net pay for these two employee classifications with a local address (162 employees) was **\$703,971**. The Senior Companion and Foster Grandparent Program employees working locally had a total net pay of **\$261,373**. Added to the net pay for FHSU employees identified in Table 1, the total net pay for all employees at FHSU is **\$24,199,822**.

It was assumed for this study that all of net pay was spent and no additional savings were withheld. Faculty and staff have available the opportunity to participate in voluntary tax-sheltered savings programs at FHSU that would be payroll deducted and thus not included in net pay.

The proportion of faculty and staff disposable income that is spent locally is an empirical question. During the spring of 2009, a survey was administered by the Docking Institute of Public Affairs of all faculty and staff about their spending patterns. The percentage of income spent locally was estimated based on the results of this survey. Previous FHSU economic impact studies have used 90 percent as the percentage spent locally. The spring 2009 survey confirmed

this is a reasonable estimate. The gravity model concerning expenditure patterns predicts that a higher percentage of disposable income is spent locally when competitive businesses are farther away. Hays is the center of a trade area with little competition for goods and services in close proximity. Salina, which is 90 miles away, is the closest larger trade center. Additionally, higher fuel prices during 2011 reduced any competitive advantage of businesses that require extensive travel.

Therefore, the total of the university employees' net income spent locally is estimated to be **\$21,779,840**, based on 90 percent of total net pay for all FHSU employees.

Full-time employees who were covered by health insurance were also responsible for purchase of local health services and medications covered by insurance. Health insurance premiums are deducted from gross pay for the employee and are not included in the net pay figures. Insurance payments to local providers of health care goods and services are associated with the employee and must be included as a part of employee expenditures. The Kansas Health Policy Authority has the ability to identify organizations such as FHSU in their claims database. They were able to identify the dollars spent for FHSU members to providers in Hays for the 2009 fiscal year. Assuming a regional two-year inflation rate of 5.7 percent, the FY 2011 expenditures were estimated to be **\$4,586,686**.

Assuming that 90 percent of spending is local, total FHSU employee expenditures are estimated to be **\$25,907,857**.

Table 2: Student Enrollment for Academic Year 2010–11 (Final Supplemental Data)

Students	On-Campus Head count		Students Living in Dormitories
Fall 2010	4430		1177
Spring 2011	4103		1082
Average		4267	1130
Summer 2011	629		

Student Expenditures

Spending by university students is another major source of the economic impact of the university. The on-campus head count is the enrollment figure relevant for direct student spending. For the academic year 2010-11, the average on-campus head count was **4,267** students. The summer of 2011 on-campus head count was **629**.

Virtual College enrollment also significantly impacts the economy by increasing university revenues and, thus, university expenditures. This spending component is included in both university spending and in faculty/staff spending.

There are students who reside in university-owned facilities such as dormitories, students who live off-campus in the community and students who live outside the local community.

Residence Hall Students

These students do not purchase local housing services, and most of their food expenditures are related to a university meal plan. It would not be appropriate to count either of these student expenditures because they are considered revenue to this university activity. From this revenue, university housing services make expenditures that are included in the university operations expenditures model. Nevertheless, they purchase a variety of goods and services in the local community including such items as: entertainment, food, beverages, clothing, school supplies, hygienic needs, insurance, medical and dental care, dry cleaning and many other items.

Local Off-Campus Students

Some students will reside in group housing, such as fraternities or sororities; some students will rent private quarters, live alone or with a roommate(s); and some students will live at home with parents. The expenditure patterns for these students will vary depending upon the circumstances.

Students Living in Other Communities

Students who commute to campus from surrounding areas will likely make some local expenditures on gasoline, food and other items. Students associated with Internet courses and programs may not come to the university and, thus, may not make any local purchases. Tuition and fees are not included in measuring the local economic impact of students because they are included in the instruction cost component of the university's operating budget.

Student spending data were collected for on-campus students as part of a survey conducted by the Docking Institute during the spring of 2009 concerning student finances. The survey was administered to all on-campus students at FHSU. Detailed data were collected on such things as student income, expenditures, housing, visitors and employment.

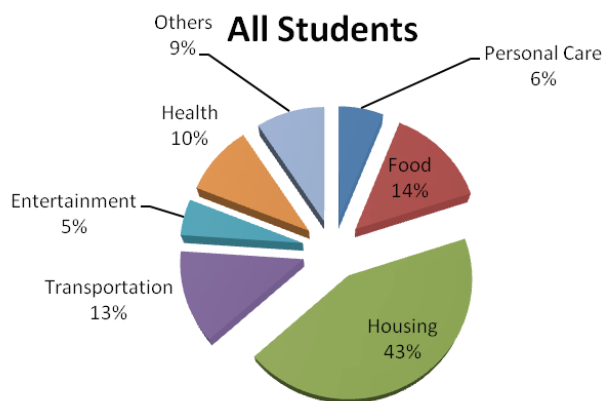
Figure 1 shows the pattern of student monthly spending for seven spending categories: housing (including utilities), food, transportation, health, personal care (including clothing, footwear, laundry/cleaning), entertainment and other (e.g., school supplies, child care, etc.).

Tuition and fees are not included in measuring the local economic impact of students because they are a revenue component that funds spending that is accounted for in the university's operating budget.

Student spending patterns change very little from year to year in terms of the percentage of their budgets spent on various categories even though the dollar amounts may change to reflect the change in market prices.

Estimating local expenditures by students requires adjustments to be made for students who live in university-owned facilities such as residence halls. Students who live in such facilities do not purchase local housing services, and most of their food expenditures are related to a university meal plan. About 26.5 percent of the average nine-month student on-campus head count resided in university housing during the 2010-11 school year.

Figure 1: Student Expenditures



FHSU students who lived in residence halls were estimated to spend an average of **\$918** per month in 2011. The student survey allows for the identification of students who live in residence halls and provides a basis for making adjustments to the housing and meal expenditures for those students. The average on-campus head count for students not living in residence halls was **3,137**. FHSU

students who did not live in residence halls were estimated to spend an average of **\$1,135** per month in 2011.

Total FHSU student spending for the 2010-11 school year (including the summer session) was adjusted for students living in residence halls. See Table 3.

Total student spending was estimated to be **\$42,670,540**.

**Table 3: Student Expenditures Less Tuition,
Average for Fall 2010 – Spring 2011***

Students Living in Residence Halls	1,130
Average Monthly Student Expenditures	\$918
Average 9-Month Student Expenditures	\$8,266
Total 9-Month Student Expenditures	\$9,336,703
Students Not Living in Residence Halls	3,137
Average Monthly Student Expenditures	\$1,135
Average 9-Month Student Expenditures	\$10,214
Total 9-Month Exp. For On-Campus Headcount	\$32,042,254
Summer Session	629
Average 2-Month Summer Student Expenditures	\$2,053
Total 2-Month Summer Student Expenditures	\$1,291,583
Total FY2011 Student Expenditures	\$42,670,540

*All figures are rounded to nearest dollar.

Visitor Expenditures

Many people visited Fort Hays State University's campus in FY 2011 as prospective students and their parents, as conference and commencement attendees, and as audiences for cultural and sporting events. These events have an economic impact on Hays and Ellis County because they are sponsored and/or supported by FHSU. This report estimates the expenditures of visitors that attend the various events. These groups include visitors attending special athletic events, events held at the Memorial Union on the FHSU campus, those that come to Hays to visit university students, and those that come to visit FHSU faculty and staff.

Special Events

The economic impact of high school state sporting events and other outside sponsored events hosted at FHSU has been studied for the year 2011 by the Hays Convention and Visitors Bureau (CVB). Many events were hosted by FHSU during 2011, including: state volleyball, state football, state basketball, Special Olympics, the High Plains Music Camp and several more. The Hays CVB estimated that in Hays and Ellis County, visitors attending these various events spent a total of approximately **\$4,268,570**.

Only overnight visitors are included in the estimates; therefore the estimates are conservative in that day visitors also spend money in the community. Day visitor information cannot be reliably estimated.

Special Memorial Union Events

The Memorial Union on the FHSU campus hosts many events during the year from outside organizations. Events hosted by the Memorial Union include the Kansas Remote Sensing Symposium; Multi-Media INT Competition; Seas, Trees, and Economics; Playdough Economics; Financial Fitness Institute; Economics of Sports; Cyber Crimes Training Conference; Kansas Academic Advising; Fall English Workshop; Kansas Scholastic Press Association; American Association of State and Colleges for Renewable Resources; Kansas International Educator; Association of College Unions; and the FHSU Math Relays.

The Memorial Union was recently renovated and more events were held during 2011. However, the specific information about the events was not available. Using the spending data available from 2009 and adjusting for the increase in the price level, as measured by the Consumer Price Index between 2009 and 2011, total local expenditures from Memorial Union events increased by 5.7 percent. The total spending in the local economy for 2011 was estimated to be **\$283,618**.

The increase in activity at the Union brought about by the renovation implies that the 2011 spending is likely a conservative estimate.

Student Visitors

Not only does student spending impact the economy, student visitors spend a substantial amount that also impacts the economy. Students have visits from friends and family throughout the year. While the primary purpose is to visit the student, some visitors combine the visit with attending a university activity or event.

Previous FHSU economic impact studies have not been able to estimate student visitor economic impact due to the absence of data. Based on a student survey in 2009 and the regional two-year inflation rate of 5.7 percent, the student visitor expenditures were estimated to be **\$20,307,354**.

This is a reasonable assumption since the on-campus enrollment has increased as well as prices of goods and services. The 2009 survey results were discussed in the 2009 Economic Impact Report.

Faculty and Staff Visitors

Faculty and staff spending data were collected as part of a survey conducted by the Docking Institute during the spring of 2009. The survey was administered to all faculty and staff at FHSU. Detailed data were collected on such things as income, expenditures, housing, visitors and employment.

Previous economic impact studies lacked the data to estimate spending for visitors of faculty and staff. Based on the faculty and staff survey in 2009 and the regional two-year inflation rate of 5.7 percent, the faculty and staff visitor expenditures were estimated to be **\$2,483,580**.

University Bookstore and Food Services

The university bookstore reported net salaries of **\$155,000** and local spending of **\$7,000**. Assuming 90 percent of payroll was spent locally, the total local expenditure was **\$146,500**.

Based on the two-year regional inflation rate, the total salaries spent locally and the local expenditures for Chartwells, the university's food service provider, were estimated to be **\$385,805**.

As in the case of university employees, it is assumed that these employees spend 90 percent of their net pay locally.

Note that the two-year regional inflation rate of 5.7 percent is used to estimate the local expenditures of employees of Chartwells, events held at the Memorial Union, and visitors of faculty, staff and students. This inflation rate is based off of the Bureau of Labor Statistic's Consumer

Price Index for communities in the Midwest that do not exceed a population of 50,000, and it represents the price increase of all goods and services consumed by a typical Midwestern household from 2009 to 2011.

FHSU Athletic Association

Total spending by the FHSU Athletic Association was **\$2,437,906**. Of this total, local expenditures were calculated to be 80 percent or **\$1,950,325**.

FHSU Foundation

The FHSU Foundation is a private foundation that supports the university through its fundraising efforts for student scholarships and departmental support money. Foundation spending consists of three areas: employee salaries, operating expenses and expenditures made by the association on behalf of university departments.

Fiscal year 2011 salaries were **\$377,867**, of which it is assumed that 90 percent is spent locally, amounting to **\$340,080**.

Local operating expenses, those expenditures necessary to operate the association, spent locally were **\$134,839**.

Fund expenses and reimbursement payments were **\$260,521**. These expenditures do not include money paid out as scholarships. The total direct expenditure for the FHSU Foundation for FY 2011 was **\$735,440**.

Total FHSU Direct Economic Impact

The total direct impact of spending related to Fort Hays State University upon the local economy is the sum of the spending components previously discussed. A summary is presented in Table 4.

Table 4: Direct Impact Expenditures*

University Operations Expenditures (Excluding Wages and Salaries)	\$ 21,624,713
Faculty and Staff Expenditures	\$ 25,907,857
Student Expenditures	\$ 38,403,486
Student Visitor Expenditures	\$ 20,307,354
Faculty and Staff Visitor Expenditures	\$ 2,483,580
Food Services	\$ 385,805
University Bookstore	\$146,500
Memorial Union Events	\$ 283,618
FHSU Athletic Association	\$ 1,950,325
Special Athletic Events	\$ 4,268,570
FHSU Foundation	\$ 735,440
Total	\$ 116,497,247

*All figures are rounded to nearest dollar.

Indirect and Induced Spending Impacts

For FY 2011, the direct impact of FHSU on the local economy was **\$116,497,247**.

This direct impact produces an indirect impact as local business establishments purchase materials and supplies from other local enterprises to support their sales. The indirect impact is estimated to be 20 percent of the direct impact, or **\$23,299,449**.

The income received by local residents from the initial dollars spent is partially spent within the local economy, thus creating additional sales. This induced impact is estimated to be 60 percent of the direct impact, or **\$69,898,348**.

The total economic impact of Fort Hays State University on Hays and the Ellis County region is **\$209,695,045**.

These impacts are summarized in Table 5.

Table 5: Direct, Indirect, and Induced Impacts*

Direct Impact	\$ 116,497,247
Indirect Impact	\$ 23,299,449
Induced Impact	\$ 69,898,348
Total Economic Impact	\$ 209,695,045

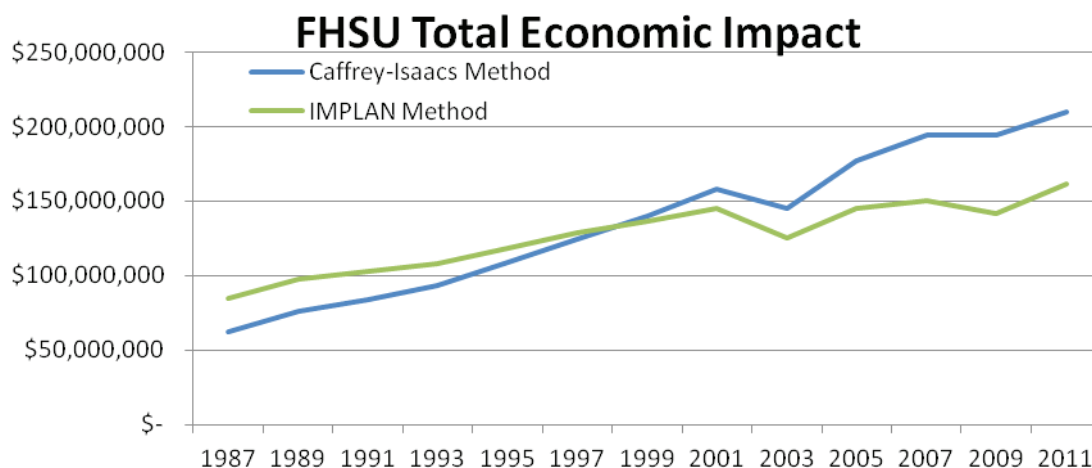
*All figures are rounded to nearest dollar.

Historical Total Economic Impact

Fort Hays State University has had a positive economic impact on Hays and the Ellis County region for many years. Figure 2 below summarizes graphically the economic impact study results since 1987. As the economy has grown, so has the economic impact of FHSU. It is interesting to note that the last two recessions (2001 and 2007-2009) show

similar impact in that the total economic impact of FHSU decreased. The results indicate that the economic impact of FHSU is cyclical with the economy. It is expected that as the economy of the United States recovers from recession, the economic impact of FHSU will also recover and trend upward.

Figure 2: FHSU's Impact on the Local Region



IMPLAN

An alternative methodology to the Caffrey-Isaacs approach, which has been employed in previous economic impact studies of FHSU on the local economy, is the IMPLAN software system. IMPLAN was also utilized to quantify the economic interaction between FHSU and various industries, businesses and other institutions.

Figure 2 illustrates the historical economic impact estimates using the two methodologies. Estimating the economic impact is not an exact science, therefore results may vary. The key difference between these two estimates is the methodology. In the Caffrey-Isaacs estimates, the methodology used was based on several assumptions (as discussed in the earlier part of this report) and an average multiplier. The average multiplier, which has been used for several years, is based on multipliers used at other universities. In the IMPLAN estimates, BEA data are utilized, and the multipliers are based on economic data specific to the region in question, that is, Ellis County, Kansas. With this data, spending patterns can be designated and fairly precise conclusions can be made about the economic impact. The Caffrey-Isaacs estimates are more assumption driven while the IMPLAN estimates are more data driven.

The IMPLAN software and database is a system that produces appropriate multipliers for each county in the state of Kansas to measure the total economic effect of FHSU. IMPLAN total effect multipliers measure changes in output, income, employment and value added for FHSU on the local economy. Data is provided for 528 specific industries corresponding to the Standard Industrial Classifications codes. This data is produced for each county in the state of Kansas in calculating multipliers to assess the economic interaction with FHSU for a specified time period.

IMPLAN builds on a robust set of tools which efficiently models economic impacts. Specific data files are created and utilized, representing a local economy of interest, be it a local community, a county, a state or the nation. The analysis is built on Social Accounting Matrices (SAMS) that describe the structure and function of a specific economy. The SAMS include the business transactions as reported by all business and government agencies for a given year. These include non-market transactions, for example taxes and unemployment benefits, and are thus better measures of economic flow relative to the traditional I-O accounts.

To estimate the impact of a given change in a given region or local economy, Multiplier Models are constructed directly from the SAMS. These Multiplier Models will therefore reflect the unique structure and trade flows of the region or local economy under consideration. The Multiplier

Models estimate the amount as well as the distribution of economic impact. Total effect multipliers can be divided into a direct effect, an indirect effect and an induced effect.

The direct effect is the amount of money that FHSU spends in the local economy; that is, FHSU purchases goods and service from firms located in Ellis County. Those businesses that receive money from FHSU also purchase goods and services and hire people who will spend their wages and salaries in the local economy.

This additional amount of spending by businesses that receive income as a result of FHSU spending is the indirect effect. Employees of FHSU and employees of FHSU vendors also spend a portion of their wages and salaries locally; that is, the induced effect. Essentially, dollars “ripple” through the economy producing this multiplier effect. For example, if the output or spending multiplier is 2, then for every dollar that FHSU spends in Ellis County, an additional \$2.00 of spending is produced in the local economy.

IMPLAN provides additional analysis of total effect multipliers by calculating Type I, Type II and Type SAMS multipliers. Type I multipliers include the direct effect and the indirect effect and measures how well FHSU is integrated with other industries and institutions in the local economy. Type II multipliers add in the induced effect to reflect consumer spending or demand. Type SAMS multipliers include an additional amount to reflect commuting, social security taxes, individual income taxes and savings.

By breaking down the total effect multipliers, the relationship between FHSU and the local economy can be better analyzed. Economic impacts that take place outside of the local economy, referred to as leakages, are excluded from estimating the local economy impacts. These lower the multiplier effect. The local economy characteristics, in particular location and population size, affect the size of the leakage since they influence the decision to purchase locally.

The impact of FHSU direct spending was estimated using Institutional Spending Patterns for State and Local Government, Education sector. All impacts were for 2011. Four categories of impacts were calculated that reflect the contribution of FHSU on the local economy. These are:

- Output – overall contribution to economic activity
- Employment – contribution to the job base due to the presence of the university
- Labor Income – contribution to earnings of workers in the local economy
- Taxes – contribution to local tax collections

The estimates from IMPLAN are summarized in Table 6 below.

Table 6: FHSU Economic Impact: IMPLAN

Impact Type	Output	Employment	Labor Income	Local Taxes
Direct Effect	\$109,710,760	2,008	\$90,415,514	
Indirect Effect	\$1,754,000	14.1	\$609,061	
Induced Effect	\$50,321,235	538.2	\$17,067,845	
Total Effect	\$161,785,995	2,560.5	\$108,092,421	\$6,219,916

For FY 2011, the IMPLAN direct impact of FHSU on the local economy produced an indirect impact estimated at **\$1,754,000**.

The induced effect was estimated to be **\$50,321,235**.

The total IMPLAN estimated economic impact of FHSU on Hays and the Ellis County region is \$161,785,995.

The number of jobs created in the local economy due to the presence of FHSU is associated with employment opportunities at the university and jobs created by business enterprises resulting from university-related expenditures.

The total impact of FHSU in terms of employment was 2,561 jobs in the Hays and Ellis County region. The contribution to wages and salaries of workers in the region was \$108,092,421.

The effect of FHSU upon local tax revenues, and thus their expenditures, was likewise estimated. The following presents a breakdown of the total local tax revenues of **\$6,219,916**:

Personal Tax

Income Tax - \$1,653,250
Non Taxes (Fines-Fees) - \$441,108
Motor Vehicle License - \$93,156
Property Taxes - \$50,104
Other Tax (Fish/Hunt) - \$54,214

Indirect Business Tax

Sales Tax - \$1,507,590
Property Tax - \$1,401,704
Motor Vehicle License - \$30,099
Severance Tax - \$39,537
Other Taxes - \$77,324
Non Taxes - \$156,333

Employee Compensation

Social Insurance Tax
(Employee Contribution) - \$62,550
Social Insurance Tax
(Employer Contribution) - \$155,366

Corporations

Dividends - \$258,862
Corporate Profits Tax - \$238,720

Total Economic Impact

The significant contributions to Hays and the surrounding area are documented throughout this report. This study has used a conservative approach in calculating the various estimates presented; therefore, the actual economic impact of Fort Hays State University is larger than the value of \$209 million estimated in this study.

As in conventional economic impact assessments, the direct spending by FHSU — spending that is funded by both state and non-state sources — and the multiplier effect of this direct spending are major parts of the university's overall economic impact. However, the value of FHSU to the region is much more than the total impact of its direct, indirect and induced spending because of what FHSU actually provides. Specifically, the primary product of FHSU is the large number of job-ready graduates produced each year who make life-long contributions to Kansas and its economy.

Education is a good investment for the state and the local region because of the lifetime earnings increase associated with education. The correlation between earnings and educational achievement is well established. Not only do the students benefit from careers with higher incomes, the area in which the students live benefits from the increased spending resulting from that higher income.

A university education alters the path of people's lives. It helps them fulfill their aspirations to become artists, business and organizational leaders, teachers, health care professionals, and more. A university education is widely recognized as an investment that pays a lifetime of dividends in the form of better jobs and higher incomes.



FORT HAYS STATE UNIVERSITY

Forward thinking. World ready.

OFFICE OF THE PRESIDENT
600 PARK STREET
HAYS, KS 67601-4099
(785) 628-4231

