DOCUMENT RESUME

ED 336 135 JC 910 408

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TITLE The Economic Impact of Johnson County Community College on the Kansas City Metropolitan Area, 1988-89.
INSTITUTION Johnson County Community Coll., Overland Park, Kans.
PUB DATE Apr 91
NOTE 27p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Community Colleges; Cost Effectiveness; Cost Estimates; *Economic Development; Economic Factors; *Economic Impact; *Educational Economics; *Expenditures; *School Community Relationship; Tax Allocation; Two Year Colleges
IDENTIFIERS *Johnson County Community College KS; Kansas (Kansas City); Miss uri (Kansas City)

ABSTRACT

In an effort to estimate the economic impact of Johnson County Community College (JCCC) on the Kansas City Metropolitan Area for 1988-89, the Ryan-New Jersey model was used to examine both direct and indirect economic influences of the college. Direct economic impact was assessed by examining institutional expenditures in the metropolitan area; expenditures of college employees in the area; expenditures of students; and expenditures of campus visitors in the metropolitan area. Indirect impact was assessed through the use of a mathematical multiplier applied to the direct impact indicators to account for additional business volume generated through re-spending of the direct expenditures. Results of the study included the following: (1) estimates of expenditures in the metropolitan area were $12,042,072 for the institution, $6,715,689 for employees, $25,689,160 for students, and $0 for visitors, for a total of $44,446,921 in direct economic impact; (2) application of the mathematical multiplier produced a total spending impact of $100,005,572; (3) in addition to business volume impact, JCCC generated a total of 3,698 full-time jobs in the Kansas City Metropolitan Area; and (4) for every dollar spent by taxpayers in support of JCCC, $3.08 was returned to the area's economy by the institution. A detailed description of the economic impact model utilized; a glossary of terms; a review of all data sources; the data calculation worksheet; flow charts; and the actual data are included. (PAA)

The Economic Impact of Johnson County Community College on the Kansas City Metropolitan Area 1988-1989

Jeff Seybert

A report prepared by the JCCC Office of Institutional Research in cooperation with the Kansas City Regional Council for Higher Education
April 1991

THE ECONOMIC IMPACT OF JOHNSON COUNTY COMMUNITY COLLEGE ON THE KANSAS CITY METROPOLITAN AREA 1988-1989

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PREFACE

Economic impact studies are, by their nature, rather complex and somewhat theoretical. This report summarizes in non-technical terms the results of a study of the economics impact of Johnson County Community College. Nonetheless, the report contains sufficient detail to document the methodology and results of the study should these be of interest. The report is divided into two major sections:

1. **Executive Summary:** provides the context for the study, describes the methodology used and discusses the major findings.
2. **Technical Report:** provides greater detail regarding methodology including definitions of terms, the data collection form, calculation worksheet, and the actual data.

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ACKNOWLEDGEMENTS

This study was a component of a larger project designed to estimate the economic impact of higher education institutions on the Kansas City Metropolitan area. That project was the initiative of Kansas City Regional Council for Higher Education (KCRCHE) Institutional Research Directors' Group. Without their sponsorship and leadership, it could not have been completed. Also, the support and encouragement of the KCRCHE Board of Directors; the KCRCHE president, Dr. Larry Rose; and vice president, Dr. Russ Wilson were greatly appreciated.

Finally, the project was made possible by the Johnson County Community College Board of Trustees and president, Dr. Charles Carlsen, who granted a sabbatical leave to Dr. Jeff Seybert, project director, so that the study could be conducted.

INTRODUCTION

In addition to providing educational benefits, colleges and universities also provide major economic benefits to their communities. Some of these benefits are significant but impossible to measure--for instance, it is nearly impossible to place a dollar value on the economic benefit derived from having a trained and educated workforce available for local businesses, or the value of the drawing power and contribution to a community's economic development resulting from the existence of a college or university in the community. Nonetheless, many of the economic benefits provided by colleges and universities to the local community are tangible, and their value is possible to estimate.

It was the purpose of this study to estimate the tangible, positive economic benefits, or impact, that Johnson County Community College has on its local economy, specifically in the Kansas City metropolitan area.

Since the early 1970's, numerous studies have been conducted to estimate the economic impact that institutions of higher education have on the communities in which they are located. Several models have been developed to conduct such studies, but most are related to the economic impact model developed by Caffrey and Isaacs in 1971 under the sponsorship of the American Council on Education (ACE).

The Caffrey and Isaacs model has been widely accepted and used in economic impact studies in both four-year colleges and universities as well as community colleges. However, it has several shortcomings in terms of estimating the economic impact of the wide range of postsecondary institutions. For example, Caffrey and Isaacs assert that part-time students have relatively little economic impact. It is widely known, however, that part-time students usually constitute a significant portion of headcount enrollment in most urban/suburban institutions and thus they play a significant role in the economic impact of those colleges and universities. In addition, much of the data in the Caffrey and Isaacs model is collected via surveys of faculty and students. Such surveys have notoriously low response rates. For example Elliott, Levin and Meisel (1988) report response rates of 28.0% to 47.9% using the Caffrey and Isaacs approach. The reliability and validity of estimates based on such low response rates is obviously questionable.

For these reasons Ryan (1983) developed a derivative version of the Caffrey and Isaacs model which was implemented in a statewide study of the community colleges in New Jersey. This Ryan-New Jersey model has subsequently been used to determine the economic impact of the community colleges in several other states. Thus, the Ryan-New Jersey model, modified to be more directly applicable to urban/suburban colleges and universities, was chosen for use in determining the economic impact of Johnson County Community College on the Kansas City metropolitan area because it employs a more efficient methodology through collection of a standard set of data readily available from a variety of reliable, public sources.

METHODOLOGY

The model used in this study includes four major components of the estimated direct economic impact of a postsecondary institution on the metropolitan area in which it is located:

1. direct institutional expenditures in the metropolitan area
2. direct expenditures of college/university employees in the metrcpolitan area
3. direct expenditures of students in the metropolitan area
4. direct expenditures of campus visitors in the metropolitan area

In addition to the direct economic impact of these expenditures, the model assumes that the indirect economic impact resulting from the additional business volume generated by these direct expenditures can be estimated by a multiplier that depends upon the size of the geographical area of interest--in this case, the metropolitan area. So the basic formula of the model used in this study is as follows:

Total metropolitan area expenditures
by the institution

PLUS

Total metropolitan area expenditures
by employees

PLUS

Total metropolitan area expenditures
by students

PLUS

Total metropolitan area expenditures
by campus visitors

TIMES

A multiplier (2.25 for the metropolitan area)
to account for additional business volume generated

EQUALS

TOTAL ECONOMIC IMPACT

In addition, the model also allows calculation of the number of full-time jobs which can be attributed to the economic activity generated by the college or university.

Figure 1 depicts the major components of this model.

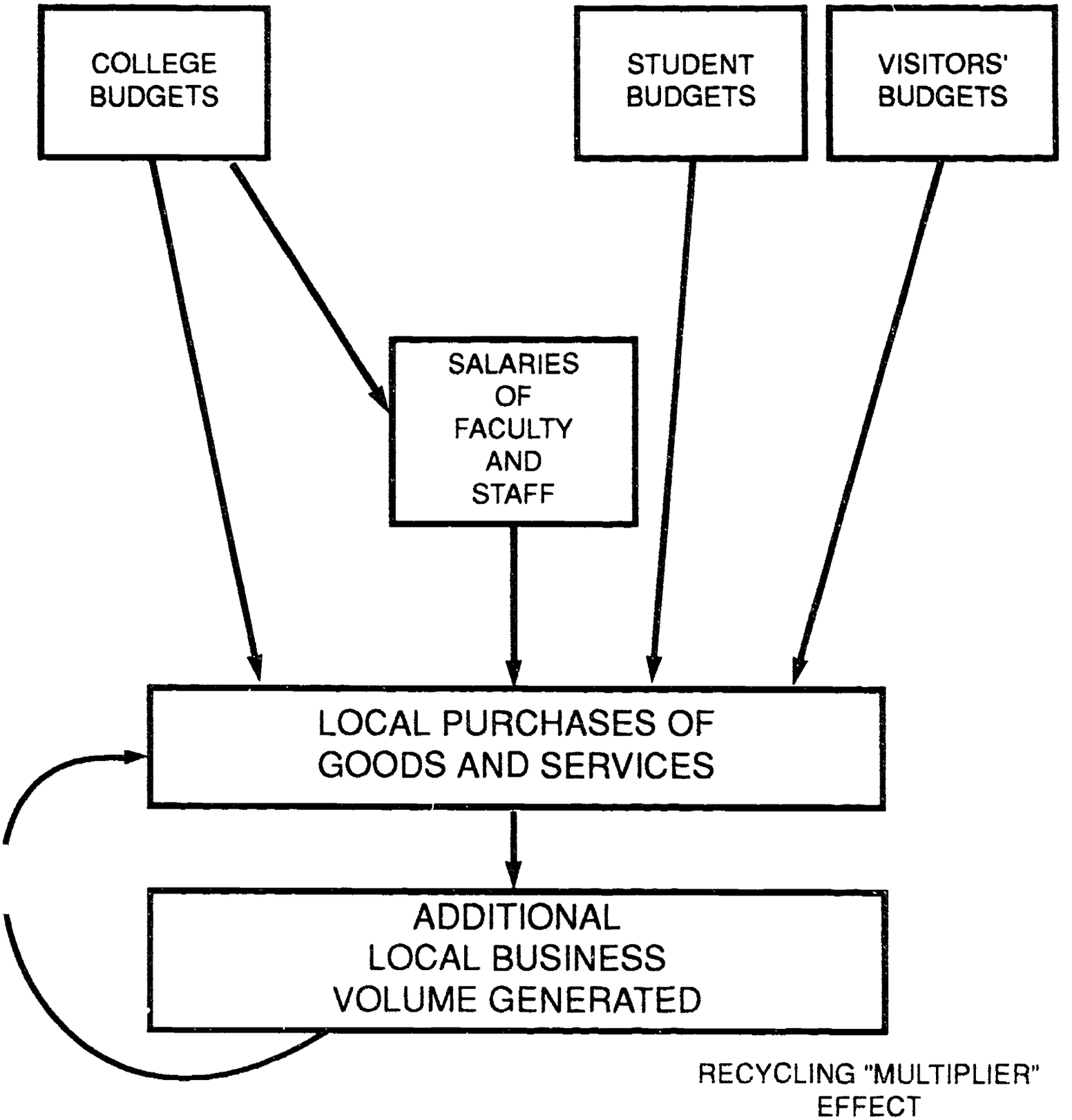

FIGURE 1. BASIC COMPONENTS OF AN ECONOMIC IMPACT MODEL

The Multiplier

The multiplier is an indispensable feature of all economic impact models. It is used to estimate the indirect business volume that is generated as a result of direct expenditures made into the economy of a specified geographical area. It is a key concept because its effect may constitute fifty percent or more of the total economic impact calculated by such models.

The following scenario explains the concept of the multiplier. For each dollar of initial spending in the metropolitan area's economy, approximately $.70 is respent within the metropolitan area by businesses and individuals for goods and services from other metropolitan area businesses and individuals. The balance is removed from the economy by taxes, savings, and spending for goods and services originating from outside the metropolitan area. But this is only the first round of transactions. The income accruing to metropolitan area residents from this round of transactions is partially respent within the metropolitan area's economy. Again, some is saved, paid out in taxes, and spent outside the metropolitan area; but on the average, $.35 remains in the metropolitan area's economy. This recycling process continues with diminishing increments at each cycle. Eventually, the ratio of total spending to initial, direct expenditures can be estimated to be approximately 2.25 to 1.0.

Thus, the multiplier represents the percent of each dollar spent in the local business economy which is then respent within the business community in successive rounds of spending.

Other economic impact studies concerned with geographical areas the size of counties use multipliers ranging from 1.9 to 3.0. Similarly, studies with areas the size of states use multipliers which range up to 4.0. Since this study employed a seven-county definition of the Kansas City metropolitan area (Johnson, Wyandotte, and Leavenworth counties in Kansas; and Jackson, Clay, Platte, and Cass counties in Missouri) the size of the geographic area of interest lies between that of a county and a state. Thus, this study used a relatively conservative multiplier of 2.25.

Figure 2 provides a graphic representation of the recycling process that forms the basis for the concept of the multiplier

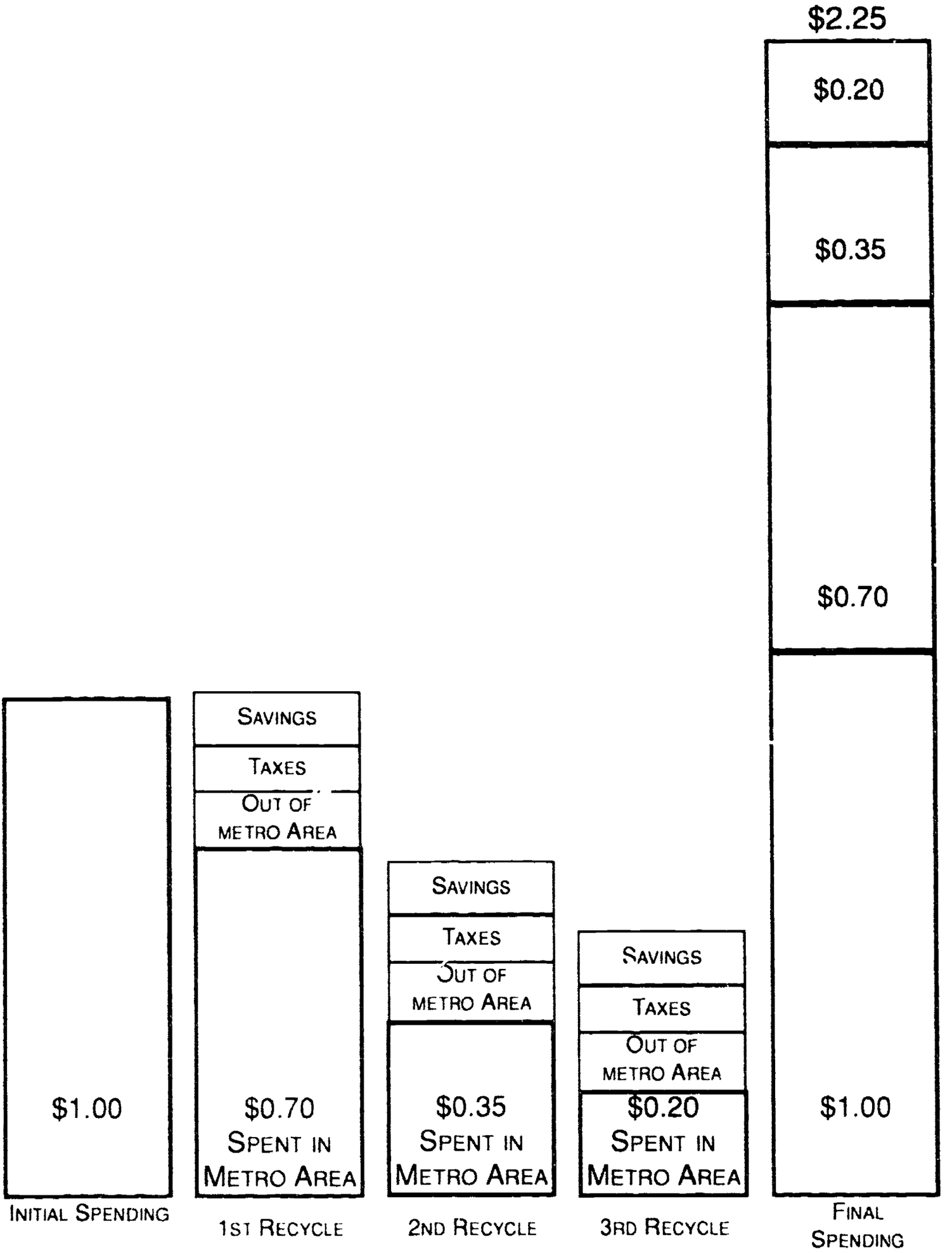

FIGURE 2. HOW THE MULTIPLIER WORKS

Conservative Nature of the Study

In addition to the choice of a conservative multiplier, this particular study, and the Ryan-New Jersey model in general, was constructed in such a way as to guarantee a very conservative estimate of the economic impact of Johnson County Community College.

Specifically, the model used in this study estimates only five major components of an institution's tangible economic impact: the economic impact of the direct expenditures of the institution, the direct expenditures of employees, the direct expenditures of college students, the direct expenditures of campus visitors, and the indirect business volume generated by these expenditures.

This model does not attempt to measure the economic impact of lesser but significant components, such as the expansion of local banks' credit base by college/university-related deposits, increases in sales and property taxes collected by local governments due to college/university-related expenditures, employee's investments in local property, and numerous other tangible but difficult to measure impacts. Thus the estimates made by this study were by their nature quite conservative.

Estimates of economic impacts made in this study were also conservative in that in all cases where a choice among equally justifiable alternatives was required, the most conservative estimate was made.

In addition, full-time student expenditures were estimated using the most conservative figures available (the federal financial aid guidelines for a dependent student living at home) for all students, while part-time student expenditures were estimated including only those for books and supplies and transportation to and from classes.

Thus, both the nature of the model and the inclinations of the researchers assured that estimates made of the tangible economic impact of Johnson County Community College on the Kansas City metropolitan area were quite conservative.

MAJOR FINDINGS

Tangible Economic Impact

The economic impact of Johnson County Community College on the economy of the Kansas City metropolitan area in 1988-89 was estimated to be:

▪ Institutional Expenditures	$ 12,042,072
▪ Employees' Expenditures	$ 6,715,689
▪ Students' Expenditures	$ 25,689,160
▪ Visitors' Expenditures	$ 0
▪ Total Direct Economic Impact	$ 44,446,921

More than 44 million dollars of the metropolitan area's economy was a direct result of spending by Johnson County Community College, its students, and employees.

This total spending was recycled through the metropolitan area's economy in several rounds of spending. This multiplier effect produces:

- Total Tangible Economic Impact $ 100,005,572

In other words, a business volume of more than 100 million dollars was generated in the Kansas City metropolitan area by the expenditures of Johnson County Community College, its students, and employees.

These findings are also shown in Figure 3.

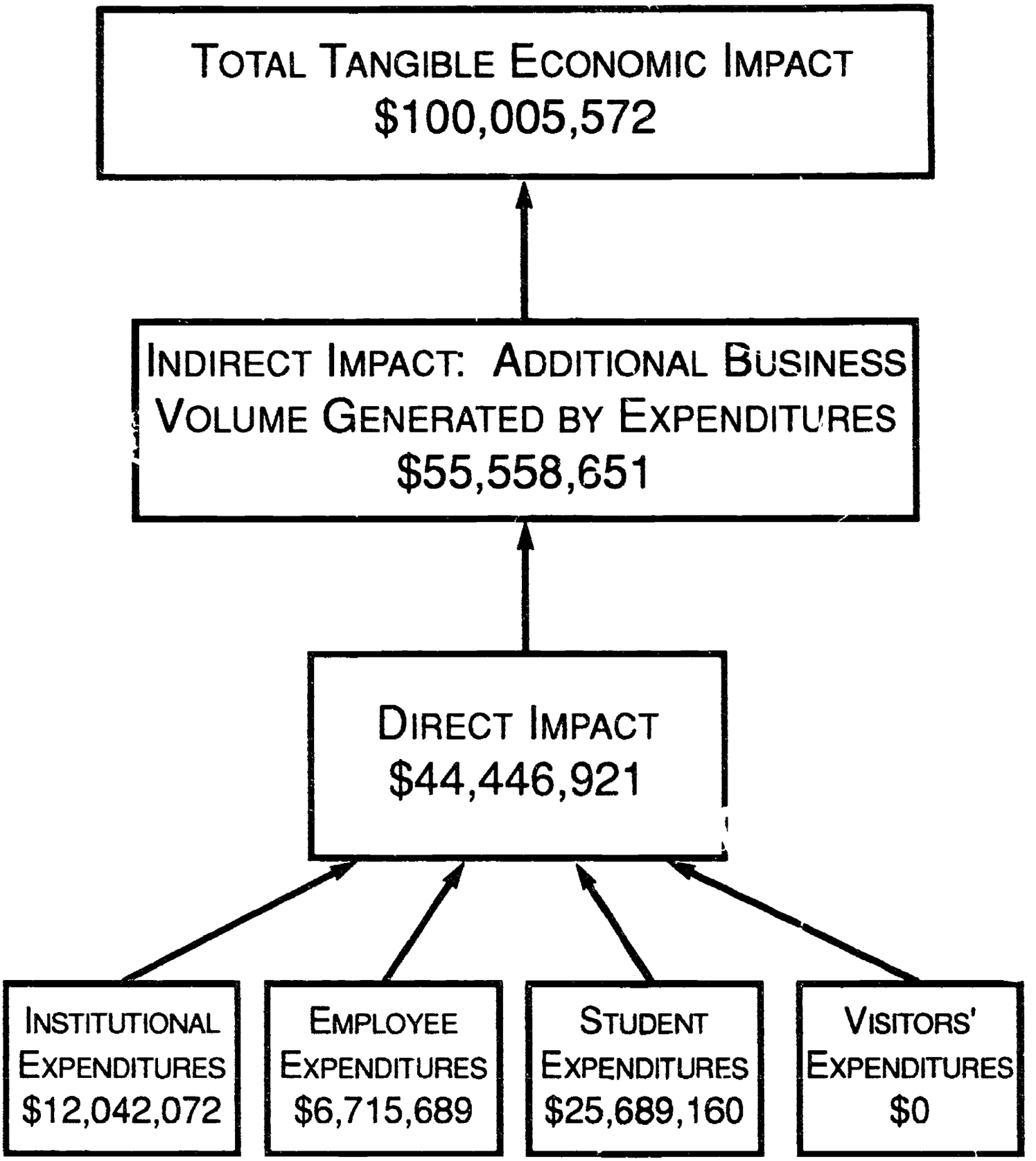

FIGURE 3. TOTAL TANGIBLE ECONOMIC IMPACT OF JOHNSON COUNTY COMMUNITY COLLEGE ON THE KANSAS CITY METRO AREA.

Full-Time Jobs Related to Johnson County Community College

In addition to the business volume it generates, Johnson County Community College also contributes a significant number of full-time jobs to the Kansas City metropolitan area economy.

- Full-time Employees 587
- Full-time Jobs Related to JCCC 3,111
- Total Full-time Employment 3,698

Thus, Johnson County Community College and its associated business volume generated 3,698 full-time jobs in the Kansas City metropolitan area.

Return on Taxpayer Investment

Johnson County Community College received $32,502,608 in state and local support in 1988-1989. The ratio of Johnson County Community College's total tangible economic impact to taxpayer support is thus:

$100,005,572 / $32,502,608 = 3.08 to 1.0.

In other words, for every dollar spent by taxpayers in support of Johnson County Community College, $3.08 was returned to the Kansas City metropolitan area's economy.

SUMMARY

This report has presented, in a simplified fashion, the results and methodology of the study of the economic impact of Johnson County Community College on the Kansas City metropolitan area. Readers interested in greater detail regarding the methodology of the study, the actual data points and calculations used to derive the results, or in specific bibliographic references are referred to "Technical Report" which follows.

TECHNICAL REPORT

INTRODUCTION

The purpose of this Technical Report is to provide additional detail, definitions, the actual data collected, and the calculation worksheet used to determine the economic impact of Johnson County Community College on the Kansas City metropolitan area. It thus serves to elaborate and provide technical documentation for the Executive Summary of that economic impact study. This Technical Report was designed to be read and used in conjunction with that Executive Summary and will be much more informative and useful when accompanied by it.

METHODOLOGY

The Economic Impact Model

The economic impact model used in this study was a modified version of the model adapted by Ryan, after an exhaustive review of previous economic impact studies, and implemented in New Jersey in 1983. It is different from previous models in that it greatly reduces the complexity of the sub-models and simplifies the data collection process. Thus, it is well-suited for use in urban/suburban colleges and universities. Ryan has also demonstrated that results derived using this simplified model are comparable to those derived using the more generic Caffrey and Isaacs model, the acknowledged parent of economic impact models for institutions of higher education, and its various adaptations.

The simplification of more complex models that characterizes the Ryan-New Jersey model used in this study is accomplished primarily by using existing data from federal, state, and local sources to substitute for surveys of college employees and students and to replace the extremely complex "retail gravity model" that is commonly used to estimate the percentage of expenditures made by employees or students in a specified geographical area.

For instance, rather than surveying college/university employees to determine how many rented their residents, how much they spent on non-housing items, and how much they spent on non-housing items in the county of their residence, existing data sources were used. For example, average annual Kansas City metropolitan area rent was obtained from the Mid-America Regional Council (MARC) Research Data Center (from the "1986 Annual Housing Survey for the Kansas City Area" published by the U.S. Department of Commerce, Bureau of the Census and the U.S. Department of Housing and Urban Development). The percentage of employees who rented was assumed to be the same as the county average, and this average was available from the same source. The percentage of disposable income that employees spent on non-housing items was also assumed to be representative of the metropolitan area and was obtained from the "Consumer Expenditure Interview Survey" Midwest Region, Fourth Quarter, 1987, published by the U.S. Department of Labor, Bureau of Labor Statistics.

Other examples and explanations of the data used in this study are contained in the following section on "Definitions". In addition, the completed data survey form and economic impact worksheets used to collect the relevant data and calculate Johnson County Community College's economic impact are included as sections of this Report.

Definitions

Critical to the consistent application of the model were definitions of key terms. The survey instrument defined the data to be collected, including the sources for them. The following are explanations of the general components of the model:

Direct Expenditures of the Institution: This included all of the expenditures the institution made to businesses and other contractors for such items as supplies, utilities, materials, equipment, building projects, services and numerous other items, excluding payments made to employees and for taxes. The location of these expenditures was determined by the address of each vendor.

Direct Expenditures of Employees: This component of the model was determined by calculating the total disposable income of employees by summing all payments made by the institution to them, excluding taxes withheld and mandatory retirement deductions. Then, the percentage of this total disposable income employees spent on non-housing items in the metropolitan area was calculated for those who were residents of the metropolitan area. To this was added the metropolitan area expenditures of non-resident, full-time employees of the institution--estimated at a very conservative constant of $1,000 per year. Finally, the housing rental expenditures of resident, full-time employees were calculated and added to the total.

Payments by full-time employees for home mortgages and related interest and taxes were considered investments and not included in the calculations of employees' expenditures. Also, expenditures of part-time employees who were not residents of the metropolitan area were excluded from the figure and only a token amount was included for the expenditures of non-resident, full-time employees. As a result, this calculation provided a very conservative estimate of the expenditures of employees, and only considered those that were derived from salaries actually paid by the institution.

Direct Expenditures of Students: Student expenditures were estimated for only those activities related to their attendance at the institution, excluding payments made for tuition and fees.

For full-time students (12 credit hours or more), who were assumed to reside in the metropolitan area because they were students, these expenditures included those for books, education-related supplies, transportation and a living allowance for room and board. Rather than depending upon surveys of students to determine average expenditure for these items, the most conservative figures available, the federal financial aid guidelines for a full-time student living at home as a dependent of his or her parents, were used. These guidelines are developed and approved for each institution disbursing federal financial aid monies

For part-time students (enrolled less than 12 credit hours), only those costs for books, education-related supplies and transportation to and from classes were included as education-related expenditures.

Direct Expenditures of Campus Visitors: Visitor expenditures were defined as expenditures for lodging, meals, and incidentals by visitors from outside the Kansas City metropolitan area who visited the campus for sporting events, cultural events, as visiting faculty, continuing education students, job applicants, commencement visitors, or hospital visitors. These figures were obtained from actual records or derived using the average expenditures of out-of-area visitors supplied by the Kansas City Convention and Visitors Bureau.

Full-time Jobs Related to Institutional Spending

Johnson County Community College directly employed 587 individuals in full-time positions during fiscal 1988-89. In addition to these jobs, direct institution-related expenditures, and the additional indirect business volume generated by those expenditures in the economy created additional employment. Economists estimate that .00007 full-time jobs are created for each dollar added directly to an economy (Caffrey & Isaacs, 1971). Spending related to Johnson County Community College, then, generated an additional 3,111 full-time jobs in the Kansas City metropolitan area.

The total number of full-time jobs in the Kansas City metropolitan area that can be attributed to Johnson County Community College is the sum of the actual number of full-time positions and the number generated by expenditures of the institution, its employees, and its students. Thus, Johnson County Community College generated 3,698 full-time jobs in the Kansas City metropolitan area in 1988-89.

KCRCHE ECONOMIC IMPACT STUDY SURVEY:

DATA REQUIREMENTS

The following information is required in order to calculate the economic impact of a college or university of the Kansas City Metropolitan Area.

Information Required	Directions/Source of Information
1. Institutional expenditures $21,934,558	Includes total institutional expenditures for the fiscal year ending June 30, 1989, (or other date in 1989 as appropriate)--including student activities expenditures, contracted services, building projects, etc.--but excludes the following: a. all salaries paid to employees b. all internal transfers (that are not then expended externally) c. all taxes Source: Use 1988-89 fiscal year audit or Fiscal Year 1989 IPEDS Financial Report, line for "total current fund operating expenditures and mandatory transfers", minus exclusions listed above, and add expenditures for building projects, capital, etc. [Add lines B22(3) + G03 + G05 + M03 + M04 from IPEDS F1, pages 2, 4, & 6 respectively.] All institutions should also add expenditures by college/ university foundations and endowment offices/associations if not reflected in the above total. [K.U. Medical Center should also add Affiliated Research Expenditures and Physicians Corporations/ Endowment Association Expenditures.]

Information Required	Directions/Source of information
2. Percentage of institutional expenditures spent--	There are two methods of deriving this information from institutional business records:
a. in the Kansas City Metropolitan Area: 54.9%	a. calculate actual total expenditures in the metropolitan area for fiscal year 1988-89. b. examine three months of activity (in three different quarters) to determine average percentage spent in the metropolitan area. Identify expenditures by addresses of vendors.
3. Number of employees--	Use end of 1988 calendar payroll records, W-2 submissions, or 1988-89 annual budget and data to determine all college employees during 1988 or fall semester, 1988. (Include both full- and part-time student employees.)
a. full-time: 535 b. part-time: 1,169 c. TOTAL: 1,756	
4. Employees who live in the metropolitan area--	Use address information on payroll records or in institutional directory. If data on part-time employees are not available, assume the same percentage of part-time employees live in the metropolitan area as do full-time employees.
a. full-time: 535 b. part-time: 1,071 c. TOTAL: 1,606	
5. Total disposable income available to employees--	Use end of 1988 calendar year payroll records/W-2 forms to determine total money paid directly to all employees, including payments/deductions for employee paid fringe benefits (i.e., health insurance voluntary annuities, credit union deductions, etc.) but excluding all taxes withheld (i.e., city, state, federal, social security) and all mandatory retirement deductions.
$15,072,215	K.U. Medical Center should add income of Physician Corporations staff.

Information Required	Directions/Source of Information
6. Number of students-- a. full-time: 3,161 b. part-time: 8,003 c. TOTAL: 11,164	Use total headcount enrollment figures for the official census day of the fall, 1988 semester. This should be available on IPEDS forms, state reports and/or internal audits. Identify both full-time and part-time students defined as follows: a. full-time students--enrolled in 12 or more credit hours b. part-time students enrolled for less than 12 credit hours a. full-time: [Add lines 05 (13) and 05 (14) on IPEDS EF2, Part A, page 1 (four-year) or Lines 08 (15) and 08 (16) on IPEDS EF2, Part A, page 1 (two-year)] b. part-time: [Add lines 10 (13) and 10 (14) on IPEDS EF2, Part A, page 1 (four-year) or lines 22 (15) and 22 (16) on IPEDS EF2, Part A, page 1 (two-year)] c. TOTAL: Add a & b above
7. Number of students who live in on-campus housing (i.e., dormitories, etc.) $ 0	Use housing records for the fall semester, 1988 to determine the total, unduplicated number of students who resided in on-campus housing during the fall semester.
8. Average annual room and board expenditure for students who live in on-campus housing (i.e., dormitories, etc.) $ 0	Use on-campus housing records as in #7.
9. Average annual room and board expenditures for full time students who do not live in on-campus housing $ 3,330	Part D, Line 9.C. on IPEDS IC1, page 6 (four-year) or Part D, Line 8.C., on IPEDS IC2, page 5 (two-year).

Information Required	Directions/Source of Information
10. Average annual non-housing education-related expenditures by full-time students $ 2,455	Add lines 9.A., 9.B., and 9.D. on IPEDS IC1, Part D, page 6 (four-year) or add lines 8.A., 8.B., and 8.D. on IPEDS IC2, Part D, page 5 (two-year) (i.e., books, transportation, and miscellaneous expenses).
11. Average annual non-housing education-related expenditures by part-time students $ 925	Add lines 9.A. and 9.B. on IPEDS IC1, Part D, page 6 (four-year) or add lines 8.A. and 8.B. on IPEDS IC2, Part D, page 5 (two-year) (i.e., books and transportation).
12. Visitors' expenditures $ 0	Include expenditures for lodging, meals, and incidentals by visitors from outside the Kansas City metropolitan area. Such individuals might visit for sporting events, cultural events, be visiting faculty, continuing education students, job applicants, commencement visitors, or (for K.U. Medical Center) hospital visitors.
13. Total local taxes received (city, county, etc.) $25,843,282	Available from institutional records and/or state department of education.
14. Total state taxes received $6,659,326	Same as #13.

KCRCHE ECONOMIC IMPACT STUDY WORKSHEET

Johnson County Community College

	DATA ELEMENT	SOURCE/ FORMULA	
1.	Total institutional expenditures	SQ#1	$ 21,934,558
2.	% expenditures in metropolitan area	SQ#2a	54.90%
3.	TOTAL INSTITUTIONAL EXPENDITURES IN METROPOLITAN AREA	R1xR2	$ 12,042,072
4.	Employees' total disposable income	SQ#5	$ 15,072,215
5.	Total institutional employees	SQ#3c	1,756
6.	Total institutional employees in metropolitan area	SQ#4c	1,606
7.	% employees in metropolitan area	R6/R5	91.46%
8.	% non-housing expenditures for metropolitan area	See Note 1	75.85%
9.	% of residents' expenditures in metropolitan area	See Note 2	56.32%
10.	Employee's non-housing expenditures in metropolitan area	R4xR7xR8xR9	$ 5,888,796
11.	Total full-time employees	SQ#3a	587
12.	Full-time employees in metropolitan area	SQ#4a	535
13.	Non-housing expenditures of full-time, out-of-metropolitan area employees	(R11-R12)x1,000	52,000
14.	% metropolitan area residents who rent	See Note 3	32.71%
15.	Average annual metropolitan area rent	See Note 3	$ 4,428
16.	Rental expenditures of full-time employees in metropolitan area	R12xR14xR15	$ 774,893
17.	TOTAL EMPLOYEES' EXPENDITURES IN METROPOLITAN AREA	R10+R13+R16	$ 6,715,689
18.	Number of full-time students	SQ#6	3,161
19.	Number of part-time students	SQ#6b	8,003
20.	Number of students in on-campus housing	SQ#7	0

	DATA ELEMENT	SOURCE/ FORMULA	
21.	Average annual room & board expenses in on-campus housing	SQ#8	$ 0
22.	Annual room & board expenditures for all students in on-campus housing	R20xR21	$ 0
23.	Average annual room & board expenses for full-time students who do not live in on-campus housing	SQ#9	$ 3,330
24.	Number of full-time students who do not live in on-campus housing	R18-R20	3,161
25.	Annual room & board expenditures for all full-time students not living in on-campus housing	R23xR24	$ 10,526,130
26.	Average annual non-housing, education-related expenditures for full-time students	SQ#10	$ 2,455
27.	Average annual non-housing, education-related expenditures for part-time students	SQ#11	$ 925
28.	Total non-housing, education-related expenditures for full-time students	R18xR26	$ 7,760,255
29.	Total non-housing, education-related expenditures for part-time students	R19xR27	$ 7,402,775
30.	TOTAL STUDENTS' EXPENDITURES	R22+R25+R28+R29	**$ 25,689,160**
31.	TOTAL VISITORS' EXPENDITURES	SQ#12	**$ 0**
32.	TOTAL DIRECT ECONOMIC IMPACT ON METROPOLITAN AREA	R3+R17+R30+R31	**$ 44,446,921**
33.	TOTAL ECONOMIC IMPACT ON METROPOLITAN AREA	R32x2.25	**$100,005,572**
34.	TOTAL INDIRECT ECONOMIC IMPACT ON METROPOLITAN AREA	R33-R32	**$ 55,558,651**
35.	FULL-TIME JOBS RELATED TO JCCC IN METROPOLITAN AREA	R32x.00007	**3,111**
36.	TOTAL FULL-TIME EMPLOYMENT RELATED TO JCCC IN METROPOLITAN AREA	R11+R35	**3,698**
37.	Total local taxes received	SQ#13	$ 25,843,282
38.	Total state taxes received	SQ#14	$ 6,659,326

DATA ELEMENT	SOURCE/ FORMULA	
39. Total taxpayer investment	R37+R38	$ 32,502,608
40. RETURN ON TAXPAYER INVESTMENT	R33/R39	3.08

NOTES

SQ = Survey Question
R = Response (Data Element) on this worksheet.

1. "Consumer Expenditure Interview Survey" Midwest Region, Fourth Quarter, 1987, published August 1989, by the U. S. Department of Labor, Bureau of Labor Statistics.

2. Calculated as the ratio of retail sales to effective buying income in 1988. Source data from the Johnson County Economic Research Institute Economic Data Base File.

3. 1986 Annual Housing Survey for the Kansas City Area", published by the U. S. Department of Commerce, Bureau of the Census and the U. S. Department of Housing and Urban Development.

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