

The Economic Impact of A State University on the Local Community; The Case of The University of Tennessee

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Introduction

There is a tendency that the relationships between the university and the surrounding community have not been fully understood as they ought to be. To the community, the university may be a source of pride, entertainment, low-cost labor, and revenue. But the university may also be regarded as a source of expense. It occupies tax-exempt property and land; it benefits from such tax-supported services as fire and police protection; some of its operations may compete with local business.⁽¹⁾

The purpose of this paper is to examine the mutuality of interests between the university and the local community and to evaluate whether it contributes to the prosperity of the surrounding community to have a university in its midst. This paper attempts to measure, at the empirical level, the economic benefits which

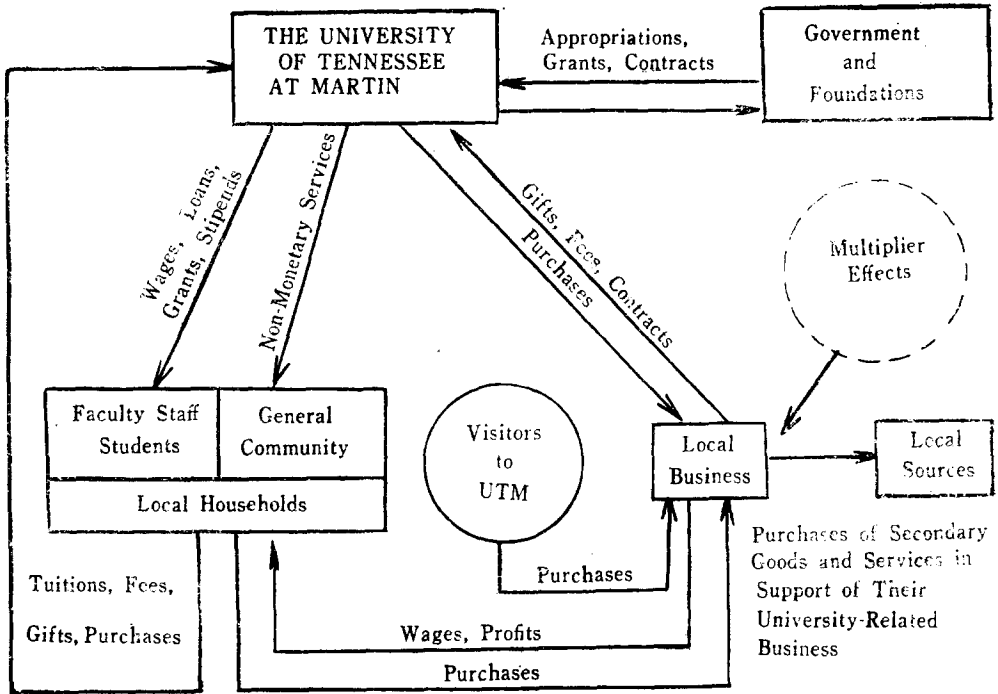
accrue to the local area as a result of university outflow of funds. It is also hoped that the contents of this paper may constitute a meaningful guide for authorities interested in finding out whether there should be more or less local and state funding and taxation.

The City of Martin, Weakley and Obion Counties in Tennessee, and the City of Fulton in Kentucky are the main subjects of the present study. The University of Tennessee at Martin (UTM), founded just over 70 years ago, is a state-supported university and is situated in Northwest Tennessee. Its cash budget for the 1976-77 fiscal year was over \$ 13.6 million. The University's physical assets are valued over \$ 38 million. State appropriations budget for the 1976-77 fiscal year accounted for 52.2 percent of the total operating funds available

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(1) John Caffrey and Herbert Isaacs, *Estimating the Impact of a College or University on the Local Economy* Washington, D.C., American Council of Education, 1972), p. 3.

Exhibit I.
A Cash Flow Model



Source: Adapted from John Gaffrey and Herbert H. Isaacs, *Estimating the Impact of a College or University on the Local Economy* (American Council of Education, Washington, D.C., 1971), p.7.

to the University, while tuition and fees accounted for only 20 percent during the same fiscal year. The University employs more than 900 persons, and its student enrollment is some 6,000 per quarter.

UTM is the largest employer and the largest property holder in the City of Martin. Students, faculty, and staff are a large consumer class whose demand for goods and services has been a factor in the location and development of the retail, housing, and transportation patterns of the local area. The University, an important source of new technology and skilled professional

labor for the local business, has also probably influenced the location of industrial firms in the community.⁽²⁾ With these considerations, this paper examines the measurable effect of UTM's transactions on the economic base of the community.

Methodology

The methodology employed in this study is basically similar to the models developed by John Caffrey and Herbert H. Isaacs, *Estimating the Impact of a College or University on the*

(2) Craig L. Moore and Sidey C. Sufrin, "Syracuse University: The Impact of a Nonprofit Institution on Regional Income," *Growth and Change* (January, 1974), p.36.

Table I. Total Budget and Total Local Expenditures of UTM (Excluding Wages and Salaries), 1975-76

UTM	Total Budget	Total Local Expenditures	Percent
Appropriation	\$ 4, 813, 126	\$ 1, 470, 200	30. 6
Restricted Fund	905, 294	271, 500	30. 0
Capital Outlay Fund	4, 700, 000*	470, 000	10. 0
Total	\$ 10, 418, 420	\$ 2, 211, 700	21. 2

* Approximation

Source: Office of Business Affairs and Office of the Vice Chancellor for Academic Affairs, The University of Tennessee at Martin.

Table II. 1975-76 Actual Operating Expenditures (Appropriations Only), Excluding Wages and Salaries

Account	Operating Expenditures	Local Expenditures	Percent
Instruction	\$ 525, 053. 42	\$ 105, 800. 00	20. 2
Public Service	(6, 701. 26)*	—	—
Academic Support	320, 898. 75	23, 350. 00	7. 2
Institutional Support	116, 654. 65	48, 700. 00	41. 8
Student Services	619, 953. 97	110, 400. 00	17. 8
Operation and Maintenance	437, 465. 23	431, 900. 00	99. 0
Scholarships	90, 263. 40	—0—	—0—
Staff Benefits	707, 097. 33	—0—	—0—
Auxiliary Enterprises	1, 981, 980. 53	750, 050. 00	38. 0
Other	(38, 982. 78)*	—	—
Total	\$ 4, 813, 126. 73	\$ 1, 470, 200. 00	30. 6

* The figure in parenthesis indicates the amount of surplus in its account.

Source: Office of Business Affairs and Office of the Vice Chancellor for Academic Affairs, The University of Tennessee at Martin.

Local Economy (American Council of Education, Washington, D.C., 1971). While the present model lacks the sophistication of the Caffrey-Issacs procedures, Exhibit I shows the general framework of this study under which the basic questions will be answered. The cash-flow model shows the source of funds in a different form and the outflow of funds for goods and services. The outflow of funds includes payments to the faculty, staff, and students. This constitutes the largest portion of the operating cash outflow from the University. The general community includes all local areas receiving services of the

faculty or staff which do not result in direct payments to the University.

During the month of April, 1977, a questionnaire was mailed to all UTM's faculty and staff and 600 undergraduate and graduate students. A random sample of those 600 students was selected following generally accepted statistical procedures. Another questionnaire was mailed to all student organizations on the campus. Of the returned questionnaires, 38.7 percent were usable. The local expenditures of UTM, other than wages and salaries, were obtained through interviews with staff officers, deans, and department

chairmen.

Economic Impact

Table I shows that \$4,813,126 (rounded to the nearest dollar) was appropriated for UTM's operating expenditures involving items other than wages and salaries. Of this sum, \$1,470,200, or 30.6 percent, was spent locally during the 1975-76 fiscal year. Table II itemizes these appropriation expenditures by account. Restricted funds in Table I constitute scholarships restricted to people from a certain area, in a specified field of study, or in a low-income level. Grants from governmental units are also restricted for the purpose outlined in the proposal. Of the \$905,294 used for specific projects, \$271,500, or 30 percent, of the total was spent locally. Capital outlay, i.e., investment spending for buildings, equipment, etc., amounted to approximately \$4,700,000. Some 10 percent of this amount was spent locally. Thus, the total amount of local expenditures of UTM was estimated as \$2,211,700 during the fiscal year 1975-76.

If a faculty member whose primary duty is teaching, research, and public service is employed at the University, there is a strong possibility that his or her spouse may also be employed in the local area. The same holds true of staff personnel as well as students. The income

earned by his or her spouse must be considered as the revenue created due to the fact that the University exists in the local community and a family member is associated with the University. In this sense, the word "household income" is used in this discussion inasmuch as income of single persons is also included. As shown in Table III, the household income of all faculty, staff, and students in the calendar year of 1976 totaled \$38,196,900, of which \$11,335,000, or 29.7 percent, of the total income was spent locally. It is interesting to note that a larger percent of the income of the staff was spent locally compared to the faculty and students.

Table IV examines in more detail the expenditures of faculty, staff, and students. In the spring of 1977, some 300 faculty reported an average household income of \$17,231. An average of \$550 per month was spent locally by each faculty family with a total annual local expenditure of \$1,980,000. Married faculty doubled their spending in comparison to single faculty members. A few faculty lived outside the area under consideration in this study but, nevertheless, spent some funds locally. The 446 staff members reporting in the spring of 1977 had an average household income of \$14,154. These individuals averaged spending \$540 per month, or \$2,890,080 annually, in the local area. As expected, the single staff members expended a smaller percentage of their income

Table III. Total Annual Household Income and Total Local Expenditures of Faculty, Staff, and Students, 1976

Group	Total Annual Household Income (After Payroll Deductions)	Total Local Expenditures	Percent
Faculty	\$5,167,300	\$1,980,000	38.3
Staff	6,312,700	2,890,000	45.8
Students	20,716,900	6,465,000	24.2
Total	\$38,196,900	\$11,335,000	29.7

Source: Primary data collected for the purpose of conducting an economic impact study at The University of Tennessee at Martin.

Table IV. Local Expenditures of Faculty, Staff, and Students for The Calendar Year 1976

	Total Spring 1977 (1)	Annual Household Income Per Person (After Payroll Deduction) (2)	Monthly Local Expenditures Per Person (3)	Annual Local Expenditures Per Person (3) × 12 (4)	Total Annual Local Expenditures (4) × (1) (5)	Ratio (Percentage) (4)/(2) × 100 (6)
FACULTY						
Local Residents	284					
Single	80	\$ 13,480	\$ 300	\$ 3,672	\$ 293,000	27.2
Married	204	18,158	626	7,512	1,523,448	41.4
Non-Local Residents	16	16,071	50	600	9,600	3.7
Total Faculty	300	17,231	550	6,600	1,980,000	38.3
STAFF						
Local Residents	431					
Single	117	\$ 8,260	\$ 265	\$ 3,180	\$ 372,000	38.5
Married	314	15,844	627	7,524	2,362,536	47.5
Non-Local Residents	15	11,250	92	1,104	16,560	9.8
Total Staff	446	14,154	540	6,480	2,890,080	45.8
STUDENTS						
On-Campus Residents	2,595					
Single	2,446	\$ 3,386	\$ 81	\$ 972	\$ 2,377,512	28.7
Married	149	6,900	210	2,520	375,480	36.5
Off-Campus Residents	2,049					
Single	1,208	4,000	106	1,272	1,536,576	31.8
Married	841	14,425	214	2,568	2,159,688	17.8
Total Students	4,644	5,753	116	1,392	6,464,448	24.2

Source: Primary data collected for the purpose of conducting an economic impact study at The University of Tennessee at Martin.

Table V. Estimated Local Expenditures Made By Student Organizations and Visitors to The Campus, 1976

	Numbers	Average Time Spent Locally	Average Amount Spent Per Day	Total Local Expenditures
Student Organizations	67	—	—	\$ 200,000
Visitors	5,000	2 days	\$ 20	200,000
Total				\$ 400,000

Source: Office of Undergraduate Life, Athletic Department, and Division of Extended Services, The University of Tennessee at Martin.

locally (38.5 percent) compared to the 47.5 percent spent by the married members.

In the spring of 1977, 55.9 percent of our student body lived on campus. The single students residing in the dormitories averaged spending only \$81 each per month locally; however, this amounted to a total annual spending of \$2,377,500. The number of students living off campus during the spring quarter was surprisingly large. The total student spending on a local basis of the 4,644 students enrolled amounted to \$6,464,500. This figure was 24.2 percent of the average annual income of \$5,753 for each student enrolled. Again, it must be remembered that the \$4,753 was the household income earned and received by student families, part-time, and full-time, in the calendar year of 1976, including summer vacation. The figure for local spending would have been much larger had this study been completed during the fall quarter of 1976 because the enrollment was considerably higher in that quarter.

The remaining sources of funds outflowing to the local community are the spendings of student organizations and visitors to the campus as shown in Table V. There were 85 campus organizations listed during the spring quarter, 1977. Eleven did not return questionnaires. Seven reported no operating funds at all in 1976. The 67 organizations operating during 1976 had a total operating budget collectively of \$300,000. Of this sum, \$200,000, or 55 per-

cent, was spent locally. Salespersons and recruiters visit the campus frequently; conferences and workshops are provided; and parents, relatives, and friends visit students, faculty, and staff. Also, people drive to the campus for athletic events and other related activities. Table V shows that the estimated amount of expenditures made by visitors locally was \$200,000.

Combining the sums of Tables I, III, and V together yields a grand total of \$13,946,700 as the estimate of the total cash flow into the local economy in 1976 as the result of the existence of UTM. The fact that the University has a fiscal year beginning in the middle of the calendar year and that income of faculty, staff, and students was calculated on a calendar year basis should not make a significant difference in the computation of income generated by this institution primarily during the 1976 calendar year.

Finally, Table VI shows the selected major items of local expenditures. It is rather surprising that students at UTM expended almost one million dollars more for automobiles than the combined faculty and staff. During the three-year period ending December, 1976, 60 faculty and staff and 5 students had new homes constructed in the local area. The faculty averaged paying \$9,000 more per home compared to the staff but \$2,500 less than the the five student respondents reporting. The sum of \$2,147,500 expended for new housing over this three-year period is quite significant but not quite as im-

Table VI. Selected Major Local Expenditures of Faculty, Staff, and Students, 1976

	Faculty	Staff	Student	Total
Total Local Mortgage Payments (Monthly)	\$ 29,900	\$ 27,100	\$ 7,700	\$ 64,700
Total Local Rental Payments (Monthly)	10,100	12,000	21,000	43,100
Total Local Savings Balances (Yearly)	600,000	800,000	1,232,000	2,632,000
Total Automobile Purchases (Past 3 years)	534,000	1,104,000	2,686,000	4,324,000
Total Home Construction (Past 3 years)	1,277,500	675,0-0	195,000	2,147,500

pressive as the \$ 4,324,000 expended for new automobiles over the same time period.

Multiplier Effects

To this point, only the primary flow of income has been examined. There is the additional economic impact which results from subsequent rounds of consumption expenditure. Dollars spent in the local area generate more spending. This is known as the multiplier effect. This impact will be measured through the relationship:

$$Y = K \cdot C$$

where Y represents total local income generated and C stands for primary local consumption. K, the multiplier, is estimated by the theoretical formula:

$$K = \frac{1}{1 - MPC}$$

where MPC represents the amount which people tend to spend locally out of each dollar of additional income (i.e., the marginal propensity to consume). Assuming that MPC would 0.30, (3) the multiplier, K, will be 1.42 ($K = \frac{1}{1 - 0.3} = 1.42$). Thus, the \$ 13,946,700 of primary local expenditures made by the University, faculty,

staff, students, and others generates approximately \$ 20 million ($\$ 13,946,700 \times 1.42 = \$ 19,804,314$). This generated income of \$ 20 million in the local economy could be underestimated if people in the local area would tend to spend more than 30 cents locally out of each dollar of additional income (i.e., if MPC is greater than 0.30).

Conclusion

The most important conclusion which can be drawn from this study is that a state university has a capacity to generate employment and millions of dollars in personal income. The subsequent expenditures of that income in the local economy can make an important contribution to economic growth. The \$ 20 million of total generated income must be truly a significant amount in the local community under consideration in this study whose population is only about 80,000. Therefore, the tax burden required by other residents to support the institution of higher education may be very small or even negative when sales and property taxes are applied to the income generated. Higher educa-

(3) The assumption of MPC=0.30 was based on the information in Table III.

tion creates a significant demand for goods and services in the local area each year, and without its presence, the economy of the area would be sorely depressed.

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