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2010 Economic Impact of The University of Texas at El Paso

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Institute for POLICY and ECONOMIC Development
The University of Texas at El Paso

FACT SHEET

2010 ECONOMIC IMPACT OF THE UNIVERSITY OF TEXAS AT EL PASO

Annual Operations (2010 $)

1.	**UTEP-Related Local Business Volume**	**$ 369 million**
2.	**Value of Local Business Property Committed to to UTEP-Related Business**	**$ 150 million**
3.	**Expansion in Local Depository Institutions' Credit Base Resulting from UTEP-Related Deposits**	**$ 32 million**
4.	**Number of Local Jobs Attributable to UTEP Presence**	**7,050**
5.	**Income to Households Resulting from UTEP Presence**	**$ 452 million**
6.	**Net Operating Cost of Local Government Provided Municipal Services Allocable to UTEP-Related Influence**	**$ 30 million**
7.	**UTEP-Related Business Volume/El Paso Total Retail and Wholesale Sales**	**3.6%**
8.	**UTEP-Related Household Income/El Paso Gross Income**	**2.4%**
9.	**UTEP-Related Business Volume/Net Local Government Outlays**	**12.5 to 1**
10.	**UTEP-Related Household Income/Net Local Government Outlays**	**15.3 to 1**
11.	**UTEP-Related Business Volume/State Funding**	**3.8 to 1**
12.	**UTEP-Related Household Income/State Funding**	**4.6 to 1**

Incremental Human Capital of Graduates from UTEP

1.	**Incremental Human Capital per UTEP Graduate Entering National Economy**	**$ 540 thousand**
2.	**Addition to National Stock of Human Capital per 4,000 UTEP Graduates**	**$ 2.16 billion**
3.	**Incremental Human Capital per Graduate/State Funding**	**20.0 to 1**
4.	**Incremental Human Capital per UTEP Graduate Entering Regional Economy**	**$ 423 thousand**
5.	**Addition to Regional Stock of Human Capital per 4,000 UTEP Graduates**	**$ 1.69 billion**
6.	**Incremental Human Capital per Graduate/State Funding**	**15.7 to 1**

This Impact Analysis does not consider the impact of current and near-term construction projects at UTEP; of visitors to the region given UTEP presence (e.g.: sporting and other ticketed events); the impact of UTEP retirees in the region; the value of UTEP presence with respect to externally funded research; contributions to technological change/innovation; and industry partnerships.

NOTES:

1. The Institute for Policy and Economic Development (IPED) at UTEP used its Regional Impact Model (IPED RIM) to assess the annual operating impacts of UTEP on El Paso County's economy. Formerly known as the Caffrey-Isaacs Model, this comprehensive model is generally considered the classic approach for determining the economic effects of a college of university. The IPED RIM consists of a system of equations (technically, linear cash flow formulas) for a variety of sub-sectors of the institution being analyzed. These equations are employed to determine the economic effects on regional business, household and local government sectors.

2. All economic impact values include the Direct Effects of spending and employment by UTEP plus the Indirect and Induced (that is, multiplier) effects.

3. Input data was provided by UTEP officials, a survey of faculty and staff (686 usable responses; a 22.1% response rate) which was representative of the faculty and staff populations, a survey of students (1465 usable responses; a 7% sample of the population), data generated in similar studies conducted by IPED over the past 7 years, local region economic statistics, and federal government information on spending patterns of households in regions similar to El Paso County.

4. Local Business Volume (#1) results from direct purchases by the UTEP community (UTEP, the faculty, staff, and students new to the region), plus El Paso County firms' purchases from local sources to support the institution's business volume, plus business transactions generated by expenditures of income from non-UTEP households. The last 2 factors estimate the so-called "second round" or multiplier effects on the local economy.

5. Impact value #2 captures the capital goods (for example, machinery and equipment) and property utilized in the region as a result of the business volume generated by the presence of UTEP.

6. #3 estimates the expansion in local depository institutions' credit base resulting from the presence of the UTEP community.

7. Impact effects on the household sector (#4 and #5) are substantial; generating 7,050 jobs and in excess of $450 million in income per year.

8. The Net Cost to Local Government value of $30 million (#6) sums the UTEP-related property and sales tax revenues paid to or received by local government plus the federal aid dollars to local government allocable to the presence of UTEP and then nets out the annual operating costs of government services provided to UTEP and/or to individuals related to UTEP. This is a net cost figure. However, the region receives a much greater return in the form of additional business volume and household income (see #9 and #10).

9. Impact values #7 and #8 offer insights to the relative importance of the UTEP community to the overall county with respect to business volume and household income. UTEP, directly or indirectly, is responsible for approximately 2.5 to 3.5% of overall economic activity in the area.

10. Figures provided by UTEP indicate 2010 state funding of $98.0 million. This sizable amount receives significant returns of 3.8 to 1 and 4.6 to 1 for increased business transactions and household income, respectively (#11 and #12).

11. The last section of the Summary Sheet provides insights concerning the incremental earnings' stream of UTEP graduates; properly weighted for Bachelors, Masters, and Doctorate degrees over their work lives if they participate in the workforce throughout the US (#1, #2, and #3) or if they remain in El Paso County for their careers (#4, #5, and #6). The last 3 figures are lower given the lower earning/income levels of El Paso County relative to the US.

12. #3 and #6 provide a return on State funds "invested" in UTEP students over time. More specifically, the $98.0 million of State funds is allocated to the 22,106 students at UTEP; an average of roughly $4,500 per student per year. If the "typical" student takes 6 years to earn a degree, then the State has invested

approximately $27,000 in that student to "produce" his/her degree. This investment by the State leads to returns (increased earnings of UTEP graduates) ranging from 16 to 1 (#6) to 20 to 1 (#3) per dollar of State funds. Truly significant returns in any investment climate! And, these incremental earnings will be spent over time generating even more impacts on the regional and/or national economy.

2010 Economic Impact of the University of Texas at El Paso

Introduction

The University of Texas at El Paso (UTEP) continues to be a significant contributor to the regional economy. In its 96th year of operation, the University of Texas at El Paso currently provides educational opportunities for over 22,000 students. In doing so, UTEP employs 3,100 individuals and has an annual operating budget of $335 million, clearly making it a significant contributor to the regional economy of West Texas and the Paso del Norte region. UTEP is one of the largest business concerns in El Paso. The presence of the University impacts, both directly and indirectly, local business volume, household income, the lending capacity for local depository institutions, employment opportunities, and revenue/expenditure levels of local government units. In addition to these immediate or short-term economic effects, graduates from UTEP enhance the stock of human capital at the regional and national levels with consequent effects upon economic development. This report, prepared by UTEP's Institute for Policy and Economic Development (IPED), quantifies the size of these factors.

The following models/methods were employed in developing the economic impact analysis:

1) The IPED Regional Impact Model (IPED RIM) was used to assess the immediate effects of the UTEP community upon local economic activity. Based upon the original Caffrey-Isaacs Model developed in 1971, this comprehensive model is generally considered the classic approach for determining the economic effects of a college or university. The IPED RIM consists of a sophisticated system of equations (technically, linear cash flow formulas) for a variety of sub-sectors of the institution being analyzed. These equations are employed to determine the economic effects on regional business, household and local government sectors.

2) The final portion of the analysis focuses upon the long-run benefits of the University on the region and nation's stock of human capital. Specifically, increased educational levels enhance the productivity of workers, promote

the development of new technology, and therefore improve the prospects for economic growth over time. Formal analysis in this area is relatively new. One approach to providing some basic insight to this argument is to compute the incremental earnings' stream of college graduates over their work life. The present study performs such a calculation.

Data

UTEP employees and students were surveyed in late spring, 2010. All faculty and staff received a questionnaire electronically. Students, both undergraduates and graduate, were sampled across all colleges via an electronic survey. The UTEP community of faculty and staff was asked to respond to a series of questions concerning their status at UTEP, information about their income/expenditure/saving levels along with data on any dependents in their household. In addition, students were asked what other educational outlets they might pursue if UTEP's educational facilities were not available.

A total of 686 usable responses from faculty and staff were received; a 22% percent overall response rate with appropriate proportions of faculty versus staff. Faculty respondents were distributed in a representative fashion across colleges and among faculty ranks. Staff replies were distributed across over 80 departments and offices. The student sample totaled 1,465 representing 7% of total enrollment. Students were sampled from all colleges; at the undergraduate and graduate levels; from morning, afternoon, evening and weekend classes. Faculty, staff, and student responses in the current study were consistent with those collected in previous IPED analyses of UTEP, the Texas Tech University Health Sciences Center-El Paso, the University of Texas-Brownsville and Texas Southmost College completed over the past 7 years along with federal government data on spending patterns of households in regions similar to El Paso County.

Additional data was obtained from: UTEP budgets; UTEP's Center for Institutional Evaluation, Research and Planning; and a variety of local, state, and federal government agencies.

Results

IPED RIM analysis reveals the following impacts of UTEP-related expenditures on local business sales volume (BUS).

Local Business Effects

(BUS-1)

Total impact of UTEP-Related Expenditures on Local Business Volume	$368,737,311
(A) Purchases by UTEP Community	$182,515,489
(B) El Paso Firms' Purchases from Local Sources in Support of UTEP-Related Business Volume	$168,532,447
(C) Business Volume Generated by Expenditure of UTEP-Related Income Received by Households not Part of UTEP Community	$ 33,656,802
(D) Local Business Volume Unrealized Given UTEP Competing Enterprises	$ 15,967,427

BUS-1-A computes the direct purchases from local businesses made by UTEP, its faculty, staff, and the incremental student population (that is, those students who are renting in El Paso and would leave the region if UTEP's facilities were not available).

BUS-1-B & C estimate the so-called "second round" or multiplier effects on local firms.

BUS-1-D nets out local business volume unrealized because of the existence of UTEP enterprises which compete with local firms. Examples include bookstore sales of education-related items and on-campus housing.

(BUS-2) Value of Local Business Property $149,518,358

This impact component captures the capital goods (for example, machinery and equipment) and property (that is, land and buildings) utilized in the region as a result of the business volume generated by the presence of UTEP. It is assumed that UTEP's share of total local business volume can be applied to the assessed valuation of total local business property.

(BUS-3) Expansion in Local Depository Institutions' Credit Base Resulting from the Presence of UTEP $ 31,714,461

This effect results from demand/savings/time deposits held by the UTEP community in local financial institutions.

Local Individual Effects

The next portion of the IPED RIM quantifies the increase in employment and income to the region as a result of UTEP's presence in the community. The individual/household sector (HH) of IPED RIM calculates the following impacts:

(HH-1) Number of Local Jobs Attributable to the Presence of UTEP 7,050

The IPED RIM assumes that the ratio of UTEP-related local business volume to gross local sales on business volume is the same as the ratio of local jobs attributable to the presence of UTEP to total local civilian employment.

(HH-2)	Personal Income Resulting from UTEP-Related Jobs and Business Activity	$452,172,876

This value is the sum of two factors:

(A)	Income of UTEP Community	$340,770,369
(B)	Income of Local Individuals Employed as Result of UTEP-Related Business Volume	$111,402,507

HH-2-B picks up the indirect or multiplier effects of this component of IPED RIM.

Government Effects

The final segment of the IPED RIM is designed to reveal the effects of the presence of UTEP upon local government revenues and expenditures (GOV). The overall, net cost to local government and the three components to this figure are:

(GOV – 1)	Net Operating Cost of Local Government Provided Municipal Services Allocable to UTEP Presence	$ 29,525,637
	(A) UTEP-Related Revenues Received by Local Government	$ 32,436,084
	(B) Value of Municipal-Type Services Self-Provided by UTEP	$ 2,031,425
	(C) Operating Cost of Government Provide Municipal Services Allocable to UTEP Presence	$ 63,993,146

GOV-1-A sums UTEP-related property and sales tax revenues received/paid to local government units plus federal aid dollars to local government allocable to the presence of UTEP.

GOV-1-B estimates the value of municipal services provided by UTEP instead of relying on provision of such services by local government; security for example. GOV-1-A and B represent amounts which reduce the net costs to local government.

GOV-1-C measures the annual operating costs of government services provided to UTEP and/or to individuals related to UTEP. These costs include municipal services allocable to UTEP-related activities and costs for local public schools allocable to UTEP faculty/staff along with their spouse and dependents.

Further Discussion

A variety of percentage and benefit to cost ratios may be determined given the results of the IPED RIM analysis. For example:

- UTEP-related sales volume relative to total retail and wholesale revenues in El Paso: 3.6%

- UTEP-related income to households relative to El Paso's gross income or Gross Regional Product: 2.4%

- UTEP-related annual sales volume compared to annual net local government outlays: 12.5 to 1. That is, every $1 spent by local government to provide municipal services to the UTEP community generated $12.50 in incremental sales volume to the region.

- UTEP-related annual household income compared to annual net local government outlays: 15.3 to 1. That is, every $1 spent by local government to provide municipal services to the UTEP community generated $15.30 in additional income to households in the region.

- The State of Texas allocated an estimated $98.0 million to UTEP for the 2010 calendar year. Every state dollar generated $3.80 in additional sales revenue and $4.60 in incremental income to the El Paso economy.

Human Capital Investments

The last section of the analysis quantifies the incremental earnings stream of UTEP graduates, properly distributed for bachelors, masters, and doctoral degrees, over their work life compared to individuals with "some college" or an "associates" degree over their work life. Figures are calculated for graduates locating throughout the United States and also for those who remain in the El Paso region. The calculations reveal the following:

- The addition to the global stock (that is, throughout the U. S.) of human capital per 4,000 annual UTEP graduates is $2.160 billion. This converts to an incremental value of $540 thousand per graduate.

- Recall that the State allocates $98.0 million per year to UTEP at present. This translates to approximately $4,500 per student each year. Assuming a six-year period to acquire a degree, the State allocates roughly $27,000 to "produce" a UTEP degree. When this "cost" figure is compared to the $540,000 incremental benefit per graduate in terms of additional earning capacity, a benefit to cost ratio of 20.0 to 1 results.

- The relevant values for UTEP graduates remaining in the El Paso region are $1.691 billion per 4,000 students, $423 thousand per graduate, and a 15.7 to 1 benefit to cost ratio. The figures are somewhat lower than the global values given the lower earnings' level in the El Paso region.

A final note concerning the net increase in earnings to UTEP graduates. The U. S. Bureau of Census recently released a study concluding that the incremental effect on an individual's stock of human capital was over $750 thousand in 2010 dollars. In addition, the College Board estimates the figure to be over $800 thousand. Both studies utilized the so-called synthetic work life approach; a somewhat more optimistic method. Clearly,

the amounts presented in this report are conservative in relative terms but no less impressive.

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UTEP: Business Affairs/Comptroller Office, Center for Institutional Evaluation, Research and Planning (CIERP).