

**THE PENNSYLVANIA STATE UNIVERSITY
ECONOMIC IMPACT STATEMENT
2008**

*Economic and Community Benefits Provided by The
Pennsylvania State University in the Commonwealth of
Pennsylvania and in each of the State's 67 Counties*

Final Report

April 16, 2009



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I. Introduction

In addition to its recognition as one of the top comprehensive research universities in the United States, The Pennsylvania State University is the single largest generator of economic impact in the Commonwealth of Pennsylvania. In August 2008, The Pennsylvania State University retained the services of Pittsburgh-based Tripp Umbach, Inc., to re-measure the economic impact of the University on the Commonwealth of Pennsylvania and on each of the State's 67 counties.¹ This report also presents the economic impact of each of the 24 University campuses on the Commonwealth of Pennsylvania and on the counties where each campus is located. The initial study was completed in 2004.

Goals of The Pennsylvania State University Economic Impact Study

Tripp Umbach was commissioned by Penn State to perform economic impact research and analysis to:

- Measure the business volume, employment, and government revenue impact of the University's operations.
- Measure the economic impact of visitors who attend conferences, sporting, cultural and alumni events at the 24 Penn State campuses.
- Quantify the economic and social impact of Penn State students, employees and alumni.
- Quantify the economic impact of businesses throughout the Commonwealth that are owned by Penn State alumni.
- Quantify the total value of services provided by Penn State to businesses throughout the Commonwealth.
- Quantify the spin-off effects of university research on new business venture formation and enterprise growth, employment, and government revenue in Pennsylvania.

Methodology Employed in The Pennsylvania State University Economic Impact Study

¹ Tripp Umbach is the leading provider of economic impact analysis for universities and academic health centers, having completed two national studies for the Association of American Medical College. Tripp Umbach has also completed statewide economic impact studies for all of the medical schools and their hospital affiliates in Pennsylvania, Virginia, Ohio and Wisconsin. Tripp Umbach has completed economic impact studies for more than 100 leading universities and for several state governmental agencies over the past ten years, including for the State System for Higher Education, The Ohio State University, and the University of Pittsburgh.

This economic impact analysis measures the effect of both direct and indirect business volume and government revenue impacts for the 24 Penn State campuses. The methodology employed in the calculation of these impacts is derived from the standard set of impact research tools developed by the American Council on Education (ACE)² for the measurement of college and university economic impact. The ACE-based methodology is well established, having been used in hundreds of impact studies throughout the United States.

The ACE methodology employs linear cash-flow modeling to track the flow of institution-originated funds through a delineated spatial area.³ For Pennsylvania State University impact analysis, computerized spreadsheet models were developed for the University as a whole and for each of the 24 locations of the University, with the models measuring impact on the state economy and government revenues.

By using this economic impact model, the Tripp Umbach research team has been able to provide Pennsylvania State University with a detailed quantification of the total direct and indirect impact of the University on the economy of Pennsylvania and on each of the state's 67 counties. The impact models provide measures of business volume and state government revenues allocable to the University, together with breakouts of the individual categories of spending that comprise the total impact (e.g. institutional capital spending, student spending, faculty spending, etc.).

² Caffrey, John and Isaacs, Herbert, "Estimating the Impact of a College or University on the Local Economy," American Council on Education, 1971.

³ The ACE methodology is highly adaptable to different geographic scales. It is suitable for measuring impact on neighborhoods, municipalities, counties, states, regions or nations. In the study reported herein for the State System of Higher Education, the impact of the universities is measured at the state and county scales.

II. Executive Summary

Penn State is the single largest contributor to the state's economy. The total impact of the University goes beyond the operations of 24 campuses located throughout the Commonwealth and education of more than 92,000 students. The operation of the university system generates \$8.48 billion annually in net economic impact to the Commonwealth of Pennsylvania and supports more than 67,000 total jobs (both direct and indirect). Every dollar invested in 2008 by the Commonwealth to support the operations of The Pennsylvania State University returned \$25.06 in total economic impact to the Commonwealth.⁴

The Pennsylvania State University also generated \$646.8 million in tax revenue for the Commonwealth of Pennsylvania in 2008. Government revenue generated by the University included \$393.3 million as a result of its operations and payroll taxes and \$253.5 million in induced impacts resulting from additional income of Penn State alumni, business taxes paid by Penn State alumni who are business owners and income taxes paid by companies who benefit from Penn State's research. In 2008, the University returned \$1.91 in tax revenue for every \$1 it received in appropriation.

As demonstrated in this report, the economic impact of Pennsylvania State University's operations and employment is only the first chapter in a powerful economic story that affects every community within the Commonwealth. Induced economic impacts calculated by Tripp Umbach generated an additional \$8.68 billion in 2008. These additional impacts include the value of services provided to businesses, commercialization of research activities, increased earning power of Penn State alumni, and the impact of Pennsylvania businesses owned by Penn State graduates. With total direct, indirect, and induced annual economic impact equaling more than \$17 billion, no other single entity in the Commonwealth does more to drive the state's economy. Stated another way, Penn State generated more than 2% of the state's business volume, or more than \$1 out of every \$50 dollars in the state's total economy.

Operational Impact of The Pennsylvania State University

Pennsylvania State University's operational impact of \$8.48 billion annually compares favorably with other universities (see Table 1).

Table 1 State Level Economic Impact of Selected Universities

Name of University	State Level Economic Impact
Pennsylvania State University	\$8.5 billion
The Ohio State University	\$5.7 billion
University of Florida	\$3.7 billion
University of Alabama, Birmingham	\$2.6 billion
Washington University St. Louis	\$2.6 billion
West Virginia University	\$1.6 billion

⁴ The Commonwealth provided \$338.4 million in operational support for The Pennsylvania State University in 2008-09 according to the University Budget Office on the Penn State website.

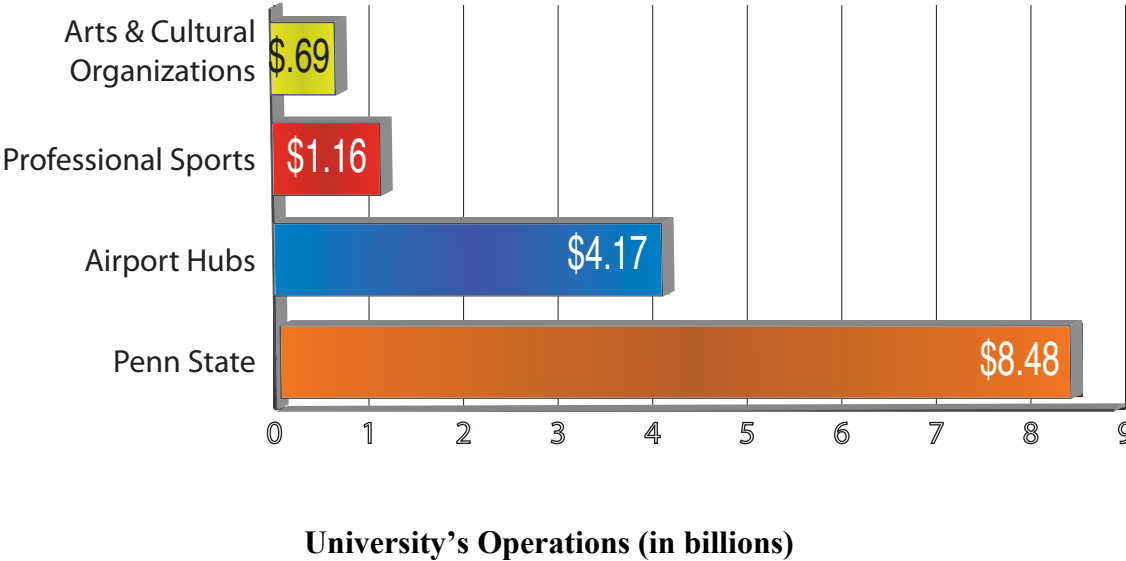
The total economic impact of Penn State’s operations goes far beyond the main University Park campus, which Tripp Umbach estimates at \$4.4 billion. The other regional campuses generate approximately \$4.1 billion of the University’s total operational impact.

State Comparisons to Other Industry Segments

Pennsylvania State University’s annual economic impact on Pennsylvania is significant, especially when compared with other industries that are recipients of financial support from state government. For example, professional sports teams generate only a fraction of the impact generated by the University, but have attracted millions in state support for the building of sports facilities. Penn State currently generates more annual economic impact than the combined impact of all of the state’s airport hubs, professional sports teams, and arts and cultural organizations (see Figure 1).

Although tourism is considered to be Pennsylvania’s second largest industry, surpassed only by agriculture, with an estimated annual impact of \$26 billion, Penn State alone attracts nearly 1 million visitors and generates \$1.73 billion for the state’s economy. Stated another way, more than \$1 out of every \$20 in tourism generated annually in Pennsylvania is attributable to Penn State (see Figure 1).

Figure 1 Impact Comparisons with The Pennsylvania State



Projected Growth in the Economic Impact of Penn State's Operations

The total economic impact of Penn State is projected to continue to grow over the next five years. Tripp Umbach estimates that Penn State's total economic impact will grow from \$8.48 billion in 2008 to approximately \$9.54 billion in 2013⁵ based on the University's continued growth in operations and investment in capital expenditures. Proposed capital expenditures alone will generate an additional \$535 million annually in the state's economy over the next five years.

Statewide Employment Impact from Penn State's Operations

With 30,000 full and part-time employees in 2008, the total payroll and benefits provided to Penn State employees ranks it as the largest generator of total employment among non-governmental entities.⁶ Total employment, including direct employment and jobs within the Commonwealth that are in support of Penn State (indirect), is estimated at more than 67,000 persons. Total employment attributable to Penn State is projected to grow to 75,000 by 2013.

Government Revenue Impact from Penn State's Operations

It is a common misperception that public nonprofit organizations do not generate state tax revenue. While Penn State does not pay corporate income taxes directly to the state, its in-state spending and generation of economic impact from out-of-state sources has a significant impact on state tax revenue. Taxes created as a result of Penn State's operations, including payroll, institutional spending in the state's economy and generation of fresh taxable dollars equaled \$393.3 million in 2008. Tripp Umbach estimates that Penn State will generate \$442.8 million in-state tax revenue annually by 2013.

In 2008, the Commonwealth of Pennsylvania provided \$338.4 million to Penn State in operational support. Since Penn State's operations generate \$393.3 million in government revenue, the University returns \$1.16 to the Commonwealth for every \$1 that the University receives. When you consider that the University generates more than \$253 million additional government revenue annually through additional earnings of Penn State alumni, business taxes paid by Penn State alumni who are business owners and companies that benefited from University research, the total return on investment of Pennsylvania State University's operations plus its induced impacts equals \$1.91 generated for every \$1 received.

⁵ Due to current economic conditions, Tripp Umbach estimates that the economic growth in operations and capital investment for Penn State will be approximately 2 percent per year for 2009-2011 and will be approximately 3 percent per year for 2012-2013.

⁶ According to the Penn State website the total number of full- and part-time, non-student employees = 29,805. The total number of student employees = 10,503. To avoid double counting, Tripp Umbach chose to include only non-student employees in the final economic impact and employment models. However, payroll taxes to the Commonwealth of Pennsylvania includes student employees as part of the approximately \$1.5 billion in total university payroll.

The Impact of Penn State's Employees and Students

Penn State's 30,000 full and part-time employees and more than 92,000 students provide benefits to the Commonwealth beyond the \$8.48 billion annual operational impact presented above. Tripp Umbach estimates that Penn State employees donate more than \$130 million annually in charitable donations and volunteer services within the Commonwealth. Tripp Umbach estimates that Penn State students donate⁷ approximately \$102 million annually in volunteer services within the Commonwealth.

Impacts of Penn State Alumni Living in Pennsylvania

The more than 250,000 alumni who reside in Pennsylvania generate \$1.9 billion annually in additional economic impact, and generate \$59.0 million in additional government revenue for the Commonwealth.⁸ With a Penn State campus within easy commuting distance of every Pennsylvanian, the economic and social power of the University reaches into every community.

Each Penn State alumnus volunteers more than 13.8 hours annually with charitable organizations throughout Pennsylvania. Tripp Umbach estimates the value of such services from all to be \$340 million annually, according to an alumni survey conducted by Tripp Umbach. Penn State alumni donate more than \$149.0 million annually to charitable organizations throughout Pennsylvania, according to the same alumni survey.

Tripp Umbach estimates that more than 17,000 Penn State alumni own businesses in Pennsylvania. These businesses directly employ more than 475,000 residents. The average wage of employees at companies owned by Penn State graduates is \$9,800 higher than the average wage earner in Pennsylvania. This translates into more than \$4.1 billion in additional expansion of the state's economy and more than \$125 million in additional government revenue for the Commonwealth annually.

The Impact of Penn State Research

Penn State annually attracts more than \$631 million to Pennsylvania from sources outside of the Commonwealth to support research activities. Research conducted at Penn State supports more than 18,000 additional jobs throughout the Commonwealth, which generates more than \$1.9 billion in additional economic impact and more than \$61.2 million in additional revenue for the

⁷ In 2008, student volunteer services are estimated at \$20.10/hr. Based on previous research, Tripp Umbach estimates that on average a college student contributes approximately \$1,100 annually in volunteer services. <http://www.onlinecardonation.org/charity-news/pennstate-unitedway-charity.htm>

⁸ The Pennsylvania State University annually attracts more than \$631 million to the state of Pennsylvania from outside sources for its on-going research activities. Of this amount, more than \$492 million of this support remains in the state's economy, generating an additional \$1.97 billion in economic expansion and more than 18,000 jobs.

Commonwealth annually.⁹ Penn State ranks nationally as one of the ten largest public research institutions. The total economic impact of research dollars from outside of the Commonwealth to grow and is expected to exceed \$840 million by 2013.

University-based research has proved to have a substantial and measurable effect on business formation and economic development. Research performed by Adam Jaffe at Harvard found that "...a state that improves its university research system will increase local innovation both by attracting industrial R&D and augmenting its productivity."¹⁰ Other researchers have confirmed that geographic proximity to a university performing research is an important driver of the location of new business enterprises. Knowledge based research has been proven to create a multiplier of 3.22 within a state's economy.¹¹ Stated another way, every research dollar generates an extra dollar in the state economy (3.22) than the standard multiplier of 2.3 dollars for every one dollar spent within the economy by an institution.

Given the findings of the Harvard study and other supporting investigations, it is logical to assume that Penn State will be generating and attracting new business enterprises for the Commonwealth. Indeed, Penn State does not just contribute to business enterprises through its research, it also actively promotes business enterprise formation and expansion via University business incubators and small business advisory services. These services and impacts are all the more important to Pennsylvania given the fact that Penn State campuses are dispersed throughout the state in generally small-town and rural settings which, historically, face greater challenges in attracting new business enterprises and fostering entrepreneurial business development. During 2008, the University engaged in research projects with more than 750 companies of which 250 were Pennsylvania based companies – more than any other public university in the nation.

⁹ The Pennsylvania State University annually attracts more than \$631 million to the state of Pennsylvania from outside sources for its on-going research activities. Of this amount, more than \$492 million of this support remains in the state's economy, generating an additional \$1.97 billion in economic expansion and more than 18,000 jobs.

¹⁰ Jaffe, Adam B., "Real Effects of Academic Research," *American Economic Review*, March 1991, pp. 957-970.

¹¹ Martin, Fernand., "The Economic Impact of University Research," Association of Universities and Colleges of Canada, March 1998.

III. Economic Impact of The Pennsylvania State University On the Commonwealth of Pennsylvania

With combined economic impact in 2008 of \$8.48 billion, the annual operations of Penn State have a truly substantial economic impact on the state. Penn State has a tremendous direct impact on the state, and the benefits of these initial expenditures ripple through the Pennsylvania economy providing economic benefits, through the multiplier effect, to the majority of Pennsylvania's citizens.

A. Business Volume Impact

The Direct and Indirect Expansion of the State Economy Attributable to Penn State

Penn State's direct economic impact stems from the spending of seven principal groups: institutional expenditures for capital improvements, goods and services; the spending of staff, faculty and technical service employees; spending of students; and the spending of visitors to the University. In addition these direct, first-round expenditures, received as income by businesses and individuals in the state, re-circulate through the economy in successive rounds of re-spending. The end result is a multiplied economic impact that is a linear result of the university's presence and its spending patterns.

The results of this analysis include:

1. Total Business Volume Impact

In 2008, Penn State had a combined total economic impact on Pennsylvania of \$8.48 billion (see Table 2).

This economic impact comprised \$3.69 billion in direct business volume impact and a further \$4.79 billion in indirect economic impacts accruing to the economy through the multiplier.

Table 2
Total State Business Volume Impact of Penn State, 2008

Campus	Total Impact (Direct + Indirect)	Direct Impact	Indirect Impact
University Park	\$4,413,881,873	\$1,919,079,075	\$2,494,802,798
Abington	\$196,843,780	\$85,584,252	\$111,259,528
Altoona	\$213,405,548	\$92,785,021	\$120,620,527
Beaver	\$55,104,336	\$23,958,407	\$31,145,929
Berks	\$142,443,013	\$61,931,745	\$80,511,268
Delaware County (Brandywine)	\$105,221,311	\$45,748,396	\$59,472,915
Dickinson School of Law	\$57,118,018	\$24,833,921	\$32,284,097
DuBois	\$66,128,243	\$28,751,410	\$37,376,833
Erie	\$204,113,150	\$88,744,848	\$115,368,302
Fayette	\$79,490,946	\$34,561,281	\$44,929,665
Great Valley	\$76,447,678	\$33,238,121	\$43,209,557
Harrisburg	\$135,135,348	\$58,754,499	\$76,380,849
Hazleton	\$68,918,060	\$29,964,374	\$38,953,686
Hershey Medical Center and College of Medicine	\$1,590,595,038	\$691,563,060	\$899,031,978
Lehigh Valley	\$54,517,415	\$23,703,224	\$30,814,191
McKeesport (Greater Allegheny)	\$66,939,120	\$29,103,965	\$37,835,155
Mont Alto	\$54,007,664	\$23,481,593	\$30,526,071
New Kensington	\$72,926,629	\$31,707,230	\$41,219,399
Penn College	\$482,489,904	\$209,778,219	\$272,711,685
Schuylkill	\$68,688,401	\$29,864,522	\$38,823,879
Shenango	\$45,107,941	\$22,423,185	\$22,684,756
Wilkes-Barre	\$57,134,767	\$25,036,258	\$32,098,509
Worthington Scranton	\$76,817,217	\$36,251,038	\$40,566,179
York	\$78,012,401	\$37,768,225	\$40,244,176
TOTAL	\$8,483,816,498	\$3,688,615,869	\$4,795,200,629

Source: Tripp Umbach Economic Impact Model

The direct impact was comprised of the following impact components:

- a. Direct spending by Penn State for capital improvements, goods, services and supplies.**

This category of impact includes the spending by the University for improvements to their facilities and capital equipment purchases made with Pennsylvania contractors and vendors (an average of spending over the previous five years was used). In addition, the category also includes the purchase, from in-state vendors, of goods, services and supplies. These may include a broad range of

purchases such as food and beverage supplies, administrative supplies, computer consulting, etc.

In 2008, this spending contributed \$1.18 billion to Penn State’s business volume impact (see Table 3).

Table 3
Penn State’s Spending for Capital Improvements, Goods and Services, and Supplies, 2008

Campus	Spending for Capital Improvements, Goods and Services, and Supplies
University Park	\$756,501,038
Abington	\$4,851,694
Altoona	\$7,367,013
Beaver	\$2,735,186
Berks	\$5,839,761
Delaware County (Brandywine)	\$2,602,109
Dickinson School of Law	\$3,841,877
DuBois	\$2,028,807
Erie	\$10,676,015
Fayette	\$2,445,325
Great Valley	\$2,450,478
Harrisburg	\$7,901,904
Hazleton	\$2,793,112
Hershey Medical Center and College of Medicine	\$327,914,013
Lehigh Valley	\$1,123,713
McKeesport (Greater Allegheny)	\$3,018,237
Mont Alto	\$2,544,476
New Kensington	\$1,732,946
Penn College	\$18,208,154
Schuylkill	\$1,647,582
Shenango	\$1,447,908
Wilkes-Barre	\$1,443,435
Worthington Scranton	\$1,588,465
York	\$2,519,863
TOTAL	\$1,175,223,110

b. Direct spending on faculty, staff and technical service employees.

While universities such as Penn State spend substantial money in the state on goods and services, one of their biggest benefits to the economy is their direct payroll. Penn State has a combined payroll and benefits obligation to faculty, staff, and technical service employees of approximately \$2.1 billion annually. The majority of this goes to Pennsylvania residents who spend the majority of their disposable income in the state. Adjusting for payroll to faculty, staff, and technical employees residing out-of-state, savings and taxes, the total payroll from Penn State generates \$805.4 million in direct impact through faculty, staff, and technical service employees spending (see Table 4).

**Table 4
Penn State’s Faculty, Staff, and Technical Service
Employee Spending, 2008**

Campus	Faculty & Staff Spending
University Park	\$324,526,321
Abington	\$10,807,375
Altoona	\$16,576,655
Beaver	\$3,883,612
Berks	\$11,299,278
Delaware County (Brandywine)	\$5,469,532
Dickinson School of Law	\$2,694,417
DuBois	\$4,478,607
Erie	\$16,252,888
Fayette	\$4,601,093
Great Valley	\$4,352,078
Harrisburg	\$17,338,437
Hazleton	\$5,310,705
Hershey Medical Center and College of Medicine	\$297,760,739
Lehigh Valley	\$4,428,548
McKeesport (Greater Allegheny)	\$5,071,381
Mont Alto	\$4,767,223
New Kensington	\$4,478,607
Penn College	\$40,442,278
Schuylkill	\$3,606,708
Shenango	\$2,658,185
Wilkes-Barre	\$3,420,944
Worthington Scranton	\$5,125,759
York	\$6,052,759
TOTAL	\$805,404,128

c. Direct spending by students.

The spending by off-campus students, outside the university, for housing, food, supplies, entertainment and other items and services, as well as the spending by on-campus students outside of the University for entertainment and other items and services, comprise students' direct impact on the Pennsylvania economy. In total, student spending amounts to \$932.2 million in the state's economy (see Table 5).

**Table 5
Penn State Student Spending, 2008**

Campus	Student and Resident Spending
University Park	\$407,845,155
Abington	\$49,681,242
Altoona	\$40,316,422
Beaver	\$10,338,192
Berks	\$26,612,327
Delaware County(Brandywine)	\$25,825,105
Dickinson School of Law	\$12,057,552
DuBois	\$15,046,630
Erie	\$33,778,398
Fayette	\$19,396,239
Great Valley	\$18,545,359
Harrisburg	\$20,340,189
Hazleton	\$11,988,408
Hershey Medical Center and College of Medicine	\$8,296,156
Lehigh Valley	\$12,148,007
McKeesport (Greater Allegheny)	\$12,320,537
Mont Alto	\$8,383,997
New Kensington	\$17,741,751
Penn College	\$100,137,356
Schuylkill	\$16,633,214
Shenango	\$12,242,550
Wilkes-Barre	\$12,152,237
Worthington Scranton	\$20,971,941
York	\$19,396,239
TOTAL	\$932,195,203

d. Direct spending by out-of-state visitors.

As any person working at a university can confirm, universities are substantial visitor destinations. These visitors come to see employees and students who are friends and family, and when they are from out-of-state they bring with them spending in the Pennsylvania economy for accommodations, gifts, services and other items during their stay. In 2008, out-of-state visitors to Penn State generated \$776.6 million in the Pennsylvania economy (see Table 6)

**Table 6
Spending by Visitors to Penn State for Conferences,
Sporting, Cultural and Alumni Events, 2008**

Campus	Visitor Spending
University Park	\$429,514,174
Abington	\$20,401,970
Altoona	\$28,711,376
Beaver	\$7,187,862
Berks	\$18,337,091
Delaware County (Brandywine)	\$12,038,097
Dickinson School of Law	\$6,426,521
DuBois	\$7,383,812
Erie	\$28,223,994
Fayette	\$8,206,012
Great Valley	\$4,624,226
Harrisburg	\$13,360,909
Hazleton	\$10,058,596
Hershey Medical Center and College of Medicine	\$58,330,889
Lehigh Valley	\$6,189,402
McKeesport (Greater Allegheny)	\$8,880,256
Mont Alto	\$7,972,343
New Kensington	\$7,940,373
Penn College	\$51,069,334
Schuylkill	\$8,163,464
Shenango	\$6,260,989
Wilkes-Barre	\$8,206,088
Worthington Scranton	\$9,163,748
York	\$9,985,811
TOTAL	\$776,637,339

2. Additional Business Impacts Allocable to Penn State

In addition to the annual, recurring impacts of the spending categories outlined above, businesses in the state have invested heavily to support the business volume generated by Penn State. The Tripp Umbach impact model calculates the two principal components of business investments: business real property development and business inventories committed to academic health center-related business.

Pennsylvania businesses have invested a total of \$1.25 billion in real property developments to support their business with Pennsylvania State University. Business inventories in the state allocable to Penn State --related business volume are calculated to be \$1.05 billion.

B. Impact of Penn State's Operations on State Government Revenues

Revenues to the State of Pennsylvania Allocable to Penn State

A major misconception held by business leaders, elected officials, and the general public, is that universities do not generate government revenue. In 2008, Tripp Umbach estimates that \$393.3 million in State government revenue was generated directly and indirectly by Penn State. In addition, the substantial spending with Pennsylvania business generates large-scale revenues for the state in the form of sales tax, corporate net income tax and capital stock/franchise taxes. The Tripp Umbach model calculated the revenue benefits accruing to the state from these sources. The results of this analysis follow:

Total State Government Revenue

Penn State generated a total of \$393.3 million in revenue for Pennsylvania in 2008 (see Table 7).

**Table 7
Penn State's Government Revenue Impact, 2008**

Campus	Government Revenue Impact
University Park	\$204,912,573
Abington	\$9,117,510
Altoona	\$9,409,834
Beaver	\$3,859,277
Berks	\$7,122,334
Delaware County (Brandywine)	\$5,733,371
Dickinson School of Law	\$4,157,448
DuBois	\$4,416,906
Erie	\$9,265,938
Fayette	\$4,931,010
Great Valley	\$5,915,797
Harrisburg	\$6,847,764
Hazleton	\$4,327,137
Hershey Medical Center and College of Medicine	\$55,294,543
Lehigh Valley	\$4,088,728
McKeesport (Greater Allegheny)	\$4,313,559
Mont Alto	\$3,928,488
New Kensington	\$4,711,436
Penn College	\$18,553,370
Schuylkill	\$4,365,642
Shenango	\$3,926,955
Wilkes-Barre	\$3,975,337
Worthington Scranton	\$5,047,302
York	\$5,116,173
TOTAL	\$393,338,430

C. Impact of Penn State's Operations on Employment

The Direct and Indirect Expansion of Employment in the State Attributable to Penn State

Perhaps the benefit that comes closest to home is the sheer number of Pennsylvania's citizens who depend on Pennsylvania State University, either directly or indirectly, for their jobs and livelihoods. More than 67,000 total jobs in Pennsylvania in 2008 were directly and indirectly attributable to Penn State.

Even on a direct employment basis (i.e., only counting those directly employed at the university), Penn State is responsible for a substantial component of statewide employment. During 2008, Penn State employed more than 40,000 full- and part-time faculty, staff and students, of which more than 10,000 were part-time students.

While direct employment is significant, the actual extent of employment impact on the state stemming from the universities is considerably larger. The business volume generated by universities creates jobs in a broad range of sectors throughout the state's economy. These jobs are proportionate to the service needs of the universities themselves and their related populations (faculty, staff, technical service employees, students, etc.). In addition, the tax revenue generated at the state and local levels by Penn State and its business volume also create government employment opportunities (see Table 8).

**Table 8
Total Employment Impact of Penn State, 2008**

Campus	Total Employment Impact (Direct + Indirect)	Direct Impact	Indirect Impact
University Park	31,815	14,527	17,287
Abington	854	390	464
Altoona	1,339	611	728
Beaver	349	159	189
Berks	898	410	488
Delaware County (Brandywine)	421	192	229
Dickinson School of Law	229	105	125
DuBois	342	156	186
Erie	1,370	626	744
Fayette	371	169	201
Great Valley	368	168	200
Harrisburg	1,436	656	780
Hazleton	443	202	241
Hershey Medical Center and College of Medicine	20,461	9,343	11,118
Lehigh Valley	329	150	179
McKeesport (Greater Allegheny)	439	200	239
Mont Alto	386	176	210
New Kensington	342	156	186
Penn College	3,589	1,639	1,950
Schuylkill	309	141	168
Shenango	199	91	108
Wilkes-Barre	278	127	151
Worthington Scranton	379	173	206
York	485	222	264
TOTAL	67,430	30,790	36,640

IV. Economic Impact of The Pennsylvania State University On the 67 Counties within the Commonwealth

Penn State impacts every county within the Commonwealth of Pennsylvania. The following tables show this impact on each of the 67 counties in the Commonwealth.

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Table 9 Total Business Volume Impact of Penn State by County, 2008

County	Total Impact	Direct Impact	Indirect Impact	County	Total Impact	Direct Impact	Indirect Impact
Adams	\$13,009,032	\$7,652,372	\$5,356,660	Lackawanna	\$55,261,850	\$32,506,970	\$22,754,879
Allegheny	\$233,335,681	\$101,450,296	\$131,885,385	Lancaster	\$112,348,704	\$66,087,473	\$46,261,231
Armstrong	\$3,622,928	\$2,131,134	\$1,491,794	Lawrence	\$1,879,414	\$1,105,537	\$773,876
Beaver	\$33,376,367	\$19,633,157	\$13,743,210	Lebanon	\$314,322,493	\$184,895,584	\$129,426,909
Bedford	\$3,764,163	\$2,214,214	\$1,549,949	Lehigh	\$32,706,088	\$19,238,875	\$13,467,213
Berks	\$99,923,501	\$58,778,530	\$41,144,971	Luzerne	\$94,105,202	\$55,356,001	\$38,749,201
Blair	\$210,958,786	\$124,093,404	\$86,865,383	Lycoming	\$352,384,915	\$207,285,244	\$145,099,671
Bradford	\$2,356,422	\$1,386,130	\$970,291	McKean	\$667,194	\$392,467	\$274,727
Bucks	\$14,099,845	\$8,294,026	\$5,805,818	Mercer	\$29,316,398	\$17,244,940	\$12,071,458
Butler	\$1,810,530	\$1,065,018	\$745,513	Mifflin	\$13,060,369	\$7,682,570	\$5,377,799
Cambria	\$5,622,256	\$3,307,209	\$2,315,047	Monroe	\$1,052,157	\$618,916	\$433,241
Cameron	\$246,851	\$145,206	\$101,644	Montgomery	\$156,999,211	\$92,352,477	\$64,646,734
Carbon	\$4,581,452	\$2,694,972	\$1,886,480	Montour	\$1,873,917	\$1,102,304	\$771,613
Centre	\$2,424,343,560	\$1,426,084,447	\$998,259,113	Northampton	\$2,287,933	\$1,345,843	\$942,090
Chester	\$119,649,526	\$70,382,074	\$49,267,452	Northumberland	\$5,833,228	\$3,431,311	\$2,401,918
Clarion	\$496,994	\$292,349	\$204,644	Perry	\$13,622,267	\$8,013,098	\$5,609,169
Clearfield	\$94,907,519	\$55,827,952	\$39,079,567	Philadelphia	\$87,551,865	\$51,501,097	\$36,050,768
Clinton	\$13,395,888	\$7,879,934	\$5,515,954	Pike	\$326,814	\$192,243	\$134,570
Columbia	\$5,321,646	\$3,130,380	\$2,191,266	Potter	\$562,086	\$330,639	\$231,447
Crawford	\$4,319,980	\$2,541,165	\$1,778,815	Schuylkill	\$63,708,547	\$37,475,616	\$26,232,931
Cumberland	\$95,294,717	\$56,055,716	\$39,239,001	Snyder	\$5,513,211	\$3,243,065	\$2,270,146
Dauphin	\$965,137,369	\$567,727,864	\$397,409,505	Somerset	\$31,146,466	\$18,321,451	\$12,825,016
Delaware	\$78,277,719	\$46,045,717	\$32,232,002	Sullivan	\$2,045,829	\$1,203,429	\$842,400
Elk	\$2,023,703	\$1,190,414	\$833,289	Susquehanna	\$571,925	\$336,427	\$235,499
Erie	\$167,023,225	\$98,248,956	\$68,774,269	Tioga	\$2,985,504	\$1,756,179	\$1,229,325
Fayette	\$47,220,779	\$27,776,929	\$19,443,850	Union	\$8,133,850	\$4,784,618	\$3,349,232
Forest	\$1,304	\$767	\$537	Venango	\$403,917	\$237,598	\$166,319
Franklin	\$31,068,079	\$18,275,341	\$12,792,738	Warren	\$334,206	\$196,592	\$137,614
Fulton	\$292,065	\$171,803	\$120,262	Washington	\$5,950,614	\$3,500,361	\$2,450,253
Greene	\$742,002	\$436,472	\$305,530	Wayne	\$373,449	\$219,676	\$153,773
Huntington	\$49,084,960	\$28,873,506	\$20,211,454	Westmoreland	\$43,908,704	\$25,828,649	\$18,080,055
Indiana	\$2,005,224	\$1,179,544	\$825,681	Wyoming	\$942,676	\$554,515	\$388,161
Jefferson	\$1,647,535	\$969,138	\$678,397	York	\$160,037,490	\$94,139,700	\$65,897,790
Juniata	\$1,771,623	\$1,042,131	\$729,492	TOTAL	\$6,270,646,977	\$3,688,615,869	\$2,582,031,108

Table 10
Penn State's Spending for Capital Improvements, Goods
and Services, and Supplies by County, 2008

County	Spending for Capital Improvements, Goods and Services, and Supplies	County	Spending for Capital Improvements, Goods and Services, and Supplies
Adams	\$1,288,054	Lackawanna	\$9,719,086
Allegheny	\$30,332,085	Lancaster	\$17,690,407
Armstrong	\$637,176	Lawrence	\$330,539
Beaver	\$5,870,013	Lebanon	\$77,053,609
Bedford	\$662,016	Lehigh	\$5,752,129
Berks	\$17,573,880	Luzerne	\$16,550,597
Blair	\$37,102,028	Lycoming	\$61,975,114
Bradford	\$414,432	McKean	\$117,342
Bucks	\$2,479,787	Mercer	\$5,155,973
Butler	\$318,424	Mifflin	\$2,296,971
Cambria	\$988,805	Monroe	\$185,046
Cameron	\$43,414	Montgomery	\$30,029,203
Carbon	\$805,755	Montour	\$329,572
Centre	\$425,377,526	Northampton	\$402,386
Chester	\$23,460,390	Northumberland	\$1,025,909
Clarion	\$87,408	Perry	\$57,478
Clearfield	\$16,691,703	Philadelphia	\$396,017
Clinton	\$2,355,980	Pike	\$15,398,039
Columbia	\$759,769	Potter	\$98,856
Crawford	\$935,936	Schuylkill	\$9,204,858
Cumberland	\$24,359,974	Snyder	\$5,477,833
Dauphin	\$208,133,685	Somerset	\$359,807
Delaware	\$13,766,964	Sullivan	\$100,586
Elk	\$355,915	Susquehanna	\$969,627
Erie	\$29,374,933	Tioga	\$525,071
Fayette	\$8,304,876	Union	\$1,430,527
Forest	\$229	Venango	\$71,038
Franklin	\$5,464,047	Warren	\$58,778
Fulton	\$51,366	Washington	\$1,046,554
Greene	\$130,498	Wayne	\$65,680
Huntington	\$8,632,736	Westmoreland	\$7,722,371
Indiana	\$352,666	Wyoming	\$165,792
Jefferson	\$289,758	York	\$35,749,502
Juniata	\$311,581	TOTAL	\$1,175,223,110

**Table 11
Penn State's Faculty, Staff and Technical Service
Employee Spending by County, 2008**

County	Faculty & Staff Spending	County	Faculty & Staff Spending
Adams	\$4,178,315	Lackawanna	\$6,293,260
Allegheny	\$19,640,497	Lancaster	\$18,143,374
Armstrong	\$412,582	Lawrence	\$214,029
Beaver	\$3,800,925	Lebanon	\$62,776,170
Bedford	\$428,666	Lehigh	\$3,724,593
Berks	\$11,379,361	Luzerne	\$10,716,769
Blair	\$24,024,140	Lycoming	\$40,129,851
Bradford	\$268,351	McKean	\$75,981
Bucks	\$1,605,701	Mercer	\$3,338,573
Butler	\$206,185	Mifflin	\$1,487,324
Cambria	\$640,267	Monroe	\$119,820
Cameron	\$28,112	Montgomery	\$17,211,626
Carbon	\$521,739	Montour	\$213,403
Centre	\$278,782,848	Northampton	\$260,552
Chester	\$12,958,217	Northumberland	\$664,292
Clarion	\$56,598	Perry	\$6,725,778
Clearfield	\$10,808,137	Philadelphia	\$256,427
Clinton	\$1,525,533	Pike	\$9,970,470
Columbia	\$491,962	Potter	\$64,011
Crawford	\$606,033	Schuylkill	\$12,648,849
Cumberland	\$13,531,021	Snyder	\$3,546,982
Dauphin	\$148,512,061	Somerset	\$232,981
Delaware	\$8,914,324	Sullivan	\$65,131
Elk	\$230,461	Susquehanna	\$627,849
Erie	\$19,020,727	Tioga	\$339,991
Fayette	\$5,377,537	Union	\$926,289
Forest	\$149	Venango	\$45,998
Franklin	\$3,538,055	Warren	\$38,060
Fulton	\$33,261	Washington	\$677,660
Greene	\$84,500	Wayne	\$42,529
Huntington	\$5,589,831	Westmoreland	\$5,000,355
Indiana	\$228,356	Wyoming	\$107,353
Jefferson	\$187,623	York	\$20,903,975
Juniata	\$201,754	TOTAL	\$805,404,128

Table 12
Penn State's Student Spending by County, 2008

County	Student Spending	County	Student Spending
Adams	\$0	Lackawanna	\$18,914,931
Allegheny	\$12,223,800	Lancaster	\$0
Armstrong	\$0	Lawrence	\$0
Beaver	\$8,950,449	Lebanon	\$0
Bedford	\$0	Lehigh	\$10,014,863
Berks	\$25,021,905	Luzerne	\$23,822,807
Blair	\$48,620,835	Lycoming	\$114,385,078
Bradford	\$0	McKean	\$0
Bucks	\$0	Mercer	\$10,636,222
Butler	\$0	Mifflin	\$0
Cambria	\$0	Monroe	\$0
Cameron	\$0	Montgomery	\$46,309,600
Carbon	\$0	Montour	\$0
Centre	\$429,885,556	Northampton	\$0
Chester	\$2,540,266	Northumberland	\$0
Clarion	\$0	Perry	\$0
Clearfield	\$12,865,808	Philadelphia	\$0
Clinton	\$0	Pike	\$0
Columbia	\$0	Potter	\$0
Crawford	\$0	Schuylkill	\$15,881,232
Cumberland	\$10,965,178	Snyder	\$0
Dauphin	\$27,237,097	Somerset	\$0
Delaware	\$26,078,847	Sullivan	\$0
Elk	\$0	Susquehanna	\$0
Erie	\$33,247,341	Tioga	\$0
Fayette	\$15,314,698	Union	\$0
Forest	\$0	Venango	\$0
Franklin	\$7,168,996	Warren	\$0
Fulton	\$0	Washington	\$0
Greene	\$0	Wayne	\$0
Huntington	\$0	Westmoreland	\$14,327,832
Indiana	\$0	Wyoming	\$0
Jefferson	\$0	York	\$17,781,863
Juniata	\$0	TOTAL	\$932,195,203

Table 13
Spending by Visitors to Penn State for Conferences, Sporting, Cultural
and Alumni Events by County, 2008

County	Visitor Spending	County	Visitor Spending
Adams	\$793,156	Lackawanna	\$7,366,479
Allegheny	\$8,165,749	Lancaster	\$3,901,451
Armstrong	\$397,975	Lawrence	\$148,670
Beaver	\$5,396,296	Lebanon	\$18,001,825
Bedford	\$325,185	Lehigh	\$3,962,862
Berks	\$16,077,160	Luzerne	\$13,950,632
Blair	\$32,096,293	Lycoming	\$56,524,184
Bradford	\$251,617	McKean	\$88,897
Bucks	\$1,218,996	Mercer	\$4,054,893
Butler	\$151,483	Mifflin	\$1,718,077
Cambria	\$409,473	Monroe	\$86,087
Cameron	\$30,144	Montgomery	\$16,517,607
Carbon	\$465,922	Montour	\$125,937
Centre	\$445,087,728	Northampton	\$208,957
Chester	\$8,222,131	Northumberland	\$445,252
Clarion	\$55,177	Perry	\$29,377
Clearfield	\$8,111,768	Philadelphia	\$277,673
Clinton	\$1,641,371	Pike	\$947,412
Columbia	\$417,124	Potter	\$58,753
Crawford	\$490,454	Schuylkill	\$6,756,140
Cumberland	\$6,805,837	Snyder	\$78,679
Dauphin	\$37,077,171	Somerset	\$80,975
Delaware	\$9,392,654	Sullivan	\$61,051
Elk	\$216,364	Susquehanna	\$309,607
Erie	\$26,670,602	Tioga	\$309,090
Fayette	\$6,261,456	Union	\$408,717
Forest	\$0	Venango	\$52,873
Franklin	\$5,785,126	Warren	\$41,127
Fulton	\$36,019	Washington	\$92,729
Greene	\$85,321	Wayne	\$30,910
Huntington	\$1,843,685	Westmoreland	\$5,510,769
Indiana	\$198,741	Wyoming	\$85,316
Jefferson	\$67,695	York	\$10,022,559
Juniata	\$135,900	TOTAL	\$776,637,339

B. Impact of Penn State's Operations on County Government Revenues

Table 14
Penn State's Government Revenue Impact by County, 2008

County	Government Revenue Impact	County	Government Revenue Impact
Adams	\$109,804	Lackawanna	\$828,532
Allegheny	\$942,000	Lancaster	\$1,508,071
Armstrong	\$54,318	Lawrence	\$28,178
Beaver	\$500,407	Lebanon	\$4,650,848
Bedford	\$56,436	Lehigh	\$490,357
Berks	\$1,498,138	Luzerne	\$1,410,905
Blair	\$3,162,873	Lycoming	\$5,286,523
Bradford	\$35,330	McKean	\$10,003
Bucks	\$211,397	Mercer	\$439,537
Butler	\$27,144	Mifflin	\$195,812
Cambria	\$84,294	Monroe	\$15,775
Cameron	\$3,701	Montgomery	\$989,140
Carbon	\$68,690	Montour	\$28,095
Centre	\$38,283,369	Northampton	\$34,303
Chester	\$671,752	Northumberland	\$87,456
Clarion	\$7,452	Perry	\$4,900
Clearfield	\$1,422,934	Philadelphia	\$33,760
Clinton	\$200,842	Pike	\$1,312,651
Columbia	\$64,769	Potter	\$8,427
Crawford	\$79,786	Schuylkill	\$784,696
Cumberland	\$1,565,221	Snyder	\$466,974
Dauphin	\$15,012,184	Somerset	\$30,673
Delaware	\$531,127	Sullivan	\$8,575
Elk	\$30,341	Susquehanna	\$82,658
Erie	\$2,504,154	Tioga	\$44,761
Fayette	\$707,973	Union	\$121,949
Forest	\$19	Venango	\$6,056
Franklin	\$465,799	Warren	\$5,010
Fulton	\$4,379	Washington	\$89,217
Greene	\$11,125	Wayne	\$5,599
Huntington	\$735,924	Westmoreland	\$658,316
Indiana	\$30,064	Wyoming	\$14,133
Jefferson	\$24,702	York	\$2,535,899
Juniata	\$26,562	TOTAL	\$91,352,797

Table 15 Total Employment Impact of Penn State by County, 2008

County	Total Employment Impact	Direct Impact	Indirect Impact	County	Total Employment Impact	Direct Impact	Indirect Impact
Adams	216	144	72	Lackawanna	328	219	109
Allegheny	819	546	273	Lancaster	1,071	714	357
Armstrong	105	70	35	Lawrence	39	26	13
Beaver	265	177	88	Lebanon	5,049	3,366	1,683
Bedford	89	59	30	Lehigh	221	148	74
Berks	795	530	265	Luzerne	520	347	173
Blair	1,723	1,148	574	Lycoming	1,831	1,221	610
Bradford	66	44	22	McKean	24	16	8
Bucks	317	211	106	Mercer	131	87	44
Butler	40	27	13	Mifflin	473	315	158
Cambria	110	73	37	Monroe	23	15	8
Cameron	8	5	3	Montgomery	456	304	152
Carbon	121	81	40	Montour	32	22	11
Centre	17,765	11,843	5,922	Northampton	55	37	18
Chester	435	290	145	Northumberland	116	78	39
Clarion	15	10	5	Perry	18	12	6
Clearfield	779	519	260	Philadelphia	76	51	25
Clinton	446	297	149	Pike	250	167	83
Columbia	113	75	38	Potter	16	11	5
Crawford	126	84	42	Schuylkill	413	275	138
Cumberland	839	559	280	Snyder	23	15	8
Dauphin	5,930	3,953	1,977	Somerset	21	14	7
Delaware	293	195	98	Sullivan	16	11	5
Elk	57	38	19	Susquehanna	82	55	27
Erie	938	625	313	Tioga	81	54	27
Fayette	270	180	90	Union	105	70	35
Forest	0	0	0	Venango	15	10	5
Franklin	263	176	88	Warren	11	8	4
Fulton	10	6	3	Washington	24	16	8
Greene	23	15	8	Wayne	8	5	3
Huntington	499	333	166	Westmoreland	144	96	48
Indiana	52	34	17	Wyoming	23	15	8
Jefferson	18	12	6	York	911	607	304
Juniata	37	25	12	TOTAL	46,185	30,790	15,395

V. Methodology

A. Impact on State Business Volume and Government Revenue

Penn State expends more than \$3 billion annually. The University is a major employer in the Commonwealth and, as such, a major generator of personal income for state residents. Businesses operating within Pennsylvania in the wholesale, retail, service and manufacturing sectors benefit from the direct expenditures of the institutions and their faculty, staff, students and visitors on goods and services. In addition, many of these "direct" expenditures are re-circulated in the economy as recipients of the first-round of income re-spend a portion of this income with other businesses and individuals within the state. This re-spending is termed the "multiplier" or "indirect" effect.

This economic impact analysis measures the effect of both direct and indirect business volume and government revenue impacts for the 24 campuses. The methodology employed in the calculation of these impacts is derived from the standard set of impact research tools developed by the American Council on Education (ACE)¹² for the measurement of college and university economic impact. The ACE-based methodology is well established, having been used in hundreds of impact studies throughout the United States. Tripp Umbach has previously used the same methodology in Pennsylvania in a multi-university study of the impacts of medical schools.¹³

The ACE methodology employs linear cash-flow modeling to track the flow of institution-originated funds through a delineated spatial area.¹⁴ For Penn State impact analysis, computerized spreadsheet models were developed for the University as a whole and for each of the 24 locations of the University, with the models measuring impact on the state economy and government revenues. Figure 1 shows the general structure of the impact models used for the Pennsylvania State University.

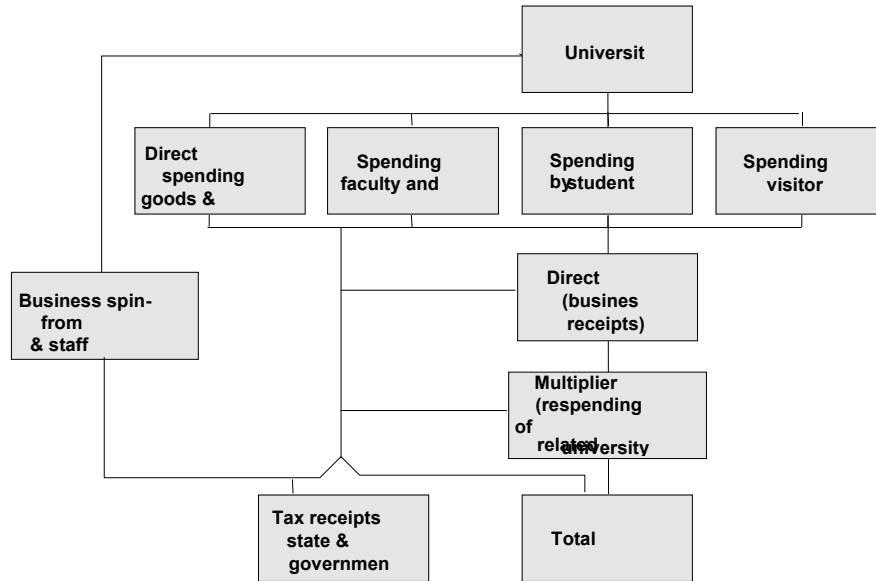
By using this economic impact model, the Tripp Umbach research team has been able to provide Penn State with a detailed quantification of the total direct and indirect impact of the University on the economy of Pennsylvania and on each of the State's 67 counties. The impact models provide measures of business volume and state government revenues allocable to the university, together with breakouts of the individual categories of spending that comprise the total impact (e.g. institutional capital spending, student spending, faculty spending, etc.).

¹² Caffrey, John and Isaacs, Herbert, "Estimating the Impact of a College or University on the Local Economy," American Council on Education, 1971.

¹³ Tripp Umbach & Associates, Inc., "The Economic Impact of Medical Centers of Excellence on the Commonwealth of Pennsylvania". Harrisburg, Pennsylvania. The Economic Development Partnership Taskforce on Medical Centers of Excellence, 1995. Pennsylvania academic medical centers sponsoring the study included the Allegheny Health Education and Research Foundation (AHERF: incorporating Hahnemann University and the Medical College of Pennsylvania), Penn State Hershey Medical Center, the University of Pennsylvania Health System, University of Pittsburgh Medical Center, Thomas Jefferson University and Temple University.

¹⁴ The ACE methodology is highly adaptable to different geographic scales. It is suitable for measuring impact on neighborhoods, municipalities, counties, states, regions or nations. In the study reported herein for the State System of Higher Education, the impact of the universities is measured at the state and county scales.

Figure 1
Pennsylvania State
University



B. Employment Impact

The research reported here, measures the direct employment impact of the University. In addition, the research quantifies the indirect employment generated at in-state businesses by expenditures emanating from the University. An employment multiplier of 2.20 was generated by Tripp Umbach for The Pennsylvania State University project. While employment multipliers at the state level range from as low as 1.4, the multiplier for Penn State is comparatively higher due to the large amount of out-of state visitors and research grants and the impact of out- of-state students and their visitors.

C. Data Sources

As noted above, this research project closely follows the ACE methodology for the performance of impact analysis for a higher education institution. The methodology requires that a university supply detailed information related to expenditure levels and geographic location of expenditures, together with staffing and other related economic information. The main sources of data used in The Pennsylvania State University economic impact study are as follows:

1. Penn State Supplied Data

The University's finance office maintains a broad range of operational and financial data for Penn State. During initial consultations between Tripp Umbach and the university it was determined that, where possible, these central databases should be used to avoid overburdening the individual campuses with data collection requirements.

2. Data Supplied by Individual Campuses

The majority of information required for the individual campus visitors section of the models was provided by each university campus directly. Tripp Umbach developed a data collection form which was distributed to each of the campuses for completion – all 24 campuses completed the form in time for inclusion in the study.

3. Data Collected by Surveys Administered to Alumni and Business Owners

Data on alumni and business owners in the Commonwealth of Pennsylvania was collected via quantitative surveys administered via mail. These surveys gathered information on campus visits, volunteer activities, charitable contributions and other key data required for the impact modeling.

4. Secondary-Sourced Data

Census data from the economic census, together with Bureau of Labor Statistics information were required for completion of the models. Tripp Umbach gathered budgetary information from each of the counties containing a Penn State campus to facilitate the modeling of government revenue impacts allocable to the University. To complete the economic impact models, Tripp Umbach used student, faculty, and staff spending data from other studies completed for the State System of Higher Education and other recent projects throughout the Commonwealth.

Appendix: Glossary of Terms

Business Volume Model	Calculates capital account, goods and service, staff, student and visitor spending, as well as the value of business property.
Government Revenue Model	Calculates the amount of tax (e.g., income, sales) received by the Commonwealth of Pennsylvania from The Pennsylvania State University-related businesses and populations.
Total Business Volume Impact	Direct impact multiplied by indirect impact multiplier.
Direct Impact	Sum of total expenditures for capital, and goods and services, and staff, patients and visitors spending.
Indirect Impact	Standard multiplier as recommended by American Council on Education representing the re-spending taking place in the study area (2.3 times direct impact).
Capital Account Expenditures	A five-year average of spending on equipment, buildings and land.
Goods, Services and Supplies Expenditures	Total non-capital and non-payroll spending for the 12-month period of the study (2008).
Total Expenditures by Staff	Sum of spending for rental housing and non-housing items by those residing in the area and general spending in-area by those not residing in the area.
Value of Business Property	Calculates the value of business real property and business inventory committed to The Pennsylvania State University's business volume.
Pennsylvania State Model	Calculates the impact on the entire state of Pennsylvania.
Study Period	2008