

Higher Education Council of Berks County (HECBC) Economic Impact Study
Paff, L. A. & D'Allegro, M. A.
October 16, 2007

Abstract

In spring 2006, the Higher Education Council of Berks County (HECBC) conducted in a study to measure the economic impact of the five colleges located in Berks County: Alvernia College, Albright College, Kutztown University, Pennsylvania State University, Berks Campus (Penn State Berks) and Reading Area Community College (RACC). Although many higher education institutions have been subjected to economic impact analyses, the lead investigators are unaware of any one economic impact study that investigated a set of institutions as varied as the institutions included in the HECBC economic impact study.

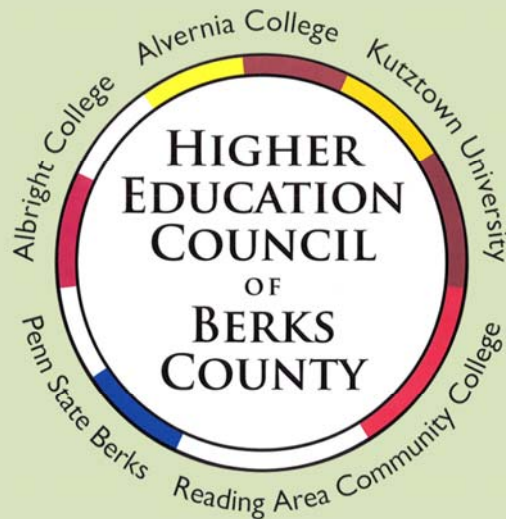
The five direct measures of economic impacts compiled for the study were core expenditures, student discretionary spending, estimates of rental payments, campus visitors and student volunteer time. Indirect economic impacts were derived from core expenditures, student discretionary spending and visitors to campus. The five colleges in Berks County contribute greatly to the Berks County economy. Overall, this study estimates that the direct and indirect economic impacts to the local economy are \$923 million conservatively with an upper bound of over \$1.2 billion.

These economic impact estimates are comparable to the 2003 Pennsylvania State University Economic Impact Survey and the 2006 Pennsylvania State System of Higher Education Economic Impact Study. That said, the economic impact study does not address many additional economic benefits that the five colleges provide. Mainly, the economic impact of alumni, charitable contributions, faculty research, grant obtainment, small business entrepreneurial and incubator resources and college partnerships with business and industry were not explored in this study.

Higher Education Council of Berks County (HECBC) Economic Impact Survey

October 2007

**Questions or comments may be directed to:
Dr. Lolita Paff, Associate Professor of Business Economics**



Prepared by HECBC Partners

Special thanks to

Dr. Mary Lou D'Allegro, Senior Director- Planning, Research & Assessment, Penn State Berks,
Dr. Lolita Paff, Associate Professor- Business Economics, Penn State Berks and
Dr. Lisa Shibley, former Director- Planning, Research & Assessment, Penn State Berks

The Economic Impact report can be downloaded from the Web at berks.psu.edu/hecbc

Table of Contents

	Page
Executive Summary	iii
Introduction	1
Aim and Scope of this Report	5
Direct Spending- Academic Institutions	5
Direct Spending- Students.....	7
Direct Spending- Visitors	10
Indirect Economic Impacts.....	11
Economic Impact of Student Volunteers.....	12
Summary	14
Looking to a Bright Berks County Future.....	17

Table and Figures

	Page
Figure 1: Core Expenditures.....	6
Figure 2: Student Discretionary Spending- 2004.....	8
Figure 3: Expenditure Multipliers Used in Higher Education Economic Impact Studies	11
Table 1: Analysis of Faculty Expenditures- 2004.....	6
Table 2: Capital Expenditures by Type of Investment & Institution- 2004.....	7
Table 3A: Low Estimate- Rental Payments Assuming 50% of Students Not Living On Campus	9
Table 3B: High Estimate- Rental Payment Assuming 80% of Students Not Living On Campus.....	9
Table 4: Economic Impact of Visitors to Campus	10
Table 5A: Indirect Economic Impact Estimates Based on Low Estimate Values & 1.78 Multiplier.....	12
Table 5B: Indirect Economic Impact Estimates Based on High Estimate Values & 2.30 Multiplier.....	12
Table 6A: Low Estimate- Student Volunteer Time Value	14
Table 6B: High Estimate- Student Volunteer Time Value.....	14

Executive Summary

In spring 2006, the Higher Education Council of Berks County (HECBC) conducted a study to measure the economic impact of the five colleges located in Berks County: Alvernia College, Albright College, Kutztown University, Pennsylvania State University, Berks Campus (Penn State Berks) and Reading Area Community College (RACC). Penn State Berks agreed to provide the lead investigator(s) for the study. Direct and indirect estimates of economic impact were ascertained. The five direct measures of economic impacts compiled for the study were core expenditures, student discretionary spending, estimates of rental payments, campus visitors and student volunteer time. Indirect economic impacts were derived from core expenditures, student discretionary spending and visitors to campus.

The five colleges in Berks County contribute greatly to the Berks County economy. Over 21,000 students enroll in Berks County colleges supported by over 2,600 full-time employees. Another 128,000 patrons visit the Berks County college campuses and venues. Estimated spending of students and visitors exceed \$179 million. Students who live on campus or in nearby off-campus apartments generate rental property revenues approximated between \$10 million and \$16 million. Students provide \$500,000 to \$1,500,000 additional resources in their service to the community.

Overall, this study estimates that the direct and indirect economic impacts to the local economy are \$923 million conservatively with an upper bound of over \$1.2 billion. These economic impact estimates are comparable to the 2003 Pennsylvania State University Economic Impact Survey and the 2006 Pennsylvania State System of Higher Education Economic Impact Study. In short, this study reinforces the magnitude of the economic and financial contributions of the five colleges in Berks County.

The five colleges' contributions to the Berks County economy are only one piece of the puzzle. At the heart of each college is civic, cultural, and social advancement. Through the many faculty, student and staff academic endeavors, the five colleges provide professional expertise and original research that reaches far beyond the Berks County borders. The five colleges attract well-known speakers, artists, and authors to their campuses. The five colleges curate special art and historical cultural artifact collections. Library facilities and holdings further enrich educational opportunities afforded to Berks County.

Many alumni of the five colleges remain in Berks County providing a professional and well-trained workforce. Notwithstanding, the five colleges impart sound moral character and keen sense of community commitment. As a result, the citizenship of Berks County is strengthened as several graduates engage in civil and social activities.

This economic impact study does not address many additional economic benefits that the five colleges provide. Mainly, the economic impact of alumni, charitable contributions, faculty research, grant obtainment, small business entrepreneurial and incubator resources and college partnerships with business and industry were not explored in this study. In short, the economic impact imparted by the five colleges is a major source of economic and cultural enrichment.

Introduction

Five colleges and universities are located in Berks County: Albright College, Alvernia College, Kutztown University, Pennsylvania State University-Berks (Penn State Berks) and Reading Area Community College (RACC). Each higher education institution provides a unique mix of post-secondary education and training to Berks County residents as well as those across the Commonwealth of Pennsylvania, the nation and the world. Collectively, the five colleges advance local workforce competitiveness and improve employment opportunities in Berks County. In addition, all five colleges support businesses in Berks County through direct spending on goods and services and through the salaries paid to faculty and staff. All five colleges have also spent significant amount of resources on capital construction projects. Spending by students, the families of students, and visitors has also added much to the Berks County economy. Moreover, graduates of the five higher education institutions contribute to regional productivity through increased wages, volunteer service and connection to the community.

Economic benefit is only one type of advantage of a regional higher education presence. Higher education provides a wide array of intangible benefits. These benefits are illustrated in the descriptions of the five higher education institutions presented below.

Albright College

Founded in 1856, Albright College is a nationally ranked, independent liberal arts college in northeast Reading. Albright College has been an integral part of this community for more than 100 of its 151 years. With more than 1,650 traditional day students and another 500 accelerated degree and graduate students, Albright College emphasizes a rigorous liberal arts education with an interdisciplinary focus and a flexible, individualized educational experience. The college also offers pre-professional programs. Albright College's Accelerated Degree Completion program, designed for working adults with two years of college, allows students to complete a bachelor's degree in two years while working full time. The program focuses on learning that can be immediately translated into the workplace. Accelerated Degree Start allows working adults to complete the general studies portion of their degree in two years while working full time.

Almost one-fifth of Albright College students come from Berks County. The remaining students hail across the United States and 25 countries. More than 3,000 Albright College alumni live in Berks County. More than 100 Albright-educated physicians currently live and work in Berks County.

Albright College awards over \$1 million each year in Shirk Scholarships to Berks County high schools graduates. Established to honor Gene Shirk, Albright professor, coach and Reading mayor, Shirk Scholarships encourage students to follow his commitment to serving the community. Accordingly, each Shirk Scholar provides at least 50 hours of community service each year to Berks County organizations. A high percentage of Shirk Scholars remain in Berks County after graduation.

North 13th Street in Reading is possibly the only street in the country where an education from kindergarten to college can be earned. In 2006, Albright College established the 13th Street Gang

Scholarship, valued to \$15,000, offered to all students who graduate from North 13th Street schools and are accepted at Albright College.

Albright College recently completed a community public-private partnership with the Reading School District to construct a stadium. Rather than solely incurring the cost of a stadium, the Reading School District contributed \$2 million to the Albright College's \$6.4 million project to renovate Shirk Stadium. In fall 2007, Albright College launched a \$100,000 project with Penn State Berks and Reading Hospital to create programs that will help reduce the incidence of childhood obesity in Berks County.

Albright College contributes to the vitality of arts and culture. Visitors to the Freedman Gallery hail regionally. With no admission fee, the Gallery is especially attractive to schools and non-profit organizations. The Gallery hosts several thousand local school children annually. The F. Wilbur Gingrich Library is also open to the community. The Albright Speaker's Bureau provides expert speakers to local organizations at no cost. In addition, Albright College offers many free and minimal cost lectures, films, theatre and musical performances.

The Albright College Learning Center offers daycare pre-school, kindergarten and first grade programs for children in the community. Albright College sports and fitness facilities offer many programs to the public. Albright College hosts the Center for Community Leadership, a joint project of the five colleges, the private sector and local government. Among its many charges, the Center for Community Leadership trains elected officials to be effective leaders. The Center also facilitates cooperative efforts among municipalities.

Alvernia College

Alvernia College is a private Franciscan college rooted in the Catholic and liberal arts tradition offering more than 50 liberal arts and professional programs of study. With an enrollment of 2,850 traditional day students, non-traditional and graduate students, Alvernia College supports three campuses.

Founded in 1958 by members of a Catholic women's religious order, the Bernardine Franciscan sisters, emigrated from Eastern Europe to Eastern Pennsylvania to teach and serve immigrant miners' families. Their Catholic values of social justice and peacemaking are at the core of their quality, holistic academic program. In this tradition, education is not about knowledge merely for its own sake, but about applying ideas and theories in service to others. In sum, Alvernia College prepares graduates for life and work in a world calling for civic engagement and moral leadership.

In 2006, Alvernia College introduced a Ph.D. program in Leadership, the only doctoral degree offered in the region. The Ph.D. program emphasizes ethical issues that impact leaders. These issues include policies, legal constraints and socioeconomic conditions that impact organizations.

In March 2007, Alvernia College completed a new strategic plan and comprehensive master plan. Jointly, the plans should help to infuse \$25- \$30 million in capital improvements to the Reading campus over the next 15 years. In 2008, Alvernia College celebrates 50 years of

preparing graduates to achieve their personal dreams and professional success, to be engaged citizens and lifelong learners.

Kutztown University

Kutztown University of Pennsylvania is a member of the Pennsylvania State System of Higher Education. The University is dedicated to excellence in learning and to the success of its diverse community of students. The University prepares its students to meet lifelong intellectual, ethical, social and career challenges and responsibilities by providing quality programs that engage students in critical, analytical and aesthetic inquiry. A well-rounded program of athletic, cultural and social events is integral to campus life. Kutztown University is committed to continuous improvement, partnerships and collaborations that encourage the development of citizens who contribute to a global society. Currently, 9,585 (8,527 undergraduates) students are enrolled at the university from 21 states and 41 countries.

Kutztown University's Center for Lifelong Learning was created in an effort to meet the educational, training and personal learning needs (credit and non-credit) of the community. Lifelong opportunities include workshop, short courses, and programs which meet the training and professional development needs of business, public schools, social agencies, health care organizations and other professions. The Kutztown University Small Business Development Center (SBDC) provides practical experience with every stage of business from pre-venture to multi-billion dollar companies. The SBDC deliver a complete Business Assistance Program with specialty areas such as Government Procurement and International Trade.

Penn State Berks

Penn State Berks, a campus college of Pennsylvania State University, serves the educational and employment needs of Berks County and its extended service area. Approximately 2,700 students are enrolled in a variety of associate and baccalaureate programs including engineering, life science, business and elementary education. Students can enroll in over 160 bachelor degree programs that can be completed at other Penn State campuses.

The mission of Penn State Berks campus focuses on the following three areas:

- Teaching and learning,
- Research, scholarship and creative activity and
- Community service and outreach.

In fact, community outreach and service is a core tenet of the Penn State Berks experience for students, faculty and staff. Some examples of this service include programs for middle and high school students, seminars and workshops for business executives and hosting community events. Penn State Berks students volunteer their time with Habitat for Humanity, tutor inner-city youth through the Penn State Educational Partnership, raise money to support THON, Penn State's 48-hour dance marathon to benefit pediatric cancer and assist the victims of Hurricane Katrina.

Penn State Berks encourages students to conduct undergraduate research collaborating with faculty. As a result of their research with faculty partnerships, students gain valuable experience to include on their resumes, list on graduate school applications and make professional contacts. Some students have earned co-authorship on scholarly publications and conference presentations.

The Boscov-Lakin Information Commons at the Thun Library includes a multimedia computer lab, an electronic classroom, technology pods for electronic research and communication and the Wyomissing Polytechnic Institute exhibit. Approximately \$140,000 is spent annually on new volumes and services in the library.

Established through a generous endowment, the Freyberger Gallery is dedicated to making fine art available to the community. The Gallery hosts several events and exhibits annually to stimulate an awareness and appreciation for the arts. Many exhibits feature local artists and alumni of Pennsylvania State University. The Field of Vision Outdoor Sculpture show and tour is an exhibition featuring work from sculptors of southeast Pennsylvania.

Penn State Berks, working with the Berks County Economic Partnership and the other four Berks County higher education institutions, recently received a \$15,000 Keystone Innovation Zone (KIZ) planning grant from the Pennsylvania Department of Community and Economic Development's Technology Investment Office. This grant will fund the growth of corporate, technology, and health and medical enterprises along the Route 183 Corridor. In addition, the Office of Continuing Education has recently invested \$15,000 to assist the Workforce Investment Board initiative to develop information technology training.

Reading Area Community College

Reading Area Community College (RACC) is a comprehensive community college committed to offering high quality educational programs leading to an associate degree, certificate and diploma. RACC also offers programming and services to respond to the needs of the community by creating lifelong learning opportunities through adult and continuing education, training for business and industry, community services or cultural enrichment.

Since its founding in 1971, RACC has continued to meet the growing and diverse educational, training and cultural needs of the city of Reading and Berks County. The enrollment has increased twenty-fold, exceeding 4,100 students enrolled in its over 60 associate degree and certificate programs. An additional 35,000 students are enrolled in its continuing education and job training programs.

RACC has taken a leadership role in establishing partnerships with business and industry, local governments, community organizations and other educational institutions. These cooperative ventures include a partnership with the Allied Health Academy at St. Joseph Medical Center to prepare native Spanish-speakers for state clinical nurse's aides licensing examination. RACC also collaborates with the Berks and Lancaster County Career and Technology Centers and Penn State Berks. This partnership allows students to earn credits in high school toward an Associate in Applied Science in Nanoscience Technology from Reading Area Community College and a Bachelor of Science with a concentration in Nanoscience from Penn State Berks. In 2006-2007 the Workforce and Economic Development Division of RACC in cooperation with the Berks County and Lancaster County Workforce and Investment Boards developed and offered over 100 customized courses for over 50 regional companies.

The college has completed an ambitious \$29 million building program, partnering with area philanthropist, Rolf Schmidt, who tendered the initial substantial donation. The Schmidt Training and Technology Center provides area businesses and industry with customized training. Training in basic skills, technology and industrial maintenance/mechatronics engineering technology are some examples of corporate training conducted at the Schmidt Training and Technology Center. The facility has been designated a National Center for Integrated Systems Technology in Advanced Manufacturing affiliate.

Examples of student community service include local participation in the Relay for Life of Reading, volunteering at the Children's Home of Reading and working with Project Alma. Project Alma raised money for students displaced by Hurricane Katrina. As a result of these volunteer efforts RACC received national recognition as part of the President's Higher Education Community Service Honor Roll.

Aim and Scope of this Project

The purpose of this report is threefold. First, key direct economic impact estimates are identified and defined. Second, the economic impact of students and visitors to Berks County higher education institutions is explicated. Third, this report affords an overview of the social contributions that higher institutions impart. These social contributions include volunteer efforts, theatre and arts resources, athletic events, mentoring and other collegiate activities and resources the five higher education institutions avail to the community.

The estimation of economic impact is a multi-step process. First, estimated direct expenditure figures are obtained. Second, estimates of the indirect or induced expenditures generated by the direct spending inputs are compiled. These estimates are derived by applying a multiplier to the direct expenditures. Third, the combined direct and indirect amounts are combined. The sum of the direct and indirect expenditures represents the estimate of economic impact that higher education has on Berks County.

The remainder of the report is organized as follows. The second (next) section details the direct spending computations and estimates. The third section clarifies the choice of multipliers and the related indirect impacts, concluding with a table of the combined indirect economic impacts by each college and in total. Fourth, a detailed discussion of the social assets and contributions made by these schools in improving the quality of life in Berks County is given. Finally, the report offers several recommendations for maintaining the higher education infrastructure and its resulting benefits to Berks County.

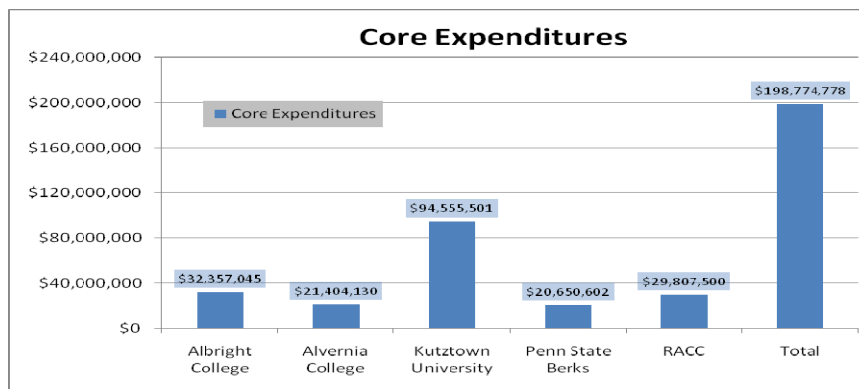
Direct Spending - Academic Institutions

Direct spending includes institutional annual expenditures for operations, payroll and capital projects, annual spending by students and an annual spending by visitors. Direct spending also encompasses payments for salaries for faculty and staff, as well as the operational costs and administrative expenses associated with the ongoing operations of the institutions.

Focusing on institutional spending, the expenditures for operations amounts listed in this study were primarily obtained from Integrated Postsecondary Education Data System (IPEDS) maintained by the National Center for Educational Statistics (NCES). If unavailable in NCES, the data was obtained from the institution’s staff and/or their respective fact books.

As indicated in Figure 1, the direct expenditure amounts, based on the schools’ reported core expenditures were approximately \$199 million (\$198,774,778) in 2004. Core expenditures include the costs associated with instruction, research, public service, academic support, student services, institutional support, operations and maintenance of facilities, depreciation, scholarship expenses and other miscellaneous operating and non-operating items.

Figure 1. Core Expenditures¹



To gain some comparative understanding of the schools’ salary and capital project spending, Table 1 provides an analysis of faculty salary expenditures. Faculty salary amounts reported are based on nine-month equated faculty contracts to maintain consistency across the institutions.

Table 1. Analysis of Faculty Expenditure - 2004

	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Total Employees	529	280	1,028	375	403	2,615
Total Full-time Faculty	102	73	436	89	61	761
Percent of Total Employees	19.3%	26.0%	42.4%	23.7%	15.1%	29.1%
Full-time Faculty Salary Expenditure	\$6,145,859	\$3,898,868	\$24,789,742	\$5,560,211	\$3,087,284	\$43,481,964
Average Salary- All Faculty	\$55,660	\$53,409	\$62,600	\$57,932	\$48,196	\$57,138

Overall, more than 2,600 employees work full-time for the five higher education institutions as shown in Table 2. Of these employees, 761 are faculty. The percent of total employees that are

¹ Pennsylvania State University Budget Office. 2004-04 operating expenditures, Berks – general funds administrative area department summary report. (2005). Retrieved August 27, 2007 from <http://www.budget.psu.edu/OpenBudget/>

full-time faculty range from fifteen percent (15.1%) at RACC to over forty percent (42.4%) at Kutztown University.

Full-time faculty salaries are also listed in Table 1. Full-time faculty salaries represent almost \$44 million (\$43,481,964) of the core expenditures. The total full-time faculty average salary is between \$48,196 at RACC and \$62,600 at Kutztown University. The 2004 full-time faculty average salary of the five colleges, \$57,138, is almost \$4,000 higher than 2004 US Census Bureau estimates of Berks County overall average earnings, \$53,920.²

Table 2 lists 2004 institution capital expenditures by category. This table lists physical plant costs including construction, leasing, buildings, equipment and infrastructure expenditures. Excluded are staff and faculty salary and benefit expenditures. As seen, the total capital expenditures exceed \$63 million (\$63,436,430). Albeit different priorities, the capital expenditures reflect significant levels of on-going infrastructure investments at each of the colleges.

Equipment was the largest 2004 expenditure for Albright College comprising over half (51.6%) of the total capital expenditures for Albright College. Construction in progress was half (50.0%) of the 2004 capital expenditures for Alvernia College. Kutztown University spent over half (51.6%) its 2004 total capital expenditures on property obtained under capital leases. Land improvements comprised of over half of Penn State Berks (51.7%) 2004 capital expenditures. Construction in progress was about two-thirds (67.8%) of the total capital expenditures for RACC.

Table 2. Capital Expenditures by Type of Investment & Institution- 2004

Expenditure Category	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Land improvements	\$75,217	\$545,705	0	\$2,500,000	\$235,447	\$3,356,369
Infrastructure	0	NA	\$1,290,652	\$2,335,000	0	\$3,625,652
Buildings	\$896,837	\$1,999,809	\$13,493,613	0	\$2,222,681	\$16,702,020
Equipment	\$1,364,717	\$1,351,330	\$1,614,564	0	\$218,274	\$5,513,835
Art and Library Collections	\$123,415	\$143,949	\$197,400	0	0	\$464,764
Property Obtained Under Capital Leases	NA	\$3,649,858	\$19,513,974	0	0	\$23,163,832
Construction in Progress	\$182,301	\$7,690,651	\$1,706,830	0	\$5,636, 619	\$10,609,958
<i>Total Capital Expenditures</i>	<i>\$2,642,487</i>	<i>\$15,381,302</i>	<i>\$37,817,033</i>	<i>\$4,835,000</i>	<i>\$8,313,021</i>	<i>\$63,436,430</i>

Direct Spending - Students

The direct spending by students falls into two main categories: discretionary spending and non-discretionary spending. Discretionary spending typically includes snacks and beverages, personal

² US Census Bureau (2004). *Earnings in the past 12 months (in 2004 inflation-adjusted dollars)*. Retrieved August 16, 2007 from <http://factfinder.census.gov/servlet/STTable>

care items, entertainment and technology items. The primary non-discretionary item (exclusive of tuition and books) is rent.

A college student spends \$287 per month on discretionary items.³ Multiplied by 12 months, a student spends approximately \$3,444 per year. However, there is variation in monthly student spending depending on several student demographics and enrollment characteristics including:

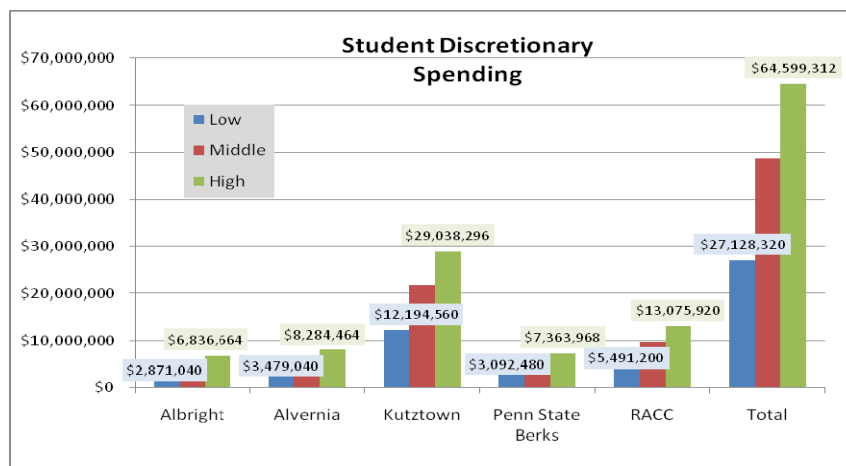
- Degree being sought (associate vs. baccalaureate),
- Attendance status (full-time vs. part-time),
- Degree year (freshmen vs. seniors) and
- Resident status (living on campus vs. commuting to campus).

Total spending (discretionary vs. discretionary) is highest among full-time students and baccalaureate degree seeking students. However, purely discretionary spending is highest among part-time students (\$406 average per month) and two-year degree candidates (\$330 average per month). Reasonably, these students spend more than their full-time and baccalaureate degree seeking counterparts because they have more potential spending time. Further, these students are more likely to be working during the school year. Students living on campus spend \$160 per month, whereas those either living with their parents or living elsewhere spend \$254 and \$381, per month respectively. First year students spend \$184 per month, yet seniors spend \$261 per month.

Because there is a significant variation of monthly student spending depending on student type (\$160 vs. \$406), student discretionary spending was computed under three assumptions: low-\$160 per month, middle-\$287 per month and high-\$381 per month. The \$406 student spending per month figure was not used in the discretionary spending economic impact estimates because, with the exception of RACC, most of the students at the other four higher education institutions are enrolled full-time.

As Figure 2 reports, students' direct spending in the local economy ranged from spending levels between \$27 million (\$27,128,320) and \$64 million (\$64,599,312) per year (assuming students attend his/her respective institution eight months per year).

Figure 2. Student Discretionary Spending- 2004



³Gardyn, R. (2002, November). Educated consumers. *American Demographics*, 24, 18-19.

In addition to discretionary spending, students contribute to the Berks County economy through non-discretionary spending on housing. Alvernia College report that almost half (47.0%) of their students are from Berks County. Albright College reported that 17.0% of their students were from Berks County in 2004. At Kutztown University 20% of students hailed from Berks County in 2004. Over one-third (35.5%) of Penn State Berks students were from Berks County in fall 2004. It seems likely that most, if not all these students would live at home and commute to college. However, it is also possible that students that do not reside in Berks County would also commute to campus. In order to avoid overstating the financial impacts of commuter students who do not live with their families, 50% was established as a low estimate of student tenants.

To identify a high estimate of the student tenants, the study honed on the percent of students living in Berks County reported by Albright College and Kutztown University and substantiated by the US Census. Therefore, the study assumed a high estimate of 20.0% already live in Berks County, leaving 80% to reside in campus housing. The low and high estimates of the student non-discretionary spending on housing are reported in Table 3A and Table 3B.

Table 3A. Low Estimate- Rental Payments Assuming 50% of Students Not Living On Campus

	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Students	2,243	2,718	9,585	2,416	4,290	21,252
Campus Housing Capacity	1,101	530	4,100	804	0	6,535
Possible Number of Student Tenants	1,142	2,188	5,485	1,612	4,290	14,717
Estimated Number of Tenants (50% x student tenants)	571	1,094	2,743	806	NA	5,214
Adjustment To Reflect Four Tenants Per Rental Unit	÷ 4	÷ 4	÷ 4	÷ 4	NA	÷ 4
Estimated Number of Units Rented	142	273	685	201	NA	1,301
Estimated Monthly Rental Cost	\$649	\$649	\$649	\$649	NA	\$649
<i>Annualized Rental Payments</i>	<i>\$1,105,896</i>	<i>\$2,126,124</i>	<i>\$5,334,780</i>	<i>\$1,565,388</i>	NA	<i>\$10,132,188</i>

Table 3B. High Estimates- Rental Payments Assuming 80% of Students Not Living On Campus.

	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Students	2,243	2,718	9,585	2,416	4,290	21,252
Campus Housing Capacity	1,101	530	4,100	804	0	6,535
Possible Number of Student Tenants	1,142	2,188	5,485	1,612	4,290	14,717
Estimated Number of Tenants (80% x student tenants)	914	1,750	4,388	1,290	NA	8,342
Adjustment To Reflect Four Tenants Per Rental Unit	÷ 4	÷ 4	÷ 4	÷ 4	NA	÷ 4
Estimated Number of Units Rented	228	437	1,097	322	NA	2,084
Estimated Monthly Rental Cost	\$649	\$649	\$649	\$649	NA	\$649
<i>Annualized Rental Payments</i>	<i>\$1,775,664</i>	<i>\$3,403,356</i>	<i>\$8,543,436</i>	<i>\$2,507,736</i>	NA	<i>\$16,230,192</i>

Note that most of the RACC students are likely to live in Berks County. Therefore, it is assumed based on this model that there is zero non-discretionary spending impact by students who attend RACC because the RACC students already lived in Berks County previous to enrollment.

As shown in Table 3A and Table 3B, students rent between 1,301 and 2,084 units in Berks County each year. The \$649 estimated monthly rental cost is the median monthly housing cost in

Berks County during 2004 as reported by the US Census Bureau.⁴ Figure 2, Table 3A and Table 3B show that student spending on discretionary spending and housing range between \$37 million (\$37,260,508) and \$81 million (\$80,829,504) each year.

Direct Spending- Visitors

Another source of economic impact is campus visitors. Visitors to campus are not enrolled in course or programs but may attend concert, studio and other campus sponsored events. Many visitors are prospective students or partake in summer camps. The Pennsylvania Tourism Office states the average per person expenditure per day during overnight visits was \$111.80 in Berks and Lancaster counties.⁵ Day-trip per person average expenditure state-wide was \$100. In order to avoid overstating or upwardly biasing the estimates, these amounts are multiplied by family, not per person. Thus, these amounts reflect a conservative estimate of spending on gas, food, entertainment and sundries in Berks County as a result of families visiting one of the five college campuses. Table 4 summarizes the estimates of direct economic impact associated with collegiate visitor spending.

Table 4. Economic Impact of Visitors to Campus

	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Visitors	40,000	1,164	79,648	7,333	NA	128,145
Low Estimate	\$100.00	\$100.00	\$100.00	\$100.00	NA	\$100.00
High Estimate	\$111.80	\$111.80	\$111.80	\$111.80	NA	\$111.80
<i>Low Estimate</i>	<i>\$32,000,000</i>	<i>\$931,200</i>	<i>\$63,718,400</i>	<i>\$5,866,400</i>	<i>NA</i>	<i>\$102,516,000</i>
<i>High Estimate</i>	<i>\$35,776,000</i>	<i>\$1,041,082</i>	<i>\$71,237,171</i>	<i>\$6,558,635</i>	<i>NA</i>	<i>\$114,612,888</i>

Note that each college was responsible for reporting visitor information to the lead investigator. As seen from Table 4, the total number of visitors is unavailable for RACC. As a result, the economic impact of visitors is an underestimate of the economic impact of patrons of the five college campuses. Nonetheless, \$102 million (\$102,516,000) to \$114 million (\$114,612,888) is the estimated economic gains attributed to campus visitors.

Albright College hosts approximately 40,000 visitors each year. Visitors to Albright College include prospective students and parents, returning alumni, attendees at alumni, athletics and cultural events and attendees at camps and conferences. In addition, Albright College has hosted the annual *Berks County Science & Engineering Fair* for the last 50 years. Penn State Berks visitor information is based on admission, prospective student visits, gallery patrons and conference usage. Several groups are already slated to use the new RACC Miller Center for the Arts. With over 500 seats, RACC will offer the facility to local arts organizations and make the lobby available for receptions. The Pennsylvania German Cultural Heritage Center at Kutztown

⁴ US Census Bureau (2004). *Berks County, Pennsylvania financial characteristics: 2004 American Community Survey*. Retrieved September 5, 2007 from <http://factfinder.census.gov/servlet/STTable>.

⁵ Pennsylvania Tourism Office, Department of Community and Economic Development. (2003). *2003 annual travel profile*. Harrisburg, PA: Author.

University represents the commitment of Kutztown University to the preservation of Pennsylvania German ("Pennsylvania Dutch") history, folklore and traditions. Genealogical, historical and cultural information are also showcased in the Center's library.

Indirect Economic Impacts

The total economic impact of the five higher education institutions is comprised of direct and indirect economic effects. The measurement of indirect economic impact is an attempt to capture the economic ripple effect that direct expenditures have in spurring additional spending and economic activity throughout Berks County. The indirect economic impact estimates are based on multiplying the direct expenditures by an appropriate multiplier. Figure 3 provides a summary of multipliers used across a broad sample of studies investigating the economic impacts of higher education.

Figure 3. Expenditure Multipliers Used in Higher Education Economic Impact Studies

University Economic Impact Study	Multipliers Used
Widener University, 2005	<i>economic impacts:</i> 2.27 – 2.33 Philadelphia region 1.78 – 2.00 Harrisburg region 2.27 – 2.47 Pennsylvania
Pennsylvania State University & Berks Campus Economic Impact Statement, 2003	2.30 <i>economic impact</i> 1.20 <i>employment factor</i>
University of Florida, 2002-2003	2.00 <i>economic impact</i>
Michigan's Public Universities, 2002	2.00 <i>economic impact</i>
Brigham Young University, 1986, 1996 & 2002	1.50-1.95 <i>economic impact</i> 1.40-1.76 <i>employment factor</i>
University System of Georgia, 2000	1.56 <i>economic impact</i> 2.80 <i>employment factor</i>
West Virginia University, 1998	1.66 <i>economic impact</i> 1.56 <i>employment factor</i>
University of Washington, 1997	2.90 <i>employment</i> 1.57 <i>economic impact</i>
Connecticut independent colleges and universities, 1996	2.33 <i>economic impact</i> 2.86 <i>employment factor</i>
<u>Sources:</u> "The Economic and Fiscal Impacts of Widener University," Econsult Corporation, 2005. "The Pennsylvania State University Economic Impact Statement 2003," Tripp Umbach & Associates, 2004. "A Micro Economic Model to Assess the Economic Impact of Universities: A Case Example," Association for Institution Research, Spring 2003. "Economic Impact of Michigan's Public Universities," SRI, Project # PDH 02-019, 2002.	

Figure 3 shows a wide variation in multiplier estimates over time, dependent upon the region of impact under study (county vs. state). Consistent with the approaches used in estimating the direct impact, this study attempts to avoid upwardly biasing the indirect economic impacts by providing two impact estimates using two multipliers, 1.78 and 2.30. These indirect economic impacts are based on two studies conducted by Pennsylvania institutions within the last four years, the multiplier used for the Harrisburg region in the Widener University study (1.78) and the multiplier used in Pennsylvania State University report (2.30).

Table 5A and Table 5B show the low and high estimates of the indirect economic impact associated with higher education in Berks County. Based on the low estimate, indirect economic impact estimates exceed \$584 million (\$584,585,995). Correspondingly, the high indirect economic estimate of higher education exceeds \$869 million (\$869,370,049).

Table 5A. Indirect Economic Impact Estimates Based on Low-Estimate Values & 1.78 Multiplier

	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Direct Spending-Core Expenditures	\$32,357,045	\$21,404,130	\$94,555,501	\$20,650,602	\$29,807,500	\$198,774,778
Students Discretionary Spending	\$2,871,040	\$3,479,040	\$12,194,560	\$3,092,480	\$5,491,200	\$27,128,320
Visitors to Campus	\$32,000,000	\$931,200	\$63,718,400	\$5,866,400	NA	\$102,516,000
Total Direct Spending	\$67,228,085	\$25,814,370	\$170,468,461	\$29,602,482	\$35,298,700	\$328,419,098
Multiplier	1.78	1.78	1.78	1.78	1.78	1.78
<i>Low-Estimate Economic Impact</i>	<i>\$119,665,991</i>	<i>\$45,949,579</i>	<i>\$303,433,861</i>	<i>\$52,704,878</i>	<i>\$62,831,686</i>	<i>\$584,585,995</i>

Table 5B. Indirect Economic Impact Estimates Based on High Estimate Values & 2.30 Multiplier

	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Direct Spending-Core Expenditures	\$32,357,045	\$21,404,130	\$94,555,501	\$20,650,602	\$29,807,500	\$198,774,778
Students Discretionary Spending	\$6,836,664	\$8,284,464	\$29,038,296	\$7,363,968	\$13,075,920	\$64,599,312
Visitors to Campus	\$35,776,000	\$1,041,082	\$71,237,171	\$6,558,635	NA	<i>\$114,612,888</i>
Total Direct Spending	\$74,969,709	\$30,729,676	\$194,830,968	\$34,573,205	\$42,883,420	\$377,986,978
Multiplier	2.3	2.3	2.3	2.3	2.3	2.3
<i>High Estimate Economic Impact</i>	<i>\$172,430,331</i>	<i>\$70,678,254</i>	<i>\$448,111,227</i>	<i>\$79,518,372</i>	<i>\$98,631,866</i>	<i>\$869,370,049</i>

Economic Impact of Student Volunteers

Community service is another avenue of economic contribution. Examples of community service activities undertaken by the five colleges include working with Habitat for Humanity, serving in the Police Athletic League youth programs, providing science education to summer camp programs, and hosting school groups at gallery exhibits.

For the purpose of this report, the estimates of economic value of student volunteering in the community are based on a three elements:

Percent of students performing community service,

Value of student time and
Number of hours of community service performed.

Specifically, the formula is provided below.

Student Volunteers x Value of Time x Number of Volunteer Hours

Because there is significant divergence in estimates of time and the monetary value of volunteerism, a low and high estimate of both value of student time and volunteer hours were used. An explanation of these parameters used is explained below.

The Corporation for National and Community Service (CNCS) estimates about one-third (35.1%) of Pennsylvania college students engage in volunteer activities each year. Nationally, the student population percent of volunteerism range from 21.4% in Georgia to 62.9% in Wyoming.

For value of time, the minimum wage can provide a low estimate. The minimum wage at the time of this study was \$5.15 per hour. The Independent Sector⁶ estimates that one-hour of volunteer work in Pennsylvania was worth \$17.06 in 2004. This includes all forms of volunteer service from unskilled to technical labor. The Independent Sector estimation of \$17.06 will be used as the high estimate.

Also according to Independent Sector the annual hours volunteered, excluding informal volunteering was 15.5 hours in 2000. The Independent Sector annual volunteer hour estimate, 15.5, will be used in the lower estimate computation. CNCS reported 40.0 hours as the average number of hours volunteered by Pennsylvanians aged 16-24. The median for all Pennsylvanians was 48.0 hours during the years 2003-2005. To be conservative the CNCS estimate, 40.0, hours will be used in the high estimate computation.

Hence, the volunteer economic impact estimates will include low and high estimates. The low and high estimates will depend dually on volunteer hours and estimated reimbursement per hour. In both estimate calculations, 35.1% of the institution's enrollment will be computed to determine the number of student volunteers.

The four specific formulas for low and high estimates for both minimum wage and PA estimated value of volunteer time are listed below.

Minimum Wage, Low Estimate:

0.351 x student volunteers x 15.5 hours x \$5.15 @ hour

Minimum Wage, High Estimate:

0.351 x student volunteers x 40.0 hours x \$17.06 @ hour

PA 2005 Estimated Value of Volunteer Time, Low Estimate:

0.351 x student volunteers x 15.5 hours x \$5.15 @ hour

PA 2005 Estimated Value of Volunteer Time, High Estimate:

0.351 x student volunteers x 40.0 hours x \$17.06 @ hour

⁶ Independent Sector. (2005). *Value of volunteer time*. Washington, DC: Author.

These computations are shown in Table 6A and 6B. As seen student volunteer efforts provide an additional \$500,000 (\$477,934) to \$1,500,000 (\$1,477,701) in economic value to Berks County each year.

Several volunteer activities are not reflected in Table 6A and Table 6B. Albright College faculty share their expertise with the community on such projects as monitoring water quality in Blue Marsh Lake and Lake Ontelaunee, local wetland restoration projects, offering science education on city playgrounds during the summer, teaching Spanish to local physicians, and partnering with local elementary schools. Albright College’s food service provides extra food from the dining halls to local community groups. Penn State Berks student teachers provide additional instruction to elementary education children.

Table 6A. Low Estimate- Student Volunteer Time Value

	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Minimum Wage	\$62,846	\$76,154	\$20,600*	\$67,693	0	\$227,293
PA 2005 Estimated Value of Volunteer Time	\$208,184	\$247,909	\$68,240*	\$224,241	0	\$748,574
<i>Average Value of Student Volunteer Services</i>	<i>\$135,515</i>	<i>\$162,032</i>	<i>\$44,420</i>	<i>\$145,967</i>	<i>0</i>	<i>\$497,934</i>

Table 6B. High Estimate- Student Volunteer Time Value

	Albright College	Alvernia College	Kutztown University	Penn State Berks	RACC	Total
Minimum Wage	\$162,182	\$196,528	\$154,500*	\$174,838	0	\$688,047
PA 2005 Estimated Value of Volunteer Time	\$537,249	\$639,764	\$511,800	\$578,686	0	\$2,267,499
<i>Average Value of Student Volunteer Services</i>	<i>\$349,716</i>	<i>\$418,146</i>	<i>\$333,150</i>	<i>\$376,689</i>	<i>0</i>	<i>\$1,477,701</i>

* Kutztown University estimates 2,000 volunteers annually

Summary

Pennsylvania’s higher education institutions- it’s universities, liberal arts colleges, community colleges and vocational schools-are fixed enterprises with massive resources and wide-ranging impacts. The substantial educational and employment-not to mention social and cultural-benefits these institutions bestow on their surrounding areas make it readily apparent that they are an important economic sector that needs to be on the radar screen of all state and local leaders. “Higher Education in Pennsylvania: A Competitive Asset for Communities,” The Brookings Institution, December 2005, p.1.

The explicit and implicit economic, cultural, and educational benefits of higher educations are numerous. The five higher education institutions spend over \$63 million (\$63,436,430) in capital infrastructure and additional \$43 million in full-time faculty salaries (\$43,481,964). Students

spend an additional \$37 million (\$37,260,508) to \$80 million (\$80,829,504) on discretionary items and housing costs.

In addition, the indirect economic impacts, cultural growth and visitors to Berks County college campuses and facilities increase the Berks County tax base and quality of life tremendously. In fact, these indirect economic impacts are cautiously estimated at \$585 million (\$584,585,994) and possibly upwards of \$869 million (\$869,370,049). Volunteer work and civil engagement add an estimate additional value of \$500,000 (\$497,934) to \$1.5 million (\$1,477,701) to the economy and the community. The volunteer and visitor economic impact estimates understate the actual economic impact of visitors to campus and student volunteers because not every institution in this study was able to provide the information.

Overall, the several direct and indirect economic impacts of the higher education institutions described in this study contribute conservatively \$923 million (\$923,635,214) to the Berks County economy. However, the remuneration to the economy may be in excess \$1.2 billion (\$1,265,064,920).

To put this study into perspective, this study encompassed a student enrollment of approximately one-fourth the student body stated in the 2003 Penn State University Economic Impact Study (21,252 vs. 83,000). However, the estimated economic impact of this study is estimated at one-fifth (\$1.2 billion vs. \$6.1 billion) the 2003 Penn State University Economic Impact Study.⁷ The 2006 Pennsylvania State System of Higher Education Economic Impact Study (PASSHE) estimated an annual economic impact of \$4.5 billion. Enrollment at the time of the PASSHE study was 107,000 students.⁸ The economic impact of this study is approximately one-fourth (\$1.2 billion vs. \$4.5 billion) the economic impact estimate garnered in the PASSHE study and reported one-fifth the student enrollment (21,252 vs. 107,000). In other words, the economic impacts estimated in this study are comparable to two previously conducted economic impact studies involving Pennsylvania higher education institutions.

Several economic impact areas in this study were not addressed. These are listed below.

Non-Credit Course Activity

Each college offers comprehensive non-credit courses. However, these non-credit courses were not included in this study. It is posited that the inclusion of non-credit activity would increase the overall economic impact estimated in this study.

Faculty Research

Adam Jaffe of Harvard University noted that academic research “will increase local innovation both by attracting industrial Research and Development augmenting its productivity.”⁹ Correspondingly, a major component of full-time faculty tenure and promotion includes research and contribution to the faculty’s field of study. If this

⁷ Tripp Umbach & Associates. (2004). The Pennsylvania State University and Berks campus economic impact statement. Pittsburgh, PA: Author.

⁸ Pennsylvania State System of Higher Education. (2006). A report on the return to the commonwealth of its investment in Pennsylvania’s state-owned universities. Harrisburg, PA: Author.

⁹ Jaffe, A. 1991. Real effects of academic research. *American economic review*, pp. 957-970.

information was captured the economic impact estimates would be larger than reported by this study.

At Albright College, faculty and students regularly conduct research and projects that aid business and government, for example, marketing plans for area businesses and nonprofit entities and research on demographics and crime. The research has been applied by local business and government.

External Grant Acquisition

The confluence of faculty research and grant acquisition is certain. Faculty often seek additional faculty funding to engage in research beyond current facility or human resource capability at their respective college. In most grant proposals, the use of the research or grant monies must be applied to society at-large. The grant monies and the invaluable benefit of sharing the grant activities with the community would further increase the economic impact stated in this study.

Entrepreneurial Enterprises

Although faculty commit most of their time to teaching and teaching excellence, as leaders in their area of study, they often share their expertise via consulting or other business opportunities. Again, this would positively impact the regional economy.

Collaborations with Business and Industry

Many examples of collaborative efforts with local and federal government were cited in the introduction. However, the ability to quantify this information is difficult and sometimes misleading. Certainly, these collaborative efforts favorably impact the Berks County economy yet were not included.

Library and Learning Resource Centers

The five college libraries attract local patrons as well as scholars world-wide. As another benefit, all the regional higher education institutions have library facilities with computer and internet access. This study did not examine the impact of library resources. Certainly, the cultural, intellectual and economic state of Berks County is much improved with these resources.

The Alvernia College library is one example of the vast resources afforded by college libraries. The Alvernia College library holdings include more than 50,000 print and electronic books, subscriptions to over 1,000 periodicals both print and electronic and the digital databases needed to locate specific articles and a large collection of multi-media resources. In addition to a rich collection, the Library has a 200+ seating capacity, frequently used for campus events such as the Literary Festival. A "Learning Commons" area consolidates services to students and faculty using technology to enhance teaching and learning. Assistance is easily available at Library Learning Commons and Help Desk for individuals or groups to assist the usage of a wide variety of course software, to view and create multi-media and to learn and practice research skills needed for class assignments and life-long learning. The library is home to special collections rooms for the Polish American Cultural Center and the Italian American Culture Center.

Tax Revenues

All five colleges are non-profit or not-for profit entities. However, student and visitor spending not only improve the economy but increase local and state tax coffers. Similarly, faculty and staff salaries generate federal, state and local income tax. Future economic impact studies could provide these dollars as part of the economic impact estimates.

Keystone Innovation Zone (KIZ)

Keystone Innovation Zone (KIZ) encourages partnerships among higher education institutions, private businesses, commercial lending institutions and venture capital organizations.¹⁰ Although several KIZ initiatives have been referenced in this study, the economic benefit to Berks County was not evaluated.

Charitable Donations

According to an economic impact study conducted in 2003, Penn State Berks faculty and staff contributed \$6.9 million in local charitable donations and volunteer services.¹¹ This study does not address charitable donations but it is posited the sum would be substantial.

Looking to a Bright Berks County Future

Berks County has an economic and cultural infrastructure greatly enhanced by the five Berks County higher education institutions as demonstrated by this study. It is exceptionally palpable with the new facility infrastructure that is currently been completed or scheduled to be constructed. New facilities such as the Miller Center for the Arts at RACC, Alvernia College's new O'Pake Science Center, the new Science Center and the Schumo Center for Fitness and Well-Being at Albright College and Penn State Berk's new classroom building, renovations to the existing Luerssen Building, and addition to the Beaver Community Center will further foster the economic development of Berks County.

Collectively, it is anticipated that this study will stimulate further cooperative efforts among the five higher education institutions. This study also provides an inventory of the unique mission, programming and infrastructure at each institution. This should facilitate further collaborations in which each higher education institution will contribute its distinct resource and talent to the partnership. At the very least, the collective economic benefits identified in this study will reinforce the advantage of cooperation among the higher education institutions.

With the continued commitment of the five higher education institutions to provide quality educational opportunities and to serve the community, Berks County will continue to be seen as one of the best places to live, raise a family and locate a business. Certainly, the economy and cultural contributions of the five colleges has enhanced Berks County.

¹⁰ Pennsylvania Department of Community & Economic Development. (2004). Keystone Innovation Zones: Program guidelines. Harrisburg, PA: Author.

¹¹ Tripp Umbach & Associates. (2004). The Pennsylvania State University and Berks campus economic impact statement, Pittsburgh, PA: Author.