

ECONOMIC AND FISCAL IMPACTS OF VILLANOVA UNIVERSITY

Report Submitted To:

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EXECUTIVE SUMMARY

Villanova University (“Villanova” or “VU”), founded by the Order of Saint Augustine in 1842, is a premier institution of higher education that offers a variety of undergraduate and graduate degree programs through the College of Liberal Arts and Sciences, the Villanova School of Business, the College of Engineering, the College of Nursing and the Villanova School of Law. With a total enrollment that includes approximately 6,400 undergraduate students and 4,000 graduate, law, and part-time students, Villanova is the oldest and largest Catholic university in the Commonwealth of Pennsylvania.

VU is an integral part of the metropolitan area’s powerful higher education industry and non-profit sector. Its 254-acre Radnor Township campus is located 12 miles west of the city of Philadelphia and is easily accessible by public transportation. With an annual operating budget of nearly \$350 million, and nearly 13,000 people living, learning and working on campus, the University is clearly a significant economic engine for Radnor Township, the Greater Philadelphia region and beyond.

This study estimates VU’s economic impact, both quantitative and qualitative, on Radnor Township and its neighboring communities, the region, and the Commonwealth. Even with the recent severe economic downturn, Villanova continues to be a strong player in the local and regional economy, increasing operating expenditures and containing a solid capital investment program.

Villanova’s estimated total annual economic impact throughout the Commonwealth is more than \$692 million which includes direct and indirect expenditures, earnings and spending. Of this figure, Villanova is estimated to have an economic impact of \$51 million in Radnor Township, including average annual direct payments to the Township and School District totaling more than \$1.8 million.

Table E1
Ongoing Annual Impacts Attributable to Villanova Operations
(\$ Millions & Total Jobs)

Description	Radnor Township	Delaware County	Regional	PA State
Total Direct Expenditures	\$48.6	\$109.8	\$295.2	\$301.2
Total Jobs	590	2796	9,709	11,080
Total Salaries & Wages	\$15.2	\$81.3	\$347.7	\$366.9
Total Economic Impact	\$51.0	\$186.6	\$666.2	\$692.6

Source: Econsult Corporation (2011)

Note: Total Economic Impact includes Total Salaries & Wages

Table E2
One-Time Impacts Attributable to Villanova Construction Projects
(FY06 – FY10)
(\$ Millions & Total Jobs)

Description	Delaware County	Regional	PA State
Total Direct Expenditures	\$130.7	\$130.7	\$130.7
Total Jobs	1,090	2,298	2,792
Total Salaries & Wages	\$41.1	\$85.2	\$102.6
Total Economic Impact	\$229.8	\$282.0	\$319.7

Source: Econsult Corporation (2011)

Note: Total Economic Impact includes Total Salaries & Wages

In addition to the economic impact in Delaware County, the Five-County Region, and the Commonwealth of Pennsylvania, Villanova University also has a local fiscal impact on Radnor Township. These include tax payments made directly by Villanova University, payments made by employees and vendors, as well as tax and permit payments resulting from construction projects undertaken by VU. The tables below present the data on a fiscal-year basis (Tables E3-E6) as well as a calendar-year basis (Tables E7).

Table E3
Average Annual Local Impact in Radnor Township¹
Fiscal Year Basis
(FY06-FY10)

Description	Amount
Direct Payments by Villanova University to Radnor Township ²	\$1,050,000
Taxes Paid by Villanova Vendors and Faculty/Staff	\$653,000
Taxes Resulting from Ancillary Spending by Students and Visitors	\$71,000
Average Annual Construction Related Taxes and Payments ³	\$568,000
Total Average Annual Local Impact in Radnor Township	\$2,342,000
Average Annual Payments to Radnor School District	\$385,000
Total Average Annual Local Impact	\$2,727,000

Source: Econsult Corporation & Villanova University (2011)

Table E4
Summary Payments to Radnor Township and Radnor Township School District
Fiscal Year Basis
FY2006 - FY2010

Description	FY 2006- FY 2010	Annual Average
Real Estate Taxes (Radnor)	\$321,720	\$64,344
Business Privilege Tax	\$281,783	\$56,357
Business License	\$100	\$20
Sewer	\$3,250,483	\$650,097
Police	\$520,923	\$104,185
Radnor Municipal Services & Emergency Tax	\$876,258	\$175,252
Permits and Fees	\$1,903,651	\$380,730
School Tax	\$1,923,496	\$384,699
GRAND TOTAL PAYMENTS TO RADNOR	\$9,078,414	\$1,815,683

Source: Villanova University (2011)

¹ These impacts include payments made directly by Villanova University, payments made by the employees and contractors of Villanova University, as well as business taxes resulting from ancillary and indirect spending.

² Excluding building permits and fees.

³ Includes the average annual building permit fees paid directly by Villanova University as well as the gross receipt taxes paid by the construction manager and subcontractors and the building permit fees paid by subcontractors.

Table E5
Payments to Radnor Township and Radnor Township School District
Fiscal Year Basis
FY2006 - FY2010

Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	Average Annual
Real Estate Taxes	\$ 62,673	\$ 62,673	\$ 63,143	\$ 63,143	\$ 70,088	\$ 64,344
Business Privilege Tax	-	-	-	250,170	31,613	56,357
Business License	-	-	-	80	20	20
Sewer	557,267	623,097	692,231	732,066	645,822	650,097
Police	73,516	76,395	138,048	104,233	128,731	104,185
Radnor Municipal Services and Emergency Tax	185,016	187,460	116,543	193,053	194,186	175,252
Permits and Fees						
Davis Center	5,615	171,670	805	-	-	35,618
Nursing Building	750	423,025	215,044	1,415	-	128,047
Law School Building	1,950	245,090	704,113	1,725	3,245	191,225
Sheehan and Sullivan Halls	-	-	-	-	129,204	25,841
Total	\$ 886,787	\$ 1,789,410	\$ 1,929,927	\$ 1,345,885	\$ 1,202,909	\$ 1,430,984
School Tax	344,244	361,611	379,702	409,313	428,626	384,699
Grand Total, Payments to Radnor, including School Tax	\$ 1,231,031	\$ 2,151,020	\$ 2,309,629	\$ 1,755,198	\$ 1,631,535	\$ 1,815,683

Source: Villanova University (2011)

Table E6
Construction Project Related Payments to Radnor Township
FY2006 - FY2010

Description	FY 2006- FY 2010	Annual Average
Building Permits and Fees Paid by Villanova	\$1,903,651	\$380,730
Building Permits and Fees Paid by the Contractors	\$237,000	\$47,400
Gross Receipts Taxes Paid by the Construction Manager	\$370,000	\$74,000
Gross Receipts Taxes Paid by the Sub-Contractors	\$328,000	\$65,600
Total	\$2,845,000	\$567,730

Source: Villanova University (2011)

Table E7
Payments to Radnor Township and Radnor Township School District
Calendar Year Basis
2006 - 2011

Description	2006	2007	2008	2009	2010	Average Annual	2011 YTD
Real Estate Taxes	\$ 62,673	\$ 62,673	\$ 63,143	\$ 63,143	\$ 70,088	\$ 64,344	\$ 77,913
Business Privilege Tax	-	-	-	250,170	31,613	56,357	-
Business License	-	-	-	80	20	20	20
Sewer	557,267	623,097	692,231	732,066	645,822	650,097	736,996
Police	54,774	127,338	126,026	132,739	127,130	113,601	28,930
Radnor Municipal Services and Permits and Fees	183,508	191,251	195,217	195,432	199,920	193,066	63,513
Davis Center	173,125	4,745	220	-	-	35,618	60
Nursing Building	2,775	635,654	1,485	320	-	128,047	-
Law School Building	11,400	110,710	830,368	3,405	240	191,225	-
Sheehan and Sullivan Halls	-	-	-	-	60	12	3,900
Total	\$ 1,045,522	\$ 1,755,468	\$ 1,908,690	\$ 1,377,355	\$ 1,074,893	\$ 1,432,386	\$ 911,332
School Tax	361,611	379,702	409,313	428,626	440,686	403,987	-
Grand Total, Payments to Radnor, including School Tax	\$ 1,407,133	\$ 2,135,170	\$ 2,318,003	\$ 1,805,981	\$ 1,515,579	\$ 1,836,373	\$ 911,332

Source: Villanova University (2011)

In addition to the quantitative economic impacts outlined above, Villanova University also generates tremendous qualitative impacts for:

VU's Alumni play important roles in all facets of the region's economy. The University's output—its educated and skilled graduates and an important research agenda — is precisely the key input to the region's future economic competitiveness. VU's graduates increase the region's knowledge base and the skill levels and productivity of its workforce. In addition, VU's graduates play important business and civic leadership roles throughout the region.

Community Engagement - Villanova emphasizes involvement in the surrounding communities through service learning and service activities by student, faculty, staff, and alumni. In addition, the University's academic departments partner with area agencies, such as Radnor Township and the Delaware River Port Authority, to provide technical services, research and analysis that support public projects.

Public Programs at VU — educational, cultural, artistic, athletic, and religious — are available to members of the local community and make a positive contribution to the quality of life of the region.

As one of the largest employers in Delaware County, Villanova University generates significant economic activity and employment and as well numerous intangible benefits to the community. Through continued spending, capital improvements to its physical plant, and the development of programs to support its students' living and learning experiences, Villanova seeks to enhance its role as a driver of local and regional economic activity.

1.0 INTRODUCTION

Villanova University (“Villanova” or “VU”) is one of the premier comprehensive Catholic universities in the Northeast, consistently garnering top spots in US News and World Report annual rankings. VU is an integral part of the metropolitan area’s powerful higher education industry. Located on a 254-acre campus 12 miles outside the city of Philadelphia in Radnor Township, the University has an annual budget of nearly \$350 million and employs over 1,800 local workers residing in Delaware County (including over 430 residing in Radnor Township), including 633 full-time faculty members, nearly 90% of whom hold the highest degrees in their fields. VU is clearly a significant economic engine for the Philadelphia 5-county region (“the region”).⁴

Founded in 1842 as the Augustinian College of Villanova, the University has been dedicated to “Saint Augustine’s vision of education as a community activity of scholars searching for truth in open discussion, commitment to ethical values, and dedication to social justice and human rights.”⁵ VU continues to espouse the Augustinian ideas of truth, unity and love as well as community dedicated to serving others and the common good.

Originally founded as a liberal arts institution, VU has undergone various expansions, and today consists of five colleges: College of Liberal Arts and Sciences, College of Engineering, School of Business, College of Nursing and the School of Law. In addition to its 50 undergraduate majors across four of the five colleges, the University offers over 35 Masters and Ph.D. programs. VU’s highly ranked study abroad program provides students with the opportunity to participate in semester, year-long or summer learning experiences on six continents.

The University’s non-academic activities also play important roles in the surrounding community. Its athletic and cultural arts programs are varied and involve thousands of students and outside participants. Community service and service learning also play a large role in the lives of VU’s students, faculty and staff.

Recent University initiatives undertaken by University president Rev. Peter Donohue, O.S.A. have included enriching the academic environment, enhancing the physical campus, and embracing environmentally friendly practices.

⁴ The Philadelphia 5-county region includes Philadelphia, Delaware, Chester, Bucks and Montgomery counties.

⁵ The History of Villanova University <http://www.villanova.edu/mission/heritage/history/>

1.1 Economic Impacts: Quantitative

As part of the Philadelphia region's powerful higher education industry, VU plays a key economic role by providing higher education to both local students and students from outside the area. By doing so, VU advances the productivity of and employment opportunities for area students, thereby increasing the quality of the region's labor force. This makes the region more attractive to companies, and thus strengthens the region's economy. VU provides significant educational opportunities for students residing in the region. Also, since over 60 percent of VU students come from outside the region, the University brings dollars into the local economy and helps to market, or "brand", the region to the outside world. Currently, VU's students represent 48 states, and 55 foreign countries.

Its unique location just outside the city of Philadelphia also makes VU an important player in the regional economy. Additionally, VU supports area businesses in order to sustain its daily operations through direct spending on goods and services and through the salaries it pays its faculty and staff. Spending by students, their families, as well as visitors attending conferences, seminars, athletic events, and other on-campus activities adds significant additional dollars to the local economy. Likewise, VU itself injects dollars into the economy by spending on capital construction projects, such as the buildings for the College of Nursing and the School of Law that were completed in 2008 and 2009 respectively. The regional economic and fiscal impacts that accrue as a result of the expenditures made by Villanova play a vital economic role in the region and the Commonwealth of Pennsylvania ("the Commonwealth").

The estimation of VU's economic and fiscal impacts is a multi-step process. The first step is to estimate VU's direct expenditures made in the local economy. These expenditures include any direct spending of the University that may fall into a number of categories. This report addresses Villanova's direct expenditures in three components: annual ongoing expenditures, construction, and the value of VU graduates. Next, indirect and induced expenditures generated by the direct spending inputs are estimated by an econometric model and are reported in terms of total economic output (or activity), earnings, and employment.⁶

Regional and Commonwealth taxes generated by VU's direct expenditures are another important measure of Villanova's estimated output. In order to carry out this fiscal impact analysis, a careful differentiation is made as to where each employee resides, as the tax rates differ by residency. It is also important to note that goods and services produced in the different counties of the region will generate different levels of business taxes. Adjusting for this difference involves accounting for different industrial structures and different commuting patterns between the region's component counties. Another important consideration is that

⁶ The regional economic impact estimates in this report are based on a standard regional input-output model developed by the U. S. Department of Commerce, Bureau of Economic Analysis, the Regional Input-Output Modeling System (RIMS II). See Appendix A for more details.

construction expenditures and goods and supplies for various university-related projects are exempt from sales tax. The taxes generated by the total expenditures are estimated using a model specifically developed by Econsult Corporation (“Econsult”) to estimate fiscal impacts.⁷

1.2 Economic Benefits: Qualitative

In addition to the quantifiable impacts noted above, Villanova brings a variety of important qualitative benefits to the region, as a result of the University’s commitment to academic excellence and community service, a variety of programs and initiatives, as well as the significant role VU graduates play in the region’s business community. Because these specific economic benefits have no clear market valuation, they are not included in the quantitative modeling, but should be included as components of VU’s overall economic impacts on the region and state.

The University has established itself as a responsible and invested civic partner. Recent efforts have focused on both the environmental practices of the university as well as its involvement in the greater community. Villanova University has pledged to be net climate neutral by 2050. In addition, after becoming university president in 2006, Rev. Donohue instituted a university-wide day of service, which now involves nearly 5,000 students, faculty and staff, making it one of the largest in the region. The commitment to environmental awareness and civic stewardship is reflected not only in community service but also in students’ academic lives through various service learning courses.

This report provides estimates of VU’s economic and fiscal (tax) impacts on the region and the Commonwealth. The report is organized in the following fashion:

- Section 2 provides estimates of the economic impacts from annual, ongoing expenditures by the University on the region as well as ancillary spending by students, faculty, and visitors.
- Section 3 estimates the economic impacts from construction, renovation and capital improvements by the University.

⁷ See Appendix A for more details.

- Section 4 studies the University's fiscal contribution to Radnor Township, Radnor School District and Delaware County.
- Section 5 examines the economic impacts of VU alumni on the labor market and the subsequent increase in productivity throughout the region.
- Section 6 presents additional qualitative impacts.
- Section 7 summarizes the findings of an analysis.
- The Appendices include a description of the economic impact model used in the analysis, as well as additional data used in the calculations of the economic and fiscal impacts.

2.0 ANNUAL DIRECT VILLANOVA SPENDING

Villanova University's annual operating budget for FY 2010 was nearly \$350 million, making it the one of the largest employers in Delaware County⁸. The budget consists of salaries to employees and staff, as well as payments to businesses for goods and services. Most of this budget is spent locally, and these expenditures are considered direct expenditures in our economic impact model. In addition, students, staff, faculty and visitors spend monies directly in the local economy outside of the University. We refer to these as ancillary expenditures. Thus, there are three distinct categories of annual direct expenditures:

- Faculty & staff payroll and faculty outside earnings
- Ongoing operational spending (non-payroll)
- Ancillary spending (spending outside of the University but associated with University activities in particular by students, faculty & staff, and visitors)

2.1 Faculty and Staff Payroll and Outside Earnings

Faculty and staff payroll is the first component used to calculate the direct expenditure impact of VU on the regional economy. Since spending by individuals of their income (referred to as "induced" spending) differs fundamentally from indirect business spending, we examine faculty and staff earnings separate from operating expenditures. The University employs numerous individuals in various education and administrative capacities. The Office of Financial Affairs provided payroll data for the analysis, and the percentage breakdown of faculty and staff payroll is shown in Table 2.1.1 faculty and staff gross payroll for all schools of the University totaled nearly \$153 million in FY 2010, not including approximately \$46 million in employee benefits and pension plan contributions. Of that total, approximately \$52 million is attributable to employees living in Delaware County (including nearly \$10 million to employees living in Radnor Township) and over \$142 million to employees residing in the state of Pennsylvania.

Faculty and staff's consulting engagements and business activities outside of the University represent another source of income attributable to VU that generates additional direct local spending. VU's faculty and staff play an important role in the region's economy by providing professional services – both for pay and volunteer – to businesses, institutions, governments, not-for-profits and individuals. These services can include consulting, offering expert advice or testimony. We assume, on average, that the faculty and staff earn 10% of their school salary for such outside production⁹.

⁸ Philadelphia Business Journal

⁹ The estimate of total Villanova faculty and staff earning an additional 10% of their university salary for outside production takes into consideration the fact that faculty will have outside production while staff will not.

All totaled faculty and staff earnings amount to nearly \$154 million and \$157 million in the region and state, respectively.

**Table 2.1.1: Total Annual Employee Income Attributable to Villanova University
(Total Employees and \$ Millions)**

Region	Employees	Gross Salary (\$ Millions)	Outside Earnings (\$ Millions)	Total Income (\$ Millions)
Radnor Township	432	\$9.52	\$0.95	\$10.47
Delaware County	1,575	\$51.50	\$5.15	\$56.65
5-County Region	3,261	\$139.70	\$13.97	\$153.67
PA State	3,366	\$142.42	\$14.24	\$156.66

Source: Villanova University Office of Financial Affairs & Econsult Corporation (2011).

**Figures may appear higher or lower due to rounding*

2.2 Ongoing Operational Spending (Non-Payroll)

Day to day operational spending by VU encompasses a whole host of university functions including advertising, athletic teams, equipment, food services, library services, parking, and all other services related to the ongoing student and professional services of the University. It also includes costs associated with general supplies, routine maintenance, and utilities.

The total non-payroll operating expenditures, provided by the University from budget estimates for fiscal year 2010, amounted to \$161.8 million.¹⁰ Based on data provided by VU, approximately \$7.9 million of this spending occurred in both Radnor Township and Delaware County¹¹, and \$87.2 million occurred in the 5-county metro region.

¹⁰ University construction and payroll expenditures have been taken out of the operating expenditures to avoid double counting. Components of travel reimbursements were also excluded to account for expenditures made outside of Pennsylvania.

¹¹ The Radnor Township totals include all vendors that have an address with one of the following zip codes: 19010, 19073, 19085, and 19087. For the purposes of estimating the economic impact in Radnor Township any business located with one of these zip codes were considered to be within Radnor Township. However because these zip codes extend outside of the Township and the exact address of each business was not known, the business may not be actually in the Township. Similarly, any business with a zip code located in Delaware was considered to be in Delaware County for the purposes of estimating the economic impact in Delaware County.

**Table 2.2.1: Total Annual Operating Expenditures & Payroll
Attributable to Villanova University
(\$ Millions)**

Description	Total Operating Expenditures (Non-Payroll)	Total Employee Salaries & Income	Total Spending
Radnor Township	\$7.91	\$10.47	\$18.38
Delaware County	\$7.86	\$56.65	\$64.51
5-County Region	\$87.24	\$153.67	\$240.91
PA State	\$87.24	\$156.66	\$243.90

Source: Villanova University Office of Financial Affairs & Econsult Corporation (2011).

Note: All impacts reported in 2010 dollars.

**Figures may appear higher or lower due to rounding*

2.3 Ancillary Spending

The final component of direct annual expenditures is ancillary spending – spending associated with university students, faculty, staff, and visitors at venues such as the Villanova Conference Center & Hotel and others that are unaffiliated with Villanova University.¹² Such venues include local off-campus lodging, nearby restaurants, nightclubs, retail, and grocery stores. This also includes hotel expenditures by visiting families and university guests. Ancillary spending by students, faculty, staff, and visitors promotes local economic growth, as additional money circulates throughout the region.

2.3.1 Student Spending

Spending by VU students is the largest component of ancillary spending. Students provide a significant source of revenue to local apartment owners and retailers, as many live off campus and most make regular purchases in the community that cover their living expenses. Generally, these expenses are higher for off-campus students, since many of the living expenses, such as housing and food, for campus residents are provided through the University. Data obtained from the Select Greater Philadelphia’s June 2010 Higher Education Survey provided the basis for average on-campus and off-campus student spending. To assess total spending, we applied per-student spending estimates to the total enrollment numbers. We estimated VU’s total student ancillary spending to be over \$45 million. We further estimate that 50% of this student spending will occur within Radnor Township, 75% in Delaware County, 90% in the 5-county metropolitan region, and 95% in the State of Pennsylvania.

¹² These expenditures counted in this category are “unaffiliated” in the sense that they do not constitute revenues (direct or indirect) to the University.

Table 2.3.1
Summary of Annual Student Spending, by Student Type
(\$ Millions)

Description	Total Student Spending (\$ Millions)
On-Campus Undergraduates	\$13.30
Off-Campus Undergraduates	\$22.82
Graduate Students	\$9.29
Total Student Spending	\$45.41

Source: Econsult Corporation (2011)

Table 2.3.2
Summary of Annual Student Spending, by Region
(\$ Millions)

Region	Total Student Spending (\$ Millions)
Radnor Township	\$22.70
Delaware County	\$34.05
5-County Region	\$40.87
PA State	\$43.14

Source: Econsult Corporation (2011)

2.3.2 Visitor Spending

In addition to student ancillary expenditures, spending by visitors also contributes to the regional and state economies. Local and out of town visitors coming to the University for events purchase items from nearby retailers, eat at local restaurants, and lodge at local hotel facilities. These and other visitor activities represent another category of ancillary spending which can be attributed to VU. Our analysis examines visitors such as:

- ❑ Athletic Teams Competing at the University
- ❑ Friends and Family of Current Students
- ❑ Orientation and Open House Attendees
- ❑ Other Visitors (academic programs, lectures, performances etc.)

Visitor counts were provided by various campus departments including Admissions, Alumni, Athletics, Conference Services and Theatre. Visitor expenditures were estimated based on the total number of visitors and the average of Pennsylvania daytrip or overnight traveler spending, obtained from the Pennsylvania Tourism Office.¹³

**Table 2.3.3: Total Visitor Spending, by Type
(Total Visitors and \$ Millions)**

Description	Approximate Visitors per Year	Average Spending ¹⁴	Total Visitor Spending (\$ Millions)
Alumni returning for reunion, homecoming, other events	17,500	\$300	\$5,250,000
Attendees to conferences (including sports and education)	17,000	\$200	\$3,400,000
Attendees to educational and cultural events open to the community	20,000	\$50	\$1,000,000
Parents, relatives, friends making overnight visits to students	N/A	-	
Sporting events	200,000	\$10	\$2,000,000
Visiting faculty and speakers	1,200	\$250	\$300,000
Other ¹⁵	30,000	\$100	\$3,000,000
Total	285,700	-	\$14,950,000

Source: Villanova University & Econsult Corporation (2011)

As shown in Table 2.3.3, total visitor spending amounts to nearly \$15.0 million. Of this total visitor spending, we estimate that 50% will occur in Radnor Township, 75% in Delaware County, 90% in the 5-county metropolitan region, and 95% in the State of Pennsylvania.

¹³ Estimates are based on average per-person daily travel expenditures, Philadelphia Countryside, 2009 Annual Travel Profile Report, and PA Dept of Community & Economic Development.

¹⁴ In order to avoid double counting, Average Spending per visitor is exclusive of payments made to Villanova and counted as Villanova expense

¹⁵ Includes 10,000 prospective students/parents; 22,000 people attending non-athletic events in Villanova's athletic facilities, including Parent's Weekend Mass, Candidate's Day, college fairs, and Villanova University Commencement ceremonies.

**Table 2.3.4: Total Annual Visitor Spending, by Region
(Total Visitors and \$ Millions)**

Region	Total Visitor Spending (\$ Millions)
Radnor Township	\$7.48
Delaware County	\$11.21
5-County Region	\$13.46
PA State	\$14.20

Source: Econsult Corporation (2011)

2.3.3 Total Ancillary Spending

Taken together, we estimate that total student and visitor spending will amount to over \$30.0 million in Radnor Township, over \$45.0 million in Delaware County, over \$54 million in the 5-county metropolitan region, and over \$57 million in the State of Pennsylvania, as shown in Table 2.3.5.

**Table 2.3.5: Total Annual Ancillary Spending (Student & Visitor), by Region
(\$ Millions)**

Region	Total Student Spending	Total Visitor Spending	Total Ancillary Spending
Radnor Township	\$22.70	\$7.48	\$30.18
Delaware County	\$34.05	\$11.21	\$45.27
5-County Region	\$40.87	\$13.46	\$54.32
PA State	\$43.14	\$14.20	\$57.34

Source: Econsult Corporation (2011)

2.4 Impacts of Annual Direct Expenditures

Annual direct expenditures in the region, including employee income, university (non-payroll) operations, and ancillary spending, is estimated to be over \$295 million, as indicated in Table 2.4.1:

Table 2.4.1: Total Annual Direct Expenditures
(\$ Millions)

Region	VU Employee Income	VU Operations	Ancillary Spending	Total Direct Expenditures
Radnor Township	\$10.47	\$7.91	\$30.18	\$48.56
Delaware County	\$56.65	\$7.86	\$45.27	\$109.77
5-County Region	\$153.67	\$87.24	\$54.32	\$295.23
PA State	\$156.66	\$87.24	\$57.34	\$301.24

Source: Econsult Corporation (2011)

Note: All impacts reported in 2010 dollars.

**Figures may appear higher or lower due to rounding*

In Radnor Township, VU direct expenditures of nearly \$49 million will generate an additional \$2.4 million in indirect and induced expenditures, resulting in a total economic impact of nearly \$51 million, including over \$15 million in employee salaries and wages, supporting nearly 600 total jobs¹⁶.

VU direct expenditures of nearly \$110 million in Delaware County stimulate approximately \$187 million in total economic activity for Delaware County each year. VU's annual expenditures also have a significant impact on the county's total employment by generating nearly 2,800 total jobs and over \$81 million in earnings.

In the 5-county metropolitan region, \$295 million in annual direct expenditures generates a total economic impact of over \$666 million, including nearly \$348 million in employee salaries and wages, supporting over 9,700 total jobs. This economic activity also generates over \$6 million in tax revenues on an annual basis.

¹⁶ While the RIMS II input-output multipliers maintained by the Bureau of Economic Analysis are only available at the County level, we conservatively estimate that Radnor Township will have a total output multiplier of 1.05 (\$92.43 million total township economic output divided by \$88.03 million in direct expenditures). This estimate is based on data obtained from the U.S. Census Bureau's Journey to Work Database. Radnor Township's estimated multiplier of 1.05 is conservative compared to the RIMS II multiplier for Delaware County, which is 1.70 (\$254.90 million in total county output divided by \$149.98 million in direct expenditures)

In the State of Pennsylvania, annual direct expenditures of over \$301 million generate a total economic impact of nearly \$693 million. This total economic impact includes nearly \$367 million in total employee salaries and wages, supporting over 11,000 total jobs. This economic activity generates over \$22 million in state tax revenues in the form of personal income tax and sales tax revenues.

Table 2.4.2: Total Economic Impact Attributable to Annual Direct Expenditures of Villanova University

Region	Annual Direct Expenditures (\$ Millions)	Indirect and Induced Expenditures (\$ Millions)	Total Economic Output (\$ Millions)	Total Earnings (\$ Millions)	Total Employment
Radnor Township	\$48.56	\$2.43	\$50.98	\$15.16	590
Delaware County	\$109.77	\$76.79	\$186.57	\$81.30	2,796
5-County Region	\$295.23	\$371.00	\$666.23	\$347.68	9,709
PA State	\$301.24	\$391.32	\$692.56	\$366.89	11,080

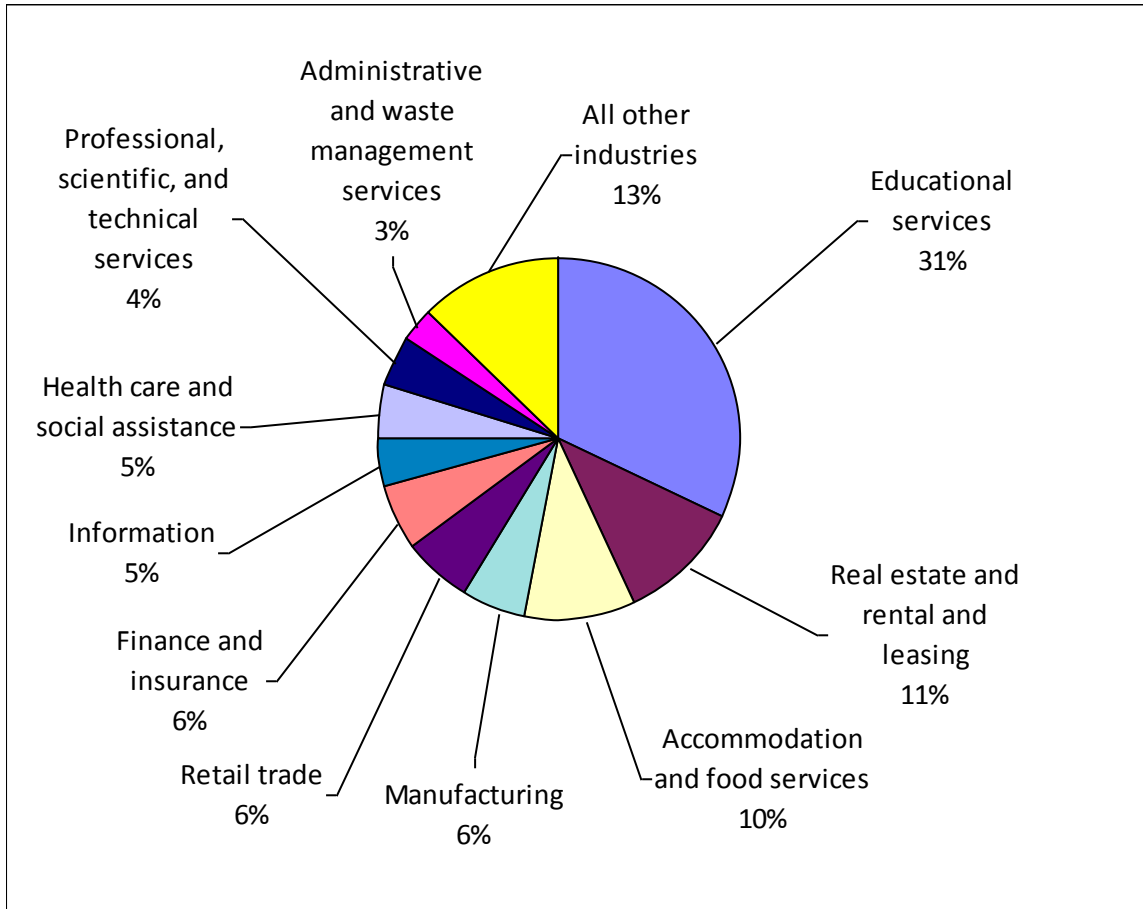
Source: Econsult Corporation (2011).

Note: Total Economic Output includes Total Earnings.

Total Employment includes full-time and part-time jobs.

VU's direct spending has far-reaching impacts that extend beyond the higher education sector. As illustrated by Figure 2.4.1, VU's direct spending generates indirect and induced economic activity in a variety of industries throughout Pennsylvania. The industries most impacted by VU's activity include real estate and rental and leasing, accommodation and food services, manufacturing, retail trade, and finance and insurance.

Figure 2.4.1: Total Economic Impacts for the State of Pennsylvania by Industry



Source: Econsult Corporation (2011)

3.0 IMPACTS OF INFRASTRUCTURE CAPITAL INVESTMENT

Over and above VU’s annual spending described in the previous section, its capital infrastructure investments positively impact the regional economy. These investments not only increase the quantity and quality of the region’s capital stock, but also generate significant economic benefits via the associated or actual construction spending. Over the past five years, the University has completed several construction projects designed to improve academic spaces and enhance student life.

Econsult estimated the annual economic impact of VU’s construction activity over the past five years. These include direct University expenditures or private capital expenditures made by donors for the use and benefit of VU. For this analysis, we estimate the one-time impact of aggregate construction expenditures from FY2006-FY2010.

Table 3.1
Villanova University Construction Projects
FY2006 – FY2010

Description	Total Construction Cost
Structures Lab	\$3,191,000
Fedigan	\$4,142,000
Sheehan/Sullivan	\$18,020,000
Davis	\$14,796,000
Nursing	\$26,897,000
Law	\$63,680,000
Total	\$130,726,000

Source: Villanova University (2011)

Construction activity contributes to regional economic output, wages, and employment, while also enhancing the University through infrastructure improvements. VU’s direct construction activity of approximately \$131 million over the past 5 years is estimated to have generated a one-time impact totaling over \$282 million in the 5-county metropolitan region, as shown in Table 3.2. The indirect and induced expenditures generated by the construction activities lead to over \$2 million in additional local tax revenue over the 5-year period. The regional multiplier for construction expenditures is approximately 2.16. This implies that for every \$1 spent on construction another \$1.16 is generated throughout the regional economy.

In the State of Pennsylvania, total construction expenditures of nearly \$131 million result in a total economic impact of nearly \$320 million, including nearly \$103 million in employee salaries and wages, supporting nearly 2,800 total jobs. The state multiplier of 2.45 implies that for each \$1 in direct construction spending, the State benefits from an additional \$1.45 in indirect and induced expenditures.

**Table 3.2: Total Economic Impacts Attributable to
VU Construction Expenditures, FY2006 – FY2010
(\$ Millions)**

Area	Total Construction Expenditures	Indirect and Induced Expenditures	Total Economic Output	Total Earnings	Total Employment
Delaware County	\$130.73	\$99.06	\$229.78	\$41.10	1,090
5-County Region	\$130.73	\$151.29	\$282.02	\$85.18	2,298
PA State	\$130.73	\$188.93	\$319.66	\$102.56	2,792

Source: Econsult Corporation (2010).

Note: Total Economic Output includes Total Earnings.

Total Employment includes full-time and part-time jobs.

4.0 LOCAL FISCAL IMPACTS

In addition to its economic impact within Delaware County (\$298 million in total economic activity), the 5-County Metropolitan Region (\$366 million in total economic activity), and the State (\$415 million in total economic activity), Villanova also generates positive impacts, both quantitative and qualitative in nature, within the local community of Radnor Township.

Radnor Township has a top tier school system, and its residents value and enjoy a high quality of life. The Township's average per capita income in 2000 was \$74,272¹⁷, compared to \$50,092 for all of Delaware County, which ranked 4th in Pennsylvania.

Villanova's positive local impacts can be summarized into the following categories:

- Payments made by Villanova University directly to Radnor Township and Radnor School District
- Payments made by Villanova University to vendors and faculty/staff in Radnor Township
- Benefits to Radnor Township business from ancillary spending generated by students, visitors, and alumni.

4.1 Payments Made by Villanova University Directly to Radnor Township and Radnor School District

In FY2010, Villanova University paid Radnor School District a total of nearly \$429,000 in taxes. Radnor School District had a total of nearly \$76.0 million in revenues in its 2010-2011 budget, including \$4.2 million in revenues from local sources. Based on this information, Villanova's payments to Radnor School District represent approximately 10.2% of the district's revenues from local sources.

In addition, Villanova also makes a number of payments to Radnor Township, in the form of contracted/purchased services, permits and fees, real estate taxes, and other miscellaneous rental or tax payments. Villanova paid a total of nearly \$1.5 million to Radnor Township in FY2010. Included in this total are over \$194,000 in Radnor Emergency and Municipal Services Taxes.

Table 4.1.1 summarizes Villanova tax payments to Radnor Township for FY2006 – FY2010.

¹⁷ U.S. Census Bureau

Table 4.1.1
Payments to Radnor Township and Radnor Township School District
Fiscal-year Basis
FY2006 - FY2010

Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	Average Annual
Real Estate Taxes						
Villanova Conference Center	\$ 34,142	\$ 34,142	\$ 34,142	\$ 34,142	\$ 37,898	\$ 34,893
Aldwyn Lane Properties	25,589	25,589	25,589	25,589	28,403	26,152
Other Properties	2,942	2,942	3,412	3,412	3,787	3,299
Business Privilege Tax						
University	-	-	-	184,960	23,958	41,784
Aldwyn Lane Partnership	-	-	-	65,210	7,655	14,573
Business License						
University	-	-	-	40	10	10
Aldwyn Lane Partnership	-	-	-	40	10	10
Sewer	557,267	623,097	692,231	732,066	645,822	650,097
Police	73,516	76,395	138,048	104,233	128,731	104,185
Radnor Municipal Services and Emergency Tax	185,016	187,460	116,543	193,053	194,186	175,252
Permits and Fees						
Davis Center	5,615	171,670	805	-	-	35,618
Nursing Building	750	423,025	215,044	1,415	-	128,047
Law School Building	1,950	245,090	704,113	1,725	3,245	191,225
Sheehan and Sullivan Halls	-	-	-	-	129,204	25,841
Total	\$ 886,787	\$ 1,789,410	\$ 1,929,927	\$ 1,345,885	\$ 1,202,909	\$ 1,430,984
School Tax						
Villanova Conference Center	\$ 186,139	\$ 196,994	\$ 206,850	\$ 221,323	\$ 229,957	\$ 208,253
Aldwyn Lane Properties	139,505	147,641	155,027	165,874	172,345	156,078
Rental Properties	18,600	16,976	17,825	22,116	26,324	20,368
Total	\$ 344,244	\$ 361,611	\$ 379,702	\$ 409,313	\$ 428,626	\$ 384,699
Grand Total, Payments to Radnor, including School Tax	\$ 1,231,031	\$ 2,151,020	\$ 2,309,629	\$ 1,755,198	\$ 1,631,535	\$ 1,815,683

Source: Villanova University (2011)

Between FY2006 and FY2010, Villanova has made a total of nearly \$9.1 million in payments to Radnor Township and Radnor School District, which translates into an annual average payment of over \$1.8 million, as shown in Table 4.1.2.

Table 4.1.2
Direct Payments to Radnor Township and Radnor Township School District
By Villanova University
Fiscal-year Basis
FY2006-FY2010

Description	FY 2006- FY 2010	Annual Average
Real Estate Taxes (Radnor)	\$321,720	\$64,344
Business Privilege Tax	\$281,783	\$56,357
Business License	\$100	\$20
Sewer	\$3,250,483	\$650,097
Police	\$520,923	\$104,185
Radnor Municipal Services and Emergency Tax	\$876,258	\$175,252
Permits and Fees	\$1,903,651	\$380,730
School Tax	\$1,923,496	\$384,699
GRAND TOTAL PAYMENTS TO RADNOR	\$9,078,414	\$1,815,683

Source: Villanova University (2011)

Between calendar year 2006 and calendar year 2010, Villanova has made a total of nearly \$9.18 million in payments to Radnor Township and Radnor School District, which translates into an annual average payment of over \$1.84 million, as shown in Table 4.1.3. In addition, between January 1, 2011 and April 14, 2011, Villanova University made an additional \$911,332 in payments to Radnor Township.

Table 4.1.3
Payments to Radnor Township and Radnor Township School District
Calendar-Year Basis
2006 - 2001

Description	2006	2007	2008	2009	2010	Average Annual
Real Estate Taxes						
Villanova Conference Center	\$ 34,142	\$ 34,142	\$ 34,142	\$ 34,142	\$ 37,898	\$ 34,893
Aldwyn Lane Properties	25,589	25,589	25,589	25,589	28,403	26,152
Other Properties	2,942	2,942	3,412	3,412	3,787	3,299
Business Privilege Tax						
University	-	-	-	184,960	23,958	41,784
Aldwyn Lane Partnership	-	-	-	65,210	7,655	14,573
Business License						
University	-	-	-	40	10	10
Aldwyn Lane Partnership	-	-	-	40	10	10
Sewer	557,267	623,097	692,231	732,066	645,822	650,097
Police	54,774	127,338	126,026	132,739	127,130	113,601
Radnor Municipal Services and Emergency Tax	183,508	191,215	195,217	195,432	199,920	193,066
Permits and Fees						
Davis Center	173,125	4,475	220	-	-	35,618
Nursing Building	2,775	635,654	1,485	320	-	128,047
Law School Building	11,400	110,710	830,368	3,405	240	191,225
Sheehan and Sullivan Halls	-	-	-	-	60	25,841
Total	\$ 1,045,222	\$ 1,755,468	\$ 1,908,690	\$ 1,377,355	\$ 1,074,893	\$ 1,432,386
School Tax						
Villanova Conference Center	\$ 196,994	\$ 206,850	\$ 221,323	\$ 229,957	\$ 236,707	\$ 218,366
Aldwyn Lane Properties	147,641	155,027	165,874	172,345	177,404	163,658
Rental Properties	16,976	17,825	22,116	26,324	26,575	21,963
Total	\$ 361,611	\$ 379,702	\$ 409,313	\$ 428,626	\$ 440,686	\$ 403,987
Grand Total, Payments to Radnor, including School Tax	\$ 1,407,133	\$ 2,135,170	\$ 2,318,003	\$ 1,805,981	\$ 1,515,579	\$ 1,836,373

Source: Villanova University (2011)

4.2 Tax Payments Made by Villanova University Vendors and Faculty/Staff to Radnor Township

In addition to making payments directly to Radnor Township, Villanova University also benefits the Township indirectly by making payments to vendors located in the Township, by its students and staff spending in the township, and by employing faculty and staff who are residents of the Township. Together they generate approximately \$790,000 in annual tax revenue for Radnor Township (See Table 4.2.2).

As outlined in Section 2.1, there are a total of over 430 faculty and staff members living in Radnor Township, earning nearly \$10 million in gross salaries, which generates nearly \$195,000 in annual payroll taxes for Radnor Township from these employees and students.

Many of the faculty and staff of Villanova that reside in Radnor Township also own property in the Township. If we assume that 75% of the 430 faculty and staff members that live in the Township own a house and based on an average assessed value of \$313,000, these employees of the University pay approximately \$368,000 in annual property taxes to the Township as well as an additional \$523,000 to Delaware County, and \$2.1 million in annual property taxes to the School District.

In addition, the faculty and staff members who reside in the Township will also spend a portion of their salaries on goods and services from local merchants. If we conservatively assume that these faculty and staff spend 5.0% of their income in the Township, there is a total of \$0.5 million in spending that will generate business for local merchants. In addition, employees that live outside of the Township also spend a portion of their salaries in the Township. If we conservatively assume that the employees that live outside of the Township spend 0.5% of their income in Radnor Township on goods and services including food and beverage, entertainment, gasoline, and other various retail items, there is a total of \$0.7 million in payments to local merchants and businesses. Taken together, all Villanova faculty and staff spend a total of \$1.2 million in Radnor Township.

The \$1.2 million in annual spending by faculty and staff in Radnor Township coupled with \$7.9 million of annual spending by Villanova University in Township and the resulting indirect economic activity will also generate additional tax revenue for the Township in the form of mercantile and business privilege taxes. We estimate that this economic activity in the Township will generate \$90,000 in additional taxes and fees for the Township.¹⁸

¹⁸ This includes mercantile and business privilege taxes as well as payroll taxes for employees hired by the local business as a result of the increased economic activity.

Table 4.2.2
Annual Payments to Radnor Township Made by Vendors and Employees

Tax	Amount
Payroll Taxes	\$195,000
Property Taxes	\$368,000
Various Business and Commercial Taxes	\$90,000
Total Annual Taxes	\$653,000

Source: Econsult Corporation (2011)

4.3 Benefits to Radnor Township Businesses from Ancillary Spending

Aside from local Radnor Township vendors benefitting from direct payments from Villanova University, local businesses also benefit from ancillary spending generated by Villanova students and visitors.

4.3.1 Student Spending

As covered previously in Section 2.3, VU students spend an estimated \$22.7 million each year in Radnor Township on items such as rent, transportation, food and beverage, entertainment and recreation, and other retail goods and services. Villanova University encourages students to purchase items from the local community by offering restricted spending accounts through university IDs (known as the Wildcard). This provides students with the convenience of purchasing power throughout the surrounding local community without having to carry cash, checks or credit cards. Retailers/merchants simply contact VU to participate in the Wildcard program.

As shown in Figure 4.3.1 below, the majority of the seventy-five retailers¹⁹ that participate in the Wildcard program are along Route 30 (Lancaster Avenue), with a number of retailers located within Radnor Township. In 2010, total Wildcard payments to local merchants amounted to over \$1.2 million.

4.3.2 Visitor Spending

With over 200,000 visitors to VU each year (including alumni returning for reunions/homecoming, attendees to conferences and educational events, parents and friends of students, sports spectators, and visiting faculty and speakers), local businesses in Radnor Township will benefit from visitors spending money on food and beverage, accommodation,

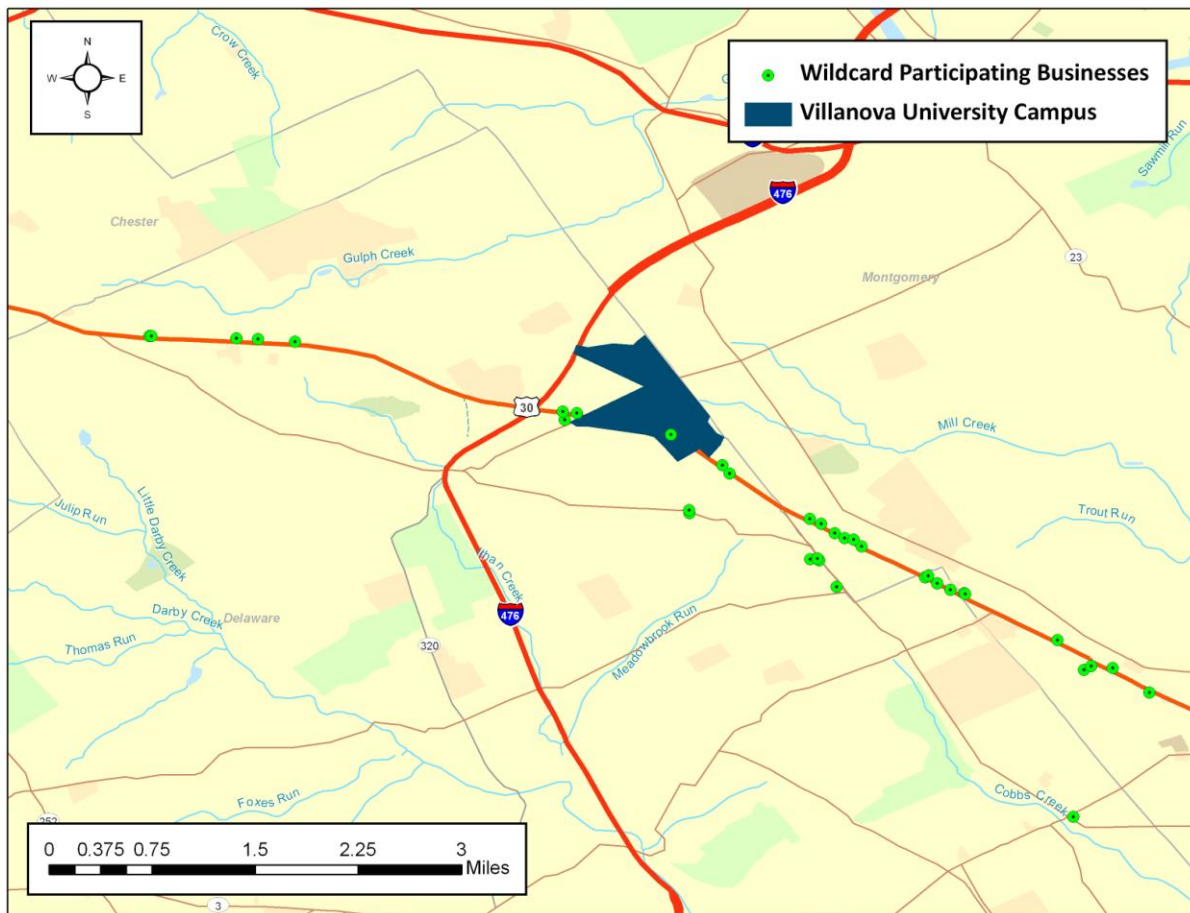
¹⁹ As of FY2010 there were 75 area businesses that were participating in the Wildcard program.

and other miscellaneous retail goods and services. In total, we estimate that visitors spend a total of nearly \$7.5 million annually at Radnor Township businesses.

4.3.3 The Fiscal Impacts of Ancillary Spending

The approximately \$30.2 million in annual ancillary spending by students and visitors at business located in Radnor Township will generate tax revenue for the Township in form of mercantile and business privilege taxes. If we assume that 75% of the \$30.2 million in ancillary spending is subjected to the Township’s 3 mill business privilege tax, the Township will receive approximately \$71,000 in annual tax revenue. This is a conservative estimate because it does not include payroll taxes for employees hired as result of the increased business due to the ancillary spending or any mercantile and business privilege taxes from the indirect spending by local business as a result of the increased economic activity.

Figure 4.3.1
Map of Villanova University and Nearby Businesses that Accept Wildcard Payments



Source: Econsult Corporation (2011)

4.4 Tax Payments Generated by Villanova University Construction Activity

Villanova University also makes payments to Radnor Township in the form of permits and fees for construction projects. As shown in Table 4.4.1, between FY2005 and FY2010, Villanova has paid a total of over \$1.9 million in permits and fees paid directly to the Township for its four main construction projects. This amounts to an average of approximately \$320,000 per year over the six year period.

**Table 4.4.1
Permits & Fees for Construction Projects
Paid to Radnor Township by Villanova University
FY2005-FY2010**

VU Fiscal Year	2005	2006	2007	2008	2009	2010	Totals
Project Name							
Davis Center	\$2,400	\$5,615	\$171,670	\$805	-	-	\$180,490
Nursing	-	\$750	\$423,025	\$215,044	\$1,415	-	\$640,234
Law School	\$3,800	\$1,950	\$245,090	\$704,113	\$1,725	\$3,245	\$959,923
Sheehan / Sullivan	-	-	-	-	-	\$129,204	\$129,204
Totals	\$6,200	\$8,315	\$839,785	\$919,962	\$3,140	\$132,449	\$1,909,851

Source: Villanova University (2011)

In addition to construction related payments to Radnor Township by Villanova University directly in the form of building permits and fees, the construction activity also generates taxes and fees from the contractors working on the projects. Between FY2005 and FY2010 the construction managers and subcontractors working on the projects described above paid a total of approximately \$935,000 in gross receipts taxes and additional permits and fees to the Township. This amounts to an average of approximately \$156,000 per year.

**Table 4.4.2
Gross Receipts Taxes Paid As a Result of Villanova University's
Construction Activity
FY2006-FY2010**

Description	Amount
Construction Permits and Fees Paid by Contractors	\$237,000
Gross Receipts Taxes paid by Construction Manager	\$370,000
Gross Receipts Taxes paid by Subcontractors	\$328,000
Total	\$935,000

Source: Villanova University (2011)

4.5 Qualitative Benefits to Radnor Township and its Residents

Aside from the financial and quantitative benefits that Villanova generates for Radnor Township and local merchants, it also generates significant, intangible qualitative benefits.

- Villanova students performed more than 220,000 hours of community service in 2010.
- Over 13,000 Villanova students, faculty/staff, and alumni participated in community service events between 2009-2010. Nearly 1,800 participated in service learning programs. Recent community service locations in Radnor Township include:
 - ◆ Bryn Mawr Thrift Shop
 - ◆ Kids First Now! (The Carr School / Mt. Pleasant Chapel)
 - ◆ Miss Mazie's Garden
 - ◆ Radnor Historical Society
 - ◆ Radnor Township Community Association
 - ◆ St. Edmond's Home for Children
 - ◆ St. John's AME Church
 - ◆ Radnor Run
 - ◆ Clem Macrone Park
- Villanova Dining Services (VDS) contributed food and meals to local charities and organizations.
- Villanova campus departments and groups host free events that are open to members of the local community, including speakers and performances.
- Villanova's student center, The Connelly Center, provides meeting space for community service programs at no charge. Past programs and organizations include Red Cross blood drives, art gallery openings and exhibits, cultural film series, Parish Technology Summit, bone marrow testing program, and drug and alcohol counseling program.
- Through its "Friends of Villanova" program, for a small fee of \$25 per year, Villanova provides access to its athletic facilities (including fitness centers and swimming pools) to Radnor Township residents 18 years of age and older. As of 2011, there are more than 1,500 registered members.

5.0 VALUE OF INCREASED PRODUCTIVITY OF VU GRADUATES

5.1 Economic Impacts of Wage Premiums

Every year, Villanova's growing alumni base and networks enhance the productivity of the regional economy. There are a total of nearly 43,000 alumni residing in Pennsylvania, including over 25,000 alumni with an undergraduate degree and over 17,000 alumni with a graduate or law degree from Villanova University. They include distinguished faculty in area schools, elected officials in local governments, small business owners, high-tech workers, entrepreneurs, and health science professionals.

VU's primary output – educated students – increases the productivity of the region and state's labor force. Villanova University graduates are more productive than non-degree holders and, therefore, earn higher salaries.²⁰ We can estimate the value of this increased productivity by examining the increased wages and salaries (wage premiums) earned by VU graduates relative to workers with no college degree. Aggregated wage premiums represent an estimate of the value of Villanova University alumni contributions to the overall economy of the 5-County Metropolitan Region. The estimation of this wage premium involves several steps.

First, we calculate the difference between average salaries with and without various university degrees, based on Bureau of Labor Statistics data. The wage premium for the bachelor's degree and advanced degrees, including Master's, Doctorate and Professional degrees, represent the differential earnings beyond high school graduate earnings.

²⁰ Also, graduates tend to benefit from a greater range of career options, increased job satisfaction, and a higher overall quality of life.

Table 5.1: Wage Premium in 2010 of All Workers by Educational Attainment

Education	Average Yearly Salary	Wage Premium ²¹
High School Diploma	\$32,812	NA
Associates	\$41,529	\$8,717
Bachelor's	\$58,762	\$25,950
Bachelor's/Master's	\$74,217	\$41,405
Master's	\$74,217	\$15,455
Doctorate	\$103,353	\$44,591

Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplement (2010), Econsult Corporation (2010)

Next, the total wage premium was calculated by multiplying the wage premiums by the total number of alumni holding each respective degree, based on residence of alumni. This report is concerned primarily with alumni residing within the Philadelphia 5-county region and the state of Pennsylvania.

Finally, aggregate total wage premiums for VU alumni residing in the Radnor Township, Delaware County, the 5-county region, and state were estimated. To be conservative, we assumed that 10% of the aggregate total wage premium is attributable to Villanova University, recognizing that in the absence of Villanova University, the degree may have been obtained elsewhere in the Philadelphia region.

²¹ For all degrees except "Master's" and "Doctorate" these numbers represent the wage premium over a high school diploma. For people that only earned their master's ("Master's") at VU the wage premium only reflects the difference between a bachelor's and a master's.

Table 5.2: Total VU Alumni, Total Wage Premium, and Total Wage Premium Attributable to Villanova University by Degree, By Residence

Degree	Total Alumni	Wage Premium	Total Wage Premium (\$ Millions)	10% Attributable to VU (\$ Millions)
Radnor Township²²				
Bachelor's	874	\$25,950	\$22.68	\$2.27
Graduate	225	\$15,455	\$3.48	\$0.35
TOTAL	1,099		\$26.16	\$2.62
Delaware County				
Bachelor's	5,745	\$25,950	\$149.08	\$14.91
Graduate	3,259	\$15,455	\$50.37	\$5.04
TOTAL	9,004		\$199.45	\$19.95
Philadelphia 5-County Region				
Bachelor's	21,840	\$25,950	\$566.75	\$56.67
Graduate	15,095	\$15,455	\$233.29	\$23.33
TOTAL	36,935		\$800.04	\$80.00
Commonwealth of Pennsylvania				
Bachelor's	25,435	\$25,950	\$660.04	\$66.00
Graduate	17,251	\$15,455	\$266.61	\$26.66
TOTAL	42,686		\$926.65	\$92.67

(\$ in millions and number of jobs)

Source: Econsult Corporation (2011).

*Numbers may appear higher or lower due to rounding.

In addition to the wage premium they receive, VU graduates also contribute to the regional economy and local workforce by increasing productivity, enhancing the overall competitiveness of the region, and often continuing the research efforts of the University. VU graduates in the workforce are estimated to provide approximately \$800 million in additional productivity “value” to the region, of which we estimate 10%, or \$80.0 million, may be attributable to their VU education.²³

²² Alumni counts were obtained from Villanova University and provided counts of alumni by zip code. Total counts for Radnor Township were estimated by taking 50% of the alumni residing in zip code 19085 (Villanova), 35% of those residing in zip code 19087 (Wayne), and 40% of alumni residing in zip code 19010 (Bryn Mawr).

²³ This cannot be added to the annual impacts of ongoing operations due to the fact that these benefits do not occur on an annual basis. They are simply representative of impacts generated by a portion of the current, living alumni population.

We estimate that there are nearly 1,100 alumni residing in Radnor Township, providing over \$26 million in additional productivity locally, with 10% (\$2.6 million) attributable to their VU education. At the county level, there are over 9,000 alumni residing in Delaware County, generating a total wage premium of nearly \$200 million, 10% of which (\$20 million) is attributable to their VU education.

6.0 QUALITATIVE IMPACTS

In addition to the quantifiable impacts noted above, there is a diverse set of qualitative economic impacts that represent the added value Villanova brings to the area, due to the University's physical location and to its commitment to community service, programs and initiatives. Because these specific economic benefits have no clear market valuation, they are not included in the quantitative modeling, but should be included when considering the overall economic benefits generated by Villanova University

The University has established itself as a responsible and invested civic partner with a commitment to environmental responsibility and sustainability as well as community engagement.

Not only does the University contribute to the process of economic growth and development, but Villanova students, faculty, staff, and alumni embrace the University's commitment to the common good by contributing to the life of the community. This civic engagement takes a variety of forms, and affects multiple aspects of community life, and the extent of participation is summarized in Table 6.1.

Table 6.1
Engagement of the Villanova Community

Participants ²⁴	Community Service	Service Learning	Total
Students	8,801	1,442	10,243
Faculty	249	98	347
Administrators/Staff	869	37	906
Alumni	1,356	114	1,470
Others	1,836	88	1,924
TOTAL	13,111	1,779	14,890

Source: Villanova University (2011)

Some examples of Villanova's civic involvement include:

- Special Olympics Fall Festival – Organized by VU students, the Special Olympics Pennsylvania Fall Festival is the largest annual student-run Special Olympics event in the World. The festival is one of four major statewide events that provide over 20,000

²⁴ Since individuals may participate in more than one activity in a given year, there may be some double counting present.

children and adults with intellectual disabilities with the opportunity to compete in 23 sports.

- Engineers without Borders (EWB) and Business without Borders (BWB) – EWB is a national service organization that partners with developing countries to improve their quality of life through engineering projects and education. BWB is a group of socially-minded business students who want to use their business skills to undertake social justice initiatives. EWB and BWB have completed projects across the US and the World including New Orleans, Thailand, Kenya, as well as on campus.
- Service Learning Classes – With over 26 programs, Service Learning composed more than one-third (39%) of total hours engaged in community involvement.
- Alpha Phi Omega – As Villanova’s only co-ed service fraternity, the chapter is nationally recognized and works to promote the principles of friendship, leadership and service through on and off campus service events.

In addition to its tradition of civic involvement and service, the University has a proud tradition of a variety of extracurricular activities, ranging from performing arts to sports, that not only enrich the lives of its students and alumni but the surrounding community, including:

- Theater – The Theater Department produces four plays per season, ranging from classic to contemporary, including both plays and musicals. Performances are open to the public.
- Men’s and Women’s basketball games – The spirit of Villanova basketball radiates throughout the community. Students and community members come together to support the Wildcats at the Pavilion.
- Other Athletic Events – Open to the public, athletic events provide the students and community with safe leisure activity and an opportunity to cheer on the Wildcats. Villanova athletics are renowned, with multiple NCAA Division I championships and nearly 60 Olympian alumni.
- Use of the Track and Athletic Facilities – The athletic facilities at Villanova provide venues for students and community members to engage in healthy forms of exercise.
- Concerts – The University sponsors concerts and performances open to the community each year. Performing arts groups include Villanova Voices and Singers, Dance Company and Ensemble, Jazz Band and Ensemble and more.

- Villanova University Art Gallery – Open to students, faculty, staff and the public, the campus gallery presents high-quality exhibits by new, emerging and established artists from around the world.

VU serves as an important local community asset, providing numerous intangible benefits to the region through community outreach programs and initiatives. VU also provides education programs designed to contribute to the region’s “Knowledge Industry” base. In addition to providing skilled workers to the region and enhancing the economy through increased productivity, VU’s research and development efforts enhance the regional image, promote regional discovery and innovation, and bring university-developed technology and research results to the community and local marketplace. VU’s international student population contributes to the region’s international exposure and reputation, while encouraging local diversity and involvement.

Through civic and community involvement, research and development efforts, and international exposure, VU provides numerous intangible benefits that must be recognized in the overall impact of the University on the region and state.

7.0 CONCLUSION

Villanova University is one of the region’s key educational institutions. VU generates a significant economic contribution for the 5-County Region and the Commonwealth. As shown in Table 7.1, VU’s annual direct expenditures generate over \$666 million each year in total economic activity for the Region. \$348 million of that total is recognized as earnings paid to the over 9,700 workers in various industries and occupations whose jobs are also a byproduct of VU activity.

**Table 7.1: Ongoing Impacts Attributable to Annual Villanova Operations
(\$ Millions & Total Jobs)**

Description	Radnor Township	Delaware County	Regional	PA State
Total Direct Expenditures	\$48.6	\$109.8	\$295.2	\$301.2
Total Economic Impact	\$51.0	\$186.6	\$666.2	\$692.6
Total Jobs	590	2,796	9,709	11,080
Total Salaries & Wages	\$15.2	\$81.3	\$347.7	\$366.9

Villanova construction projects also generate significant one-time impacts, as outlined in Table 7.2. Nearly \$131 million in direct construction expenditures generate a regional economic impact of \$282 million, including over \$85 million in employee salaries and wages, supporting nearly 2,300 total jobs.

**Table 7.2: One-Time Impacts Attributable to Villanova Construction Projects
(\$ Millions & Total Jobs)**

Description	Delaware County	Regional	PA State
Total Direct Expenditures	\$130.7	\$130.7	\$130.7
Total Economic Impact	\$229.8	\$282.0	\$319.7
Total Jobs	1,090	2,298	2,792
Total Salaries & Wages	\$41.1	\$85.2	\$102.6

At the local level, Villanova University generates significant benefits for Radnor Township, in the form of direct tax payments, tax payments arising from indirect economic activity, spending by visitors and students at local retail establishments, and Villanova University permit and fee

payments for construction projects. Table 7.3 provides a summary of the annual economic benefits to Radnor Township attributable to Villanova University.

**Table 7.3: Average Annual Ongoing Local Benefits to Radnor Township²⁵
FY 2006-FY2010**

Description	Amount
Direct Payments by Villanova University to Radnor Township ²⁶	\$1,050,000
Taxes Paid by Villanova Vendors and Faculty/Staff	\$653,000
Taxes Resulting from Ancillary Spending by Students and Visitors	\$71,000
Average Annual Construction Related Taxes and Payments ²⁷	\$568,000
Total Average Annual Local Impact in Radnor Township	\$2,342,000
Average Annual Payments to Radnor School District	\$385,000
Total Average Annual Local Impact	\$2,727,000

Source: Econsult Corporation & Villanova University (2011)

In addition to the ongoing local benefits to Radnor Township in the form of taxes and fees paid directly by Villanova as well as by the businesses and vendors supported by Villanova and Villanova employees, recent on campus infrastructure investments have generated significant one-time local fiscal impacts for Radnor Township. Table 7.4 provides a summary of the economic benefits to Radnor Township attributable to infrastructure investments made by Villanova between FY2005 and FY2010

²⁵ Excludes building permits and fees and other taxes and fees related to construction spending.

²⁶ Excluding building permits and fees.

²⁷ Includes the average annual building permit fees paid directly by Villanova University as well as the gross receipt taxes paid by the construction manager and subcontractors and the building permit fees paid by subcontractors.

Table 7.4
Construction Project Related Payments to Radnor Township
FY2006 - FY2010

Description	FY 2006- FY 2010	Annual Average
Building Permits and Fees Paid by Villanova	\$1,910,000	\$380,730
Building Permits and Fees Paid by the Contractors	\$237,000	\$47,400
Gross Receipts Taxes Paid by the Construction Manager	\$370,000	\$74,000
Gross Receipts Taxes Paid by the Sub-Contractors	\$328,000	\$65,600
Total	\$2,845,000	\$567,730

Source: Villanova University (2011)

The total economic output we calculate represents only a portion of the total benefits of Villanova University. Quantifying all benefits of the University would require significant subjective valuations, and this additional component is beyond the scope of this analysis. The benefits not estimated empirically are clearly positive, and their consideration, even if only as qualitative outcomes, are important to recognize.

Higher education is an investment that provides enormous returns for businesses, government, and society as a whole. Clearly, VU is vital to the economic growth and development of the region and the Commonwealth. VU generates significant current economic activity and employment, and provides numerous intangible benefits to the community. Furthermore, its output – educated and skilled graduates – is precisely the key input to the region’s future economic competitiveness.

APPENDIX A: MODEL METHODOLOGY

A.1 Regional Input-Output Models and Methodology

The economic impact estimates presented in this report were derived from the regional Input-Output (I-O) model developed and maintained by the U. S. Department of Commerce, Bureau of Economic Analysis (BEA). This model, the Regional Input-Output Modeling System (RIMS II), is widely used to estimate the economic impacts of regional projects or programs. The results generated from the RIMS II model are widely recognized as plausible, and defensible, in cases where the input data to the model are accurate and based on reasonable assumptions. This section describes the basic concepts that underlie RIMS II.

An I-O model provides a compact means of summarizing inter-industry relationships within regions. The model itself is essentially an accounting framework, expressed as a matrix or array. For each industry in the region, the model shows the distribution of inputs purchased and outputs sold to all other regional industries. The RIMS II model is based on the BEA National I-O model, which shows the input and output structure for nearly 500 industries, and the BEA regional economic accounts, which are used to adjust the information in the national model to reflect a given region's industrial structure and inter-industry trading patterns.

The data that drive the I-O model are the planned expenditures associated with the project or program being studied. In the jargon of I-O models, those expenses make up the "direct expenditures," which form one part of the programs' total economic impact on the region. Assuming that the planned project is a new store, the direct expenditures are the sum of all spending needed to construct, equip and operate that facility.

Some of that spending will be to purchase goods and services from other businesses in the region, causing those firms to increase production. In turn, the firms supplying the new store will need to increase purchases from their suppliers to meet their new orders. The sum of all of this inter-industry spending is the "indirect expenditures" associated with the new store.

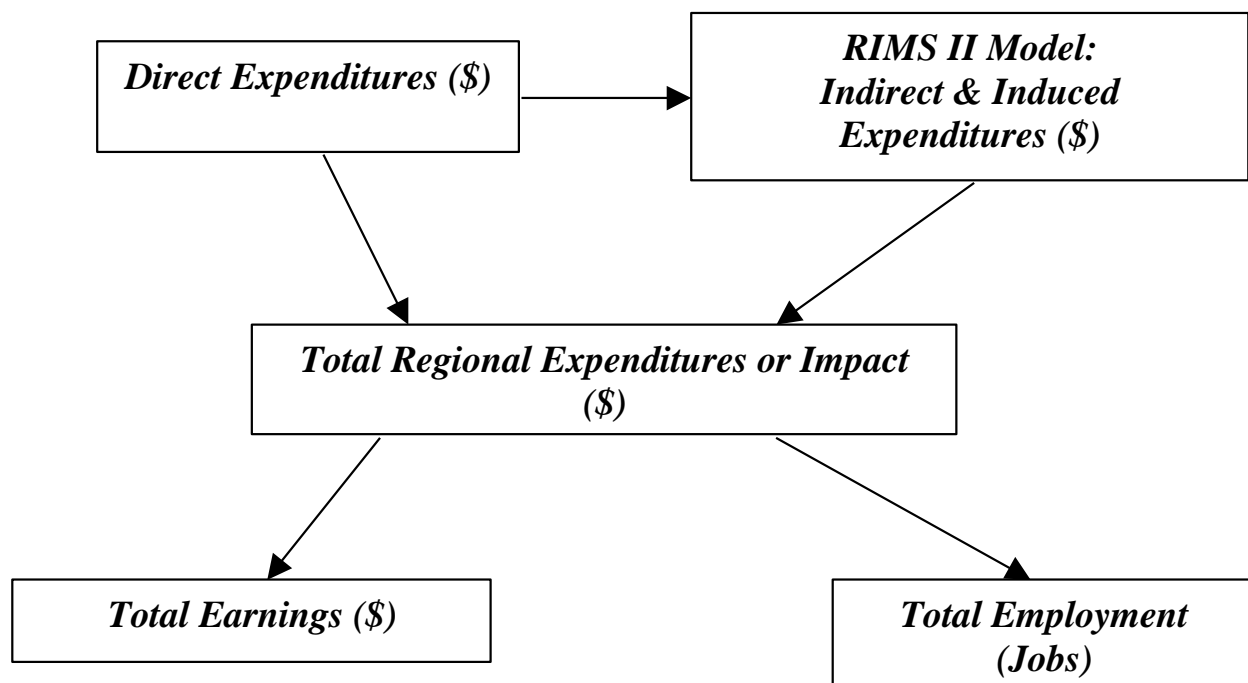
All of the economic activity resulting from the new store, whether direct or indirect, will require workers who must be paid. Some of their earnings will be spent at businesses within the region on various goods and services, creating another round of economic activity like that described above. These expenditures equal the "induced expenditures" associated with the new store.

The sum of the direct, indirect, and induced expenses represent the total economic impact of the new store on the region. In addition to measuring that impact in dollars as output or expenditures, the RIMS II model produces estimates of the proportion of that spending paid to regional households as wages and salaries. Finally, the RIMS II model generates estimates, by

industry, of the number of full- and part-time jobs related to the new store. Both the earnings and employment estimates are useful alternative measures of the regional economic impact of the new project.

The following schematic depicts the flow of data, from inputs to outputs, through the model:

Figure A -- Input-Output Model Flow Chart



The overall “success” of the economic impact analysis depends in large part on the initial design of the analysis. For example, if the project involves both construction and operation phases, it is important to separate the total expenditures between the two, and run the RIMS II model for each set of expenditures. The phases occur at different points in time, and have different impacts on the regional economy. Hence, the accuracy of the results depends on recognizing those differences, and treating them appropriately.

A.2 Fiscal Impact Model

The economic activity estimated to result from an economic development project should result in additional tax revenue for state and local government in the region where that economic activity occurs. Econsult's Fiscal Impact Model is designed to estimate this level of additional tax revenue based on the estimates of economic impact produced by the RIMS II model.

The RIMS II model provides estimates of direct, indirect, and induced expenditures, earnings, and employment within a county, metropolitan area, or state. Econsult combines the output of the RIMS II model with U. S. Census Bureau County Business Patterns data to produce estimates of the distribution of additional employment and earnings by county within a region or state. In addition, U. S. Census Bureau "Journey to Work" data on commuting flows from the 2000 Census are utilized to estimate income earned by residents of each county within a region.

Pennsylvania state business and sales taxes are estimated based on the most recent data on average sales tax base per employee by major industry, as contained in publications from the Pennsylvania Department of Revenue. The RIMS II model produces estimates of additional employment by industry. These estimates, combined with estimates of the average business and sales tax base per employee, and current and projected future tax rates, produce the estimates of additional annual state business and sales tax revenue.

For the current study, the fiscal impact estimates take into account estimated additional revenue from the following major tax sources:

- Local earned income taxes in Pennsylvania (counties other than Philadelphia)
- Philadelphia wage tax
- Philadelphia sales tax
- Philadelphia business privilege tax
- Pennsylvania state sales tax
- Pennsylvania personal income tax
- Pennsylvania corporate net income tax
- Pennsylvania capital stock and franchise tax

APPENDIX B: ANNUAL DIRECT VILLANOVA SPENDING - DETAILS

B.1 Faculty and Staff Payroll and Outside Earnings

**Table B1.1: All Villanova University Faculty and Staff
(Including Students)**

Region	Employees	Gross Salary (\$ Millions)	Outside Earnings (\$ Millions)	Total Income (\$ millions)
Radnor	514	\$9.59	\$0.96	\$10.55
Delaware County	1,810	\$51.89	\$5.19	\$57.08
5-County Metro Region	3,898	\$140.96	\$14.10	\$155.06
PA State	4,180	\$143.88	\$14.39	\$158.27
Other States	2,178	\$12.22	\$1.22	\$13.44
Total	6,358	\$156.10	\$15.61	\$171.71

Source: Villanova University (2011)

**Table B1.2: All Villanova University Faculty and Staff
(Excluding Students)**

Residency	Total Employees	Gross Salary (\$ Millions)	Benefits Paid By Employer	Benefits Paid by Employee
Radnor Township	432	\$9.52	\$0.96	\$10.55
Delaware County	1,575	\$51.50	\$5.19	\$57.08
5-County Metro Region	3,261	\$139.70	\$14.10	\$155.06
PA State	3,366	\$142.42	\$14.39	\$158.27
Other States	437	\$10.29	\$1.22	\$13.44
Total	3,803	\$152.70	\$15.61	\$171.71

Source: Villanova University (2011)

**Table B1.3: All Villanova University Faculty and Staff
(Students Only)**

Residency	Total Employees	Gross Salary (\$ Millions)	Benefits Paid By Employer	Benefits Paid by Employee
Radnor Township	82	\$0.08	\$0.00	\$0.00
Delaware County	235	\$0.39	\$0.00	\$0.00
5-County Metro Region	637	\$1.26	\$0.00	\$0.00
PA State	814	\$1.46	\$0.00	\$0.00
Other States	1,741	\$1.93	\$0.00	\$0.00
Total	2,555	3.40	\$0.00	\$0.00

Source: Villanova University (2011)

B.2 Ongoing Operational Spending (Non-Payroll)

**Table B2.1: Overall Summary of Operating Budget
(\$thousands)**

Description	FY '10 Amount
Salaries & Wages	\$159,909
Other Employee Benefits	35,268
Utilities	11,057
Maintenance	754
Professional Fees	1,847
Equipment Rental & Maintenance	8,450
Supplies	92,271
Pension Plan Contribution	10,791
Printing & Publications	2,198
Travel	6,434
Advertising	1,577
Telephone	1,540
Postage & Shipping	1,738
Insurance	1,304
Cost of Goods Sold	12,965
Accounting & Legal Fees	588
Total	\$348,691
Total Non-Payroll Spending	\$142,723

Source: Villanova University (2011)

Table B2.2: Villanova University Spending from Local Vendors

Greater Philadelphia Area County	Amount	% of Total
NJ – Salem	\$760	0%
NJ – Burlington	\$269,154	0%
NJ – Camden	\$877,957	1%
NJ – Gloucester	\$348,320	0%
NJ – Mercer	\$113,633	0%
DE - New Castle	\$1,954,468	1%
PA – Bucks	\$1,960,102	1%
PA – Chester	\$16,826,054	12%
PA – Delaware	\$7,855,602	6%
PA – Montgomery	\$12,387,966	9%
PA – Philadelphia	\$48,211,693	34%
TOTAL PHILA. AREA SPENDING	\$90,805,709	64%
Radnor Township	\$7,909,078	6%
Total FY 2010 Spending	\$142,723,000	

Source: Villanova University (2011)

B.3 Ancillary Spending

B.3.1 Student Spending

Table B3.1.1: Student Counts

Description	Amount
Undergraduate full-time	6,394
Graduate	2,529
Law School (includes traditional and joint Ph.D., M.B.A. and Tax enrollments)	960
Part-time and others	599
Total enrollment	10,482

Source: Villanova University (2011)

Table B3.1.2 Average Annual Spending for Full-Time Students Living On Campus in University Housing

Spending Category	Spending Per Student	Total Students	Total Spending
Transportation:	\$600	3,325	\$1,994,928
Books and Educational Supplies:	\$950	3,325	\$3,158,636
Food and Beverage:	\$1,000	3,325	\$3,324,880
Clothing:	\$350	3,325	\$1,163,708
Entertainment and Recreation:	\$400	3,325	\$1,329,952
Other Services (Medical, Beauty, etc.):	\$700	3,325	\$2,327,416
TOTAL	\$4,000		\$13,299,520

Source: Villanova University (2011)

Source for spending amounts: 2009 AICUP VU Impact Report

Table B3.1.3 Average Annual Spending for Off-Campus Students Off-Campus Undergrads

		Off-Campus Undergrads		
Spending Category	Amount	Total Students	% Paying	\$ Total
Rent Per Student	\$3,600	3,069	60%	\$6,629,299
Utilities	included in rent	3,069		
Transportation:	\$2,500	3,069	75%	\$5,754,600
Books and Educational Supplies:	\$950	3,069	100%	\$2,915,664
Food and Beverage:	\$1,000	3,069	100%	\$3,069,120
Clothing:	\$350	3,069	100%	\$1,074,192
Entertainment and Recreation:	\$400	3,069	100%	\$1,227,648
Other Services (Medical, Beauty, etc.):	\$700	3,069	100%	\$2,148,384
TOTAL	\$14,900			\$22,818,907

Source: Econsult Calculations (2011)

**Table B3.1.4 Average Annual Spending for Off-Campus Students
Part-Time and Others**

		Part-Time and Others		
Spending Category	Amount	Total Students	% Paying	\$ Total
Rent Per Student	\$3,600	599	NA	
Utilities	included in rent	599		
Transportation:	\$2,500	599	NA	
Books and Educational Supplies:	\$950	599	100%	\$569,050
Food and Beverage:	\$1,000	599	100%	\$599,000
Clothing:	\$350	599	NA	
Entertainment and Recreation:	\$400	599	25%	\$59,900
Other Services (Medical, Beauty, etc.):	\$700	599	25%	\$104,825
TOTAL	\$14,900			\$1,332,775

Source: Econsult Calculations (2011)

**Table B3.1.5 Average Annual Spending for Off-Campus Students
Graduate Students**

		Graduate Students (inc. Law School)		
Spending Category	Amount	Total Students	% Paying	\$ Total
Rent Per Student	\$3,600	3,489	5%	\$628,020
Utilities	included in rent	3,489	NA	
Transportation:	\$2,500	3,489	25%	\$2,180,625
Books and Educational Supplies:	\$950	3,489	100%	\$3,314,550
Food and Beverage:	\$1,000	3,489	25%	\$872,250
Clothing:	\$350	3,489	NA	
Entertainment and Recreation:	\$400	3,489	25%	\$348,900
Other Services (Medical, Beauty, etc.):	\$700	3,489	25%	\$610,575
TOTAL	\$14,900			\$7,954,920

Source: Econsult Calculations (2011)

**Table B3.1.6 Location of Annual Student Spending
(\$ Millions)**

Region	% Student Spending in Region	Total Regional Student Spending
Radnor Township	50%	\$22.70
Delaware County	75%	\$34.05
5-County Region	90%	\$40.87
PA State	95%	\$43.14

Source: Econsult Calculations (2011)

B.3.2 Visitor Spending

**Table B3.2.1 Location of Annual Visitor Spending
(\$ Millions)**

Region	% Visitor Spending in Region	Total Regional Visitor Spending
Radnor Township*	50%	\$7.48
Delaware County	75%	\$11.21
5-County Region	90%	\$13.46
PA State	95%	\$14.20

*Spending at off-campus sporting events is excluded completely from Radnor Township

B.3.3 Impacts of Annual Direct Expenditures

Table B3.3.1 Multipliers Used

Region	Indirect and Induced Expenditures	Total Economic Output	Total Earnings	Total Employment	Tax Revenue
Radnor Township	0.05	1.05	0.31	12.15	0.02
Delaware County	0.70	1.70	0.74	25.47	0.01
5-County Region	1.26	2.26	1.18	32.89	0.02
PA State	1.30	2.30	1.22	36.78	0.07

Source: Econsult Calculations (2011)

APPENDIX C: IMPACTS OF CAPITAL INVESTMENTS – DETAILS

Table C1 Multipliers Used

Area	Indirect and Induced Expenditures	Total Economic Output	Total Earnings	Total Employment	Tax Revenue
Delaware County	0.76	1.76	0.31	8.33	0.00
5-County Region	1.16	2.16	0.65	17.58	0.02
PA State	1.45	2.45	0.78	21.36	0.05

APPENDIX D: LOCAL FISCAL IMPACTS – DETAILS

D.1 Tax Payments Made by Villanova University Vendors and Faculty/Staff to Radnor Township

Table D1.1 Annual Payroll Taxes Paid by Villanova Employees To Radnor Township

Payroll Taxes	
Faculty and Staff	\$136,408
Students	\$58,928
TOTAL	\$195,336

Source: Villanova University (2011)

Table D1.2 Annual Property Taxes Paid by Villanova Employees To Radnor Township

Payroll Taxes	
Total Township Job Impact	430
% of Employees who pay property taxes	75%
Average Residential Property Assessment	\$313,000
Radnor Township Millage Rate	3.6411
Average Township Real Estate Tax Bill	\$1,140
TOTAL PROPERTY TAXES	\$367,650

*Source: Villanova University (2011), Radnor Township (2011),
Econsult Calculations (2011)*

**Table D1.3 Annual Spending by Villanova University Employees
In Radnor Township**

Description	Number of Employees	Total Earnings (\$ Millions)	% Spent in Radnor Township	Total Spent in Radnor Township (\$ Millions)
VU Employees Residing in Radnor Township	432	\$9.5	5.0%	\$0.5
VU Employees Residing Outside Radnor Township	3,371	\$143.2	0.5%	\$0.7
Total	3,803	\$152.7		\$1.2

Source: Econsult Calculations (2011)

**Table D1.4 Annual Spending by Villanova University Employees
In Radnor Township**

	Payroll Taxes
Annual Spending by University Employees	\$1.2
Annual Indirect Operation Economic Activity	\$2.4
Total Annual Economic Activity	\$3.6
Additional Taxes as a percent of economic activity	2.5%
TOTAL Commercial and Business Taxes	\$90,000