

COMMUNITY COLLEGE OF PHILADELPHIA ECONOMIC AND COMMUNITY IMPACT ANALYSIS



FINAL REPORT – June 22, 2016

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EXECUTIVE SUMMARY

The Community College of Philadelphia (CCP) is the largest public institution of higher education in Philadelphia. CCP opened its doors in 1965 (and celebrated its 50th anniversary in 2015) and in that time has served more than 685,000 students. The vast majority of these students are residents of Philadelphia, and they represent a broad geographic, demographic and educational cross-section of the city. CCP is truly the “city’s college,” reflecting the vast diversity of the City of Philadelphia.

This report articulates, and quantifies where possible, the variety of social and economic impacts associated with CCP’s annual activities. Like other large institutions and community anchors, CCP is a major employer and a major local purchaser of goods and services. Further, the knowledge and academic credentialing conferred by its programs translate into a significant wage premium for its alumni. As important as its economic footprint, however, is CCP’s ability to transform the lives of its students, through educational programming that provides them with sustainable pathways out of poverty.

CCP’s academic offerings are not “one size fits all,” but instead fill essential gaps for many residents, allowing them to improve their economic opportunities and quality of life through advanced educational attainment. Overall, CCP offers programs in 80 different disciplines, granting students associate’s degrees and certificate programs amongst these topic areas. These students include the high school graduate who is seeking a pathway to a four-year degree, and also the “reverse transfer” student from a four-year institution looking to get themselves back on track to a bachelor’s degree. It includes students seeking an associate’s degree in a particular field as a pathway to a career, and also part-time students seeking a certificate in a specific skill to advance at their place of employment. It includes immigrant parents seeking English language courses to communicate better with their neighbors and employers, ex-offenders seeking a way to make positive contributions to their community, and countless others looking to better their lives and that of their families.

Importantly, CCP students are not the only beneficiaries of CCP’s academic mission and services. CCP is an essential component of the region’s workforce development strategy, and its training and credentialing services increase the productivity of the local labor force. A more productive workforce, in turn, strengthens the city and regional economies, making Philadelphia a more attractive place to start and grow a business. These benefits to students and the regional economy ultimately translate into benefits to the state and local government by building the tax base. As important as the level of economic growth is the manner in which it is achieved. CCP’s programs are a vital part of a balanced growth strategy which helps citizens to build stronger futures for themselves and their families. This, in turn, not only grows the tax base but contributes to fostering strong and vibrant neighborhoods.

Research suggests that higher educational attainment among citizens improves public health, public safety, and reduces reliance on public assistance programs, therefore reducing

government expenditures. In particular, life expectancy and health outcomes improve with higher educational attainment. Higher education can reduce crime by adding to the legitimate (i.e., non-criminal) workforce, intensifying the opportunity cost of committing a crime and avoiding a myriad of costs to the justice system by mitigated incarceration. There is a strong relationship between educational attainment and reliance on government assistance – most stark in one example, where 95% of beneficiaries lack education beyond a high school degree. It is clear that with additional years of schooling beyond a high school diploma, society has much to benefit.

Among the advantages described above are several categories of quantifiable impacts in economic activity and employment within the city and state economy, as well as tax revenue generation for the city and state governments. This report includes estimates of the annual economic activity associated with CCP's operations, its capital investments, and the annual wage premium realized by its alumni, which translates to greater spending power within the local economy. In total, estimated annual impacts from these three categories sum to:

- \$346 million in annual output within the City of Philadelphia, supporting nearly 3,000 direct, indirect, and induced jobs with nearly \$150 million in earnings, and generating more than \$6 million in tax revenues
- \$663 million in annual output within the Commonwealth of Pennsylvania, supporting over 5,200 jobs with \$300 million in earnings and generating nearly \$16 million in tax revenues

SUMMARY OF CCP'S CALCULATED ANNUAL ECONOMIC AND FISCAL IMPACTS WITHIN THE CITY OF PHILADELPHIA AND COMMONWEALTH OF PENNSYLVANIA

City of Philadelphia	Operations	Capital Investment	Wage Premium	Total
Economic Impact (\$M)	\$202	\$25	\$120	\$346
Employment (Jobs)	2,040	130	770	2,950
Labor Earnings (\$M)	\$91	\$11	\$45	\$148
Tax Revenue (\$M)	\$4.4	\$0.3	\$1.5	\$6.3
Commonwealth of Pennsylvania	Operations	Capital Investment	Wage Premium	Total
Economic Impact (\$M)	\$276	\$43	\$343	\$663
Employment (Jobs)	2,430	390	2,400	5,220
Labor Earnings (\$M)	\$145	\$27	\$121	\$293
Tax Revenue (\$M)	\$6.8	\$1.3	\$7.5	\$15.5

Source: ESI (2016)

Note: Numbers may not add due to rounding

1.0 INTRODUCTION

1.1 ABOUT COMMUNITY COLLEGE OF PHILADELPHIA

Community College of Philadelphia (CCP) is an institute of higher education celebrating over 50 years since it first opened its doors in 1965. It is an open-admissions institution that provides access to higher education for all who may benefit. CCP is the city's only public college offering associate's degrees and transfer paths to four-year institutions leading to bachelor's degrees, in addition to technical education, training and a variety of supporting services. More broadly, it serves Philadelphia by preparing its students to be active and informed citizens and productive members of the city's future workforce. Each year, CCP has the city's highest number of incoming enrollees, most of them Philadelphians, many low-income and the first in their families to attend college.

CCP is truly the "city's college" in terms of both geographical representation and demographics of the student body population. The College has four locations spread throughout the City of Philadelphia – Main Campus in Center City, West Regional Center, Northwest Regional Center, and Northeast Regional Center. The vast majority of the student body are Philadelphia residents, representing a cross-section of neighborhoods, and they exhibit similar ethnic and racial demographics of the city writ large. Notably, a significant proportion of the student body stays in Philadelphia after completing their studies, reflecting an individual commitment to the City of Philadelphia.

CCP is funded through a mix of public support (largely from the City of Philadelphia and Commonwealth of Pennsylvania) and student tuition. In FY 2015, the city allocation to CCP totaled approximately \$27 million, and the state allocation was \$33 million, representing approximately 16% and 22%, respectively, of total CCP funding. Student tuition accounted for about \$75 million in revenue or 60% of total funding. These public investments in CCP are critical for CCP to maintain an accessible tuition rate for its students and to maintain and expand its services to generate the impacts described throughout this analysis.

1.2 OVERVIEW OF REPORT

The purpose of this report is to articulate, and quantify where possible, the variety of social and economic impacts associated with the work of CCP. Impacts from CCP are visible through several lenses. Like other large institutions, CCP is a major employer, and its direct expenditures on its operations and capital investments have a considerable economic footprint. More important, however, is CCP's ability to transform the lives of its students, through education programming that provides them with sustainable pathways out of poverty. The students themselves are not the only beneficiaries of this academic mission. Strengthening Philadelphia's workforce strengthens the city and regional economy, making Philadelphia a more attractive place to start and grow a business. Finally, the City and State government are significant

beneficiaries, as CCP's academic services foster balanced and sustainable growth in the city, and concurrently help governments realize savings by improving the lives of citizens.

Broadly, the report first explores the students that CCP serves and the variety of programs and services that it offers to them. Next, the report examines these programs through the lens of their beneficiaries, which include not only the students themselves, who enhance their career and earnings potential but the regional economy and state and local government. Finally, the report quantifies impacts from the direct economic footprint of CCP's expenditures on operations and capital investments.

SECTION 2: CCP MISSION AND SERVICES

Section 2 explores the student population served by CCP, and the variety of services that the institution offers to enhance the opportunities available to those students. CCP students are mainly native Philadelphians, reflecting a broad geographic, demographic and socio-economic cross-section of the city, and they primarily join the workforce of the city after graduation. CCP's open-admissions status is supplemented by a variety of programs above and beyond its transfer path and associate's degrees that enable them to meet the needs of a broad spectrum of Philadelphians. These include professional certificate programs, industry partnerships, General Educational Development (GED) courses, English as a Second Language (ESL) courses, re-entry programs, and more. CCP offers programs in 80 different disciplines, granting students associate's degrees and certificate programs within these many topic areas. These programs ensure that impacts of CCP's mission and offerings are not tied solely to its credentialing and degree-granting functions, but in the variety of ways that it serves a broad cross-section of Philadelphians and helps to further their career and life opportunities.

SECTION 3: BENEFICIARIES OF CCP SERVICES

Section 3 explores three categories of beneficiaries of the services described in Section 2. First and perhaps most apparent are the students, who see lasting and sustainable improvements to their career prospects, and in many cases, their quality of life, through the education and credentialing provided by CCP. One framework to quantify these benefits is through the annual "wage premium" accrued by recipients of CCP degrees. Importantly, this premium provides a substantial return on investment for these students, thanks to CCP's commitment to controlling tuition costs and providing financial aid.

However, the benefits of CCP's services extend well beyond the students directly touched by them. CCP's workforce development function leads to a more skilled and productive labor force in Philadelphia. This, in turn, grows the regional economy and makes Philadelphia a more attractive place to grow and locate a business. This expansion of the tax base, in turn, benefits the city and state government. Further, educational attainment is associated with improved outcomes in areas like public health, public safety and reduced reliance on public assistance, yielding savings expenditures for local and state government. Beyond the fiscal implications for government, CCP

is a vital partner in efforts to grow the city in a balanced way, providing opportunities for a wide variety of citizens across all of Philadelphia's neighborhoods.

SECTION 4: ECONOMIC FOOTPRINT

Section 4 describes and quantifies the direct and indirect economic effects associated with CCP's operating expenditures and capital investments on an annual basis. CCP is a major procurer of products and services, a source of capital and infrastructure projects, and a major employer. These direct capital and operating expenditures create spillover economic impacts since direct expenditures result in some local suppliers ramping up their activities in response and since some portion of direct earnings is spent locally.

Impacts estimated included total economic output, employment and labor income are described and modeled at the city and state level. Input-output modeling is utilized to understand supply chain and labor effects throughout the local economy, demonstrating that impacts from this activity extend well beyond the academic services and construction sectors. Fiscal impacts to the city and state government are also estimated on an annual basis.

2.0 CCP MISSION AND SERVICES

CCP produces significant and sustainable economic and social value through its educational mission and services. This section discusses the student population that it serves and the variety of programs that it offers.

Over its 50 year history, CCP has served more than 685,000 total credit and non-credit students and granted more than 60,000 credit degrees and certificates. These students represent a broad cross-section of Philadelphians across neighborhoods, race, and economic status. Importantly, CCP programs are not geared only to those students interested in pursuing a four-year degree through a transfer path. Instead, CCP offers a variety of programs that enhance career opportunities and quality of life in several ways, including directly serving at-risk populations.

From 1967 – 2015, CCP awarded a total of 60,344 degrees and certificates, including 53,738 associate's degrees. Table 2.1 below shows the breakdown of those degrees by type, both historically and for the past ten years (2006-2015).

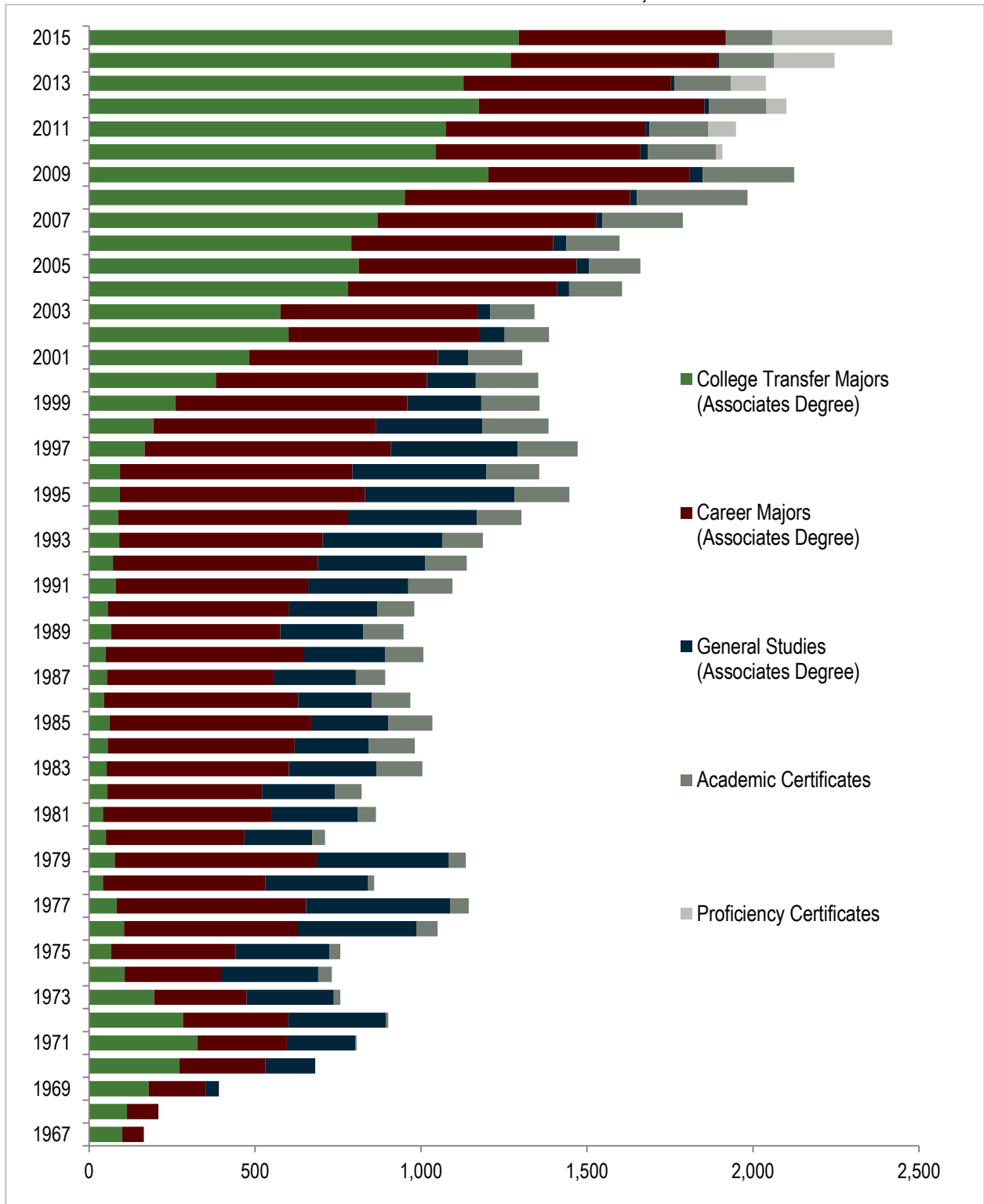
TABLE 2.1 – TOTAL DEGREES AWARDED 1967 – 2015 BY TYPE

Type	Total 1967 - 2015	Total 2006- 2015
College Transfer Major	18,111	10,798
Career Majors	26,193	6,322
General Studies	9,434	183
<i>Total Associate's Degrees</i>	53,738	17,303
Certificates	5,792	2,041
Proficiency Certificates	814	814
<i>Total Certificates</i>	6,606	2,855
Total Degrees Awarded	60,344	20,158

Source: CCP (2015)

Several significant trends emerge from this comparison, and the annual comparison shown below in Figure 2.1.

- First, the volume of degrees granted has grown significantly over time. Total degrees reached a new high of 2,420 in 2015.
- Second, college transfer majors have grown to represent the most common degree type, surpassing career majors.
- Third, the volume of certificates awarded has increased significantly in recent years, providing expertise in targeted and career-specific knowledge and skills.

FIGURE 2.1 – CCP ANNUAL DEGREES AWARDED, 1967-2015

Source: CCP (2015)

2.1 STUDENTS SERVED

Data provided by CCP supports the reality that the institution is the “city’s college” and an integral part of the fabric of Philadelphia. Of the nearly 28,000 credit-enrolled students in academic year 2014-15, 94% are residents of Philadelphia. As shown in Figure 2.2 below, these students are distributed across all of Philadelphia’s neighborhoods. CCP’s accessibility is ensured both by its open-admissions policy, and its system of regional centers which augment the main Center City Campus.¹

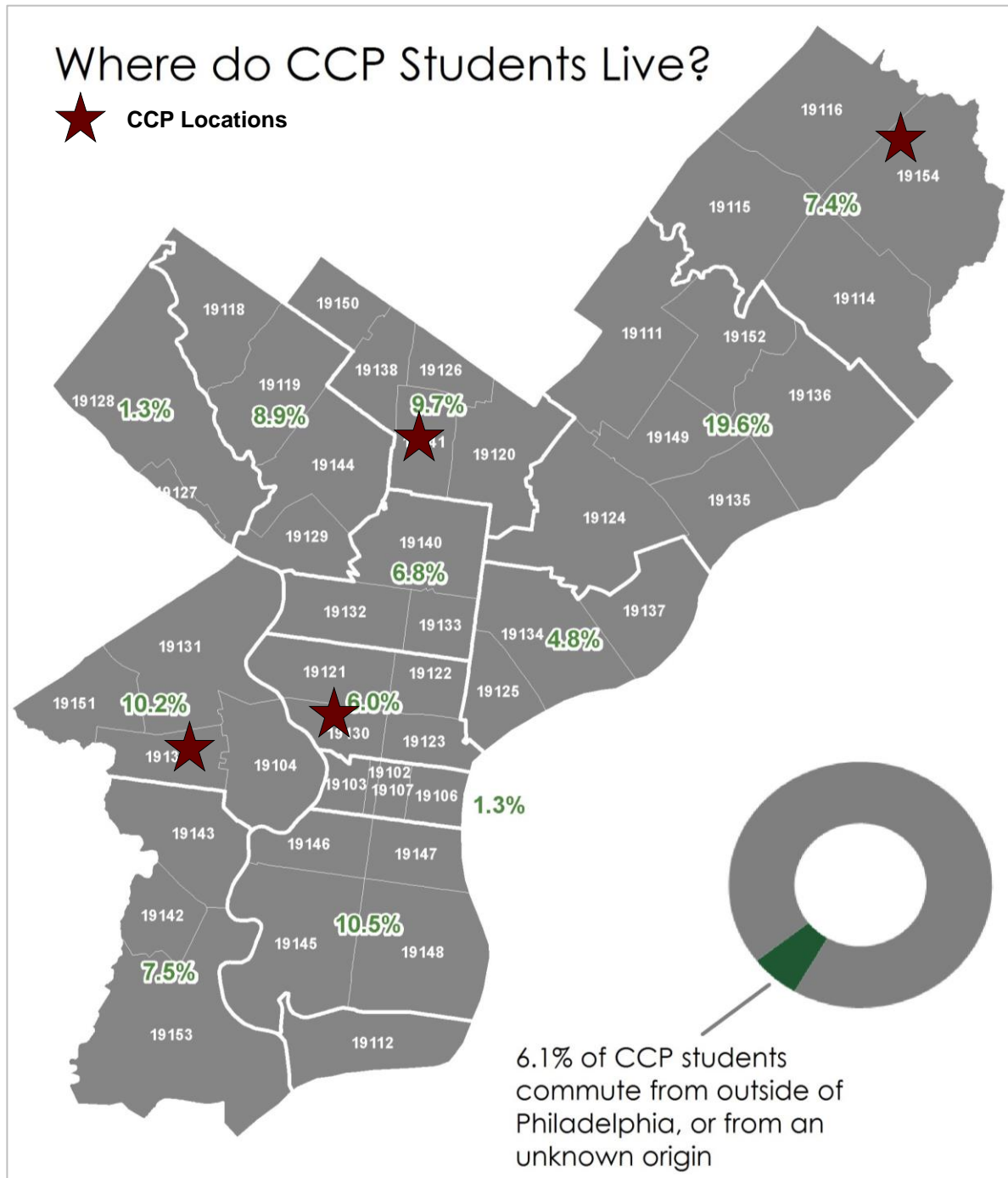
Further, alumni data indicate that CCP students primarily stay in Philadelphia after graduation. Alumni surveys undertaken by CCP over several years show that more than 80% of recent graduates (those awarded degrees between 2002 and 2012) are currently working in the City of Philadelphia, and nearly 95% are within the Philadelphia metropolitan area. Thus, CCP is overwhelmingly serving local citizens, and the benefits of its services are widely retained within the city, rather than lost to other cities or regions.²

¹ CCP’s four locations, denoted with stars on Figure 2.2, are:

- Main Campus – 1700 Spring Garden Street (Center City)
- West Regional Center – 4725 Chestnut Street (West Philadelphia)
- Northwest Regional Center – 1300 W. Godfrey Ave (North/Northwest Philadelphia)
- Northeast Regional Center – 12901 Townsend Road (Northeast Philadelphia)

² Note that this is not unique to CCP. According to *Minding the Dream: The Process and Practice of the American Community College*, “Students and graduates [of community colleges] overwhelmingly live in the community where they attend college.” See: Gail O. Mellow and Cynthia M. Heelan, *Minding the Dream: The Process and Practice of the American Community College* (Lanham: Rowman & Littlefield, 2015), 19.

FIGURE 2.2 – CCP CREDIT-ENROLLED STUDENT BODY BY HOME NEIGHBORHOOD



Source: CCP (2015)

CCP's student body is also reflective of the racial and socioeconomic diversity of the city. According to data collected by the federal Department of Education through its "College Scorecard" program, 61% of CCP students have a family income of less than \$40,000 and receive an income-based federal Pell Grant to help pay for their education. Over 60% of CCP's student body are students of color, and an additional 11% are from outside the US (see Table 2.2).³

TABLE 2.2 – RACE/ETHNICITY OF THE CCP STUDENT BODY COMPARED TO ALL PHILADELPHIA RESIDENTS

Race/Ethnicity	Percent of CCP Students	Percent of Philadelphia Residents
Black	45%	43%
White	21%	42%
Non-resident alien	11%	6%
Hispanic	10%	13%
Asian	5%	7%
Unknown	3%	6%
Two or more races	3%	3%

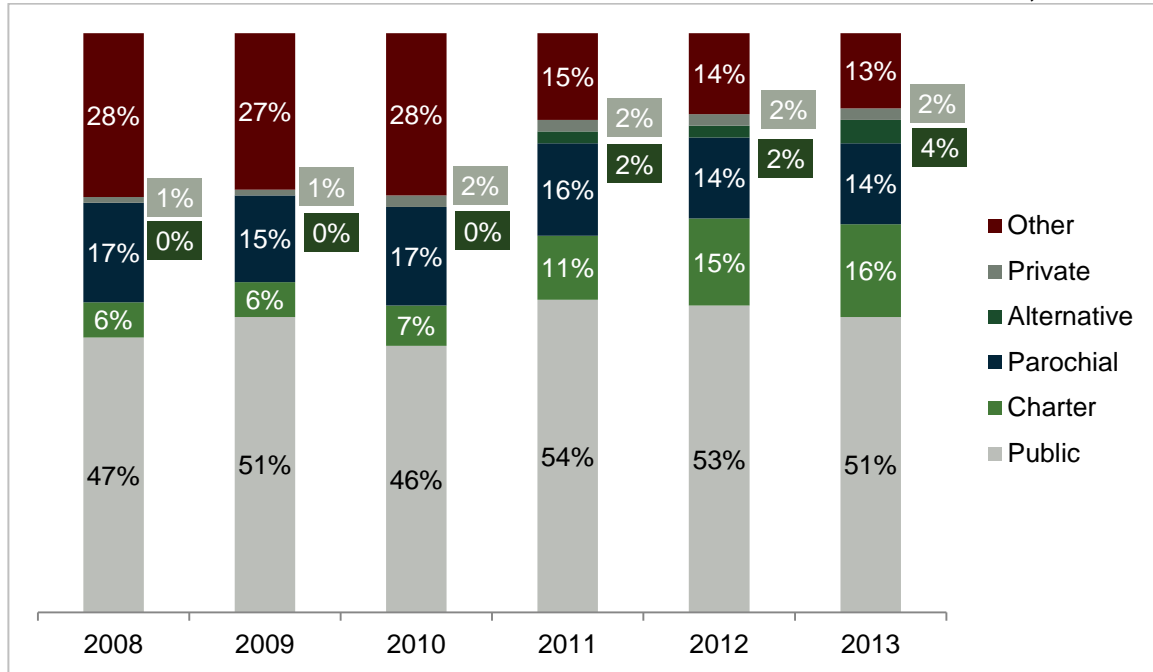
Source: U.S. Department of Education "College Scorecard" (2015), U.S. Census (2014)

These data indicate that CCP's serves not only the large black and white populations of Philadelphia but also other groups that are underserved by the private education system. This includes the Hispanic population, as well as the "non-resident alien" immigrant population. CCP plays a crucial role in helping to integrate this immigrant population into the local economy, supporting economic dynamism and growth.

The diversity of backgrounds is also reflected in the high schools attended by CCP students. CCP graduates attended a mix of high school types across Philadelphia, with a plurality having attended public neighborhood high schools (see Figure 2.3 and Table 2.3). Citywide, nearly 30% of Philadelphia's graduating high school seniors who attend college enroll at CCP.⁴

³ Race/ethnicity profiles vary slightly between data sources based on differing definitions of racial and ethnic categories. The federal definition is reported here based on its inclusion of non-resident (i.e. immigrant) and Hispanic categories.

⁴ OMG Center for Collaborative Learning and the City of Philadelphia. (2011). Pathways to Postsecondary Completion: How Are Philadelphia Students Faring? Retrieved from http://www.omgcenter.org/sites/default/files/PtC_Final_Report.pdf and http://www.omgcenter.org/sites/default/files/PtC_Technical_Appendix.pdf

FIGURE 2.3 –STUDENTS WHO ENROLLED AT CCP IMMEDIATELY AFTER COMPLETING HIGH SCHOOL, 2008-2013

Source: CCP (2016)

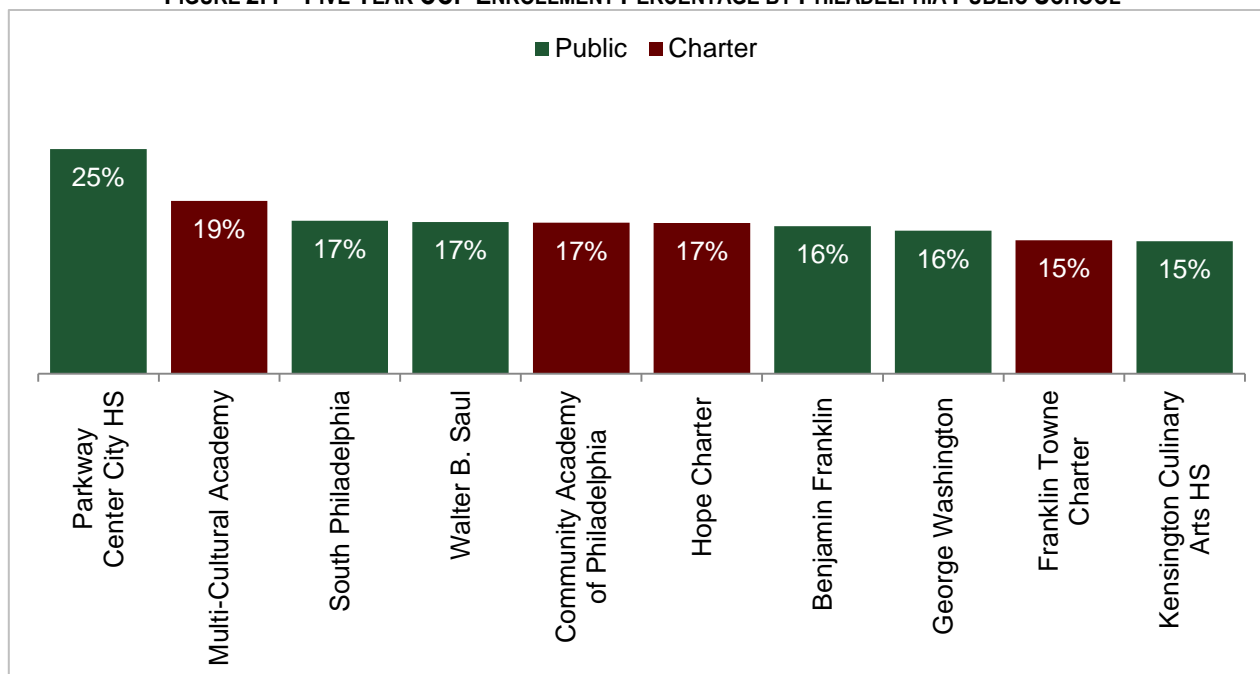
TABLE 2.3 – PHILADELPHIA-AREA HIGH SCHOOLS CONTRIBUTING TO THE HIGHEST MATRICULATION OF CCP STUDENTS, 2009-2013

School/Program	Type	5 Year Matriculation Total	Percent of Total Matriculation
Northeast High School	Public	448	5%
George Washington	Public	346	3%
Archbishop Ryan	Parochial	339	3%
Central High School	Public	253	3%
Father Judge	Parochial	237	2%
Abraham Lincoln	Public	222	2%
Edison-Fareira High School	Public	186	2%
St. John Neumann/Goretti	Parochial	180	2%
Samuel S. Fels High School	Public	171	2%
Frankford High School	Public	167	2%

Source: CCP (2016)

From the reverse perspective, approximately one in 10 graduates of Philadelphia Public Schools and charter schools in the last five years have matriculated to CCP. Several schools, most notably Parkway Center City High School, send more than 10% of their graduates to CCP. Parkway Center City, just down Spring Garden Street from CCP, sends close to 1 in 4 of its graduates to CCP. George Washington High School in Northeast Philadelphia sends approximately 16% of its graduates to CCP each year – that is nearly 70 students (see Figure 2.4).

FIGURE 2.4 – FIVE YEAR CCP ENROLLMENT PERCENTAGE BY PHILADELPHIA PUBLIC SCHOOL



Source: Pennsylvania Department of Education (2009-2013), CCP (2016), ESI (2016)

CCP has been recognized not simply for the diversity of its student body, but for its success in meeting the needs of a wide variety of students. For instance, there is a high proportion of CCP students enter the institution in need of Developmental Math or English Courses. According to a recent analysis by the Pew Charitable Trusts,⁵ about 70% of incoming students each year “fall below CCP’s academic standards for its first-year credit courses.” These students are steered into developmental courses designed to prepare them for freshman level courses. Pew compares completion rates for these courses at CCP relative to an “urban peer” group of institutions and concludes that “in moving its students through remedial to college level courses, CCP has performed much better than the average.”⁶

⁵ Pew Charitable Trusts. (2015). Assessing Community College of Philadelphia

⁶ The analysis by Pew and non-profit Achieving the Dream Inc. found that among those students starting 2007-2009, 59% completed developmental English courses within two years and 43% completed developmental mathematics courses within two years and, each about 20 percentage points higher than the urban peer group. (*Assessing Community College of Philadelphia*, p. 15-18).

More broadly, CCP has distinguished itself through its outreach and programs for groups like immigrants, adult learners, and ex-offenders. Many of these efforts are described in more detail below.

2.2 PROGRAMS AND SERVICES

CCP offers a variety of degree, certificate, and non-credit programs that meet the diverse needs of its student population. CCP's transfer program offers majors that work towards an associate's degree with the goal of completing a four-year degree at a transfer institution. Graduates of this program frequently go on to finish their bachelor's degrees at local institutions like Temple and Drexel Universities. Other students matriculate in the career program, which offers majors in a variety of associate's degrees and certificate programs that enhance workforce skills and knowledge. These efforts are augmented by several business and industry partnership programs which help CCP impart the skills that employers are looking for, and connect students directly to those companies.

Finally, CCP offers a variety of educational and support services that advance life opportunities of its students whether or not they complete an associate's degree. Programs like GED training, English as a Second Language, adult education and ex-offender integration serve as vital ladders to opportunity for difficult to serve populations, and can make enormous differences in the lives of students and citizens across the city.

2.2.1 TRANSFER OPPORTUNITIES

For many students, CCP is the beginning of their path towards a four-year degree and/or new career opportunities in high-demand industries. CCP offers transfer majors through which its students can obtain an associate's degree that positions them to complete a bachelor's degree at a transfer institution. Students matriculate to a variety of schools, mainly in the Philadelphia region, with Temple University receiving nearly one-quarter of the transfers (see Table 2.4).

TABLE 2.4 – TOP RECENT CCP TRANSFER STUDENTS TO 4-YEAR INSTITUTIONS, 2005-2015

Institution	Location	# of Students	% of Students
Temple University	Philadelphia, PA	4,147	23%
Drexel University	Philadelphia, PA	1,279	7%
University of Phoenix	Online	1,056	6%
Pennsylvania State University	State College, PA	877	5%
Peirce College	Philadelphia, PA	723	4%
La Salle University	Philadelphia, PA	524	3%
Strayer University	Online	440	2%
West Chester University	West Chester, PA	418	2%
Chestnut Hill College	Philadelphia, PA	412	2%
Thomas Jefferson University	Philadelphia, PA	394	2%

Source: CCP (2016)

CCP facilitates the transfer process through its programs and partnerships with local four-year institutions. The dual admissions program facilitates transfers to four-year institutions with the best opportunity for success, ensuring junior standing at arrival, and providing scholarship opportunities. The “Core-to-Core” program is a partnership with area four-year institutions in which approved CCP associate’s degrees are accepted as fulfilling the core requirements of the transfer institutions. CCP has this relationship with Arcadia University, Cabrini College, Chestnut Hill College, La Salle University, and Temple University. The “Program-to-Program” agreement is similar to the “Core-to-Core,” but in this arrangement the entire CCP curriculum is accepted at the four-year institution, allowing transfer students to enter with advanced standing in a particular bachelor’s degree program at the transfer institution.⁷

These transfer relationships benefit not only CCP and its students, but also the transfer institutions. Temple University, for example, attributes 1 in 19 students on campus as former CCP students. The quality of these transfers is analogous to those from other institutions – retention after the first semester at Temple for CCP students is 80% compared to 83% for transfers overall. Temple alleviates some barriers in the application process, including application fee waivers, and allows them eligibility for scholarships (not the case for all transfers to four-year institutions). In 2012, CCP’s 2,000 transfer students to Temple received a collective \$11 million in scholarship funds.⁸

In short, Community College of Philadelphia is invaluable for Temple University.

***- Dr. Neil Theobald
President, Temple University***

⁷ See: <http://www.ccp.edu/academic-offerings/transfer-opportunities/transfer-agreements>

⁸ See: http://www.philly.com/philly/blogs/campus_inq/The-CCP-Temple-connection.html

Alternatively, CCP has several students who come from four-year institutions. These reverse-transfers often enroll in CCP to earn credits, obtain new credentials, or utilize the time to get back on track. Reverse-transfer students are enrolled in both tracks at CCP: transfer program and career program. From 2003 to 2012, more than one-third of CCP associate's degree graduates had attended another college before CCP.⁹

In general, reverse transfer students come from a variety of higher education institutions. The majority come from Temple University and other schools within the Philadelphia region. However, the list keeps growing. In 2015, CCP signed a reverse transfer agreement with East Stroudsburg University (ESU), which allows students to transfer coursework from ESU to CCP to complete their associate's degrees, which is a valuable credential to demonstrate while job hunting or for career advancement.

For students who transferred to Temple and Drexel between 2005-2008, CCP reports that approximately 40% of CCP graduates, and about 35% of total CCP students, went on to graduate from the transfer institution. As CCP's mission is to prepare students for the next phase in their academic or career paths, these figures are a considerable accomplishment – as described earlier in this section, CCP provides a multitude of services that all add up to successfully transferring a student from CCP to a four-year institution.

2.2.2 WORKFORCE DEGREES, CERTIFICATES, AND TRAINING

While both transfer and career programs further students' educational attainment and help provide career opportunities, students in the career program enroll in majors that are designed to help them immediately access jobs in high-demand industries.

These students graduate with an Associate in Applied Science (A.A.S.) degree in a variety of industries, including medical (e.g., nursing, dental hygiene), technical (e.g., IT, automotive), and business management fields (e.g., hospitality, construction, facility), among others. Additionally, students can obtain Academic Certificates, which are training programs that target specific skills for workplace preparation. The goal of these certificates is to be immediately put to use in the workplace. The industries represented include energy conservation, human services, and justice. These programs are meant for those currently working in these fields looking to advance their career with the addition of new qualifications. Similarly, Proficiency Certificates are shorter, focused course offerings aiding students to accumulate specific skills to bring to their workplace. Many of these certificates are technical (e.g., automotive services, biomedical equipment technology, computer programming, and software development), but there are also some that are non-technology based (e.g., ophthalmic technician, paralegal studies, and social and human services). See Table 2.5 for a full list of degree programs.

⁹ Among 2003-2012 graduates, 39% of career program majors and 35% of transfer program majors attended another college prior to CCP. (See: http://path.ccp.edu/vpfin-pl/ir/ir_reports/ir_report_235.pdf, page 1)

TABLE 2.5 – DEGREE AND CERTIFICATE PROGRAMS OFFERED BY CCP

Program	Associate in Arts	Associate in Science	Associate in Applied Sciences	Academic Certificate	Proficiency Certificate
Accounting			✓		✓
American Sign Language/English Interpreting (INT)			✓		
Applied Science and Engineering Technology			✓		
Architecture	✓				
Art and Design	✓				
Automotive Technology –Management and Marketing; Service Technology			✓		✓
Behavioral Health/Human Services			✓	✓	✓
Biology		✓			
Biomedical Equipment Technology					✓
Building Science			✓		
Business; Business Administration	✓				
Chemical Technology			✓		
Clinical Assistant					✓
Communication Studies	✓				
Computer-Assisted Design Technology			✓	✓	
Computer Information Systems – IT			✓		
Computer Programming and Software Dev.					✓
Computer Science		✓			
Construction Management			✓		
Creative Writing				✓	
Culinary Arts			✓		✓
Culture, <u>Science</u> and Technology	✓				
Dental Hygiene			✓		
Diagnostic Medical Imaging			✓		
Digital Forensics; Digital Imaging			✓		✓
Digital Video Production			✓		✓
Education: Early Childhood; Middle Level; Secondary Humanities/Social Studies; Secondary Math /Science	✓				
<u>Energy</u> Conservation				✓	
Engineering Science		✓			

Program	Associate in Arts	Associate in Science	Associate in Applied Sciences	Academic Certificate	Proficiency Certificate
English	✓				
Entrepreneurship					✓
Facility Management: Construction; Design			✓		
Fire Science			✓		
Geographic Information Systems					✓
Health Care Studies; Health Services Mgmt	✓				
Hospitality Management			✓		
Interior Design	✓				
International Studies	✓				
Justice			✓	✓	
Liberal Arts: Honors Option; Social/Behavioral Science	✓				
Mass Media	✓				
Mathematics		✓			
Medical Insurance Billing					✓
Music	✓		✓		
Network and Systems Administration					✓
Nursing			✓		
Paralegal Studies			✓		✓
Patient Services Representative					✓
Photographic Imaging			✓		
Process Technology					✓
Psychology	✓				
Receptionist and Office Clerk					✓
Recovery and Transformation				✓	✓
Religious Studies	✓				
Respiratory Care Technology			✓		
Science		✓			
Technical Studies			✓		
Theater; Acting	✓				✓
Youth Work					✓

Source: CCP (2016)

All of the certificates can transfer seamlessly into an associate's degree program in a related field, which allows CCP students to further their academic and professional goals.

As seen in Figure 2.1, this has become an increasingly popular option among CCP graduates. Academic and Proficiency Certificates have been growing over the past ten years while General Studies associate's degrees have been declining. These certificates have direct and clear wage premium implications because they demonstrate the mastery of a specific, marketable skill.

2.2.3 BUSINESS AND INDUSTRY PARTNERSHIPS

CCP has served employers of city residents for over 30 years. The mission of the college is directly aligned with assisting these companies: develop a world-class workforce in Philadelphia and enhance the vitality of the city, its residents, and its businesses. Among its many offerings, CCP provides customized job training and continuing professional education to specific industries, as well as a center for small businesses. There are certificate programs for industry sectors growing in Philadelphia, as well as “stackable/micro-credential” offerings that allow students to take small steps to advancing their career. Regardless of the path, these programs are tied directly to career and further education pathways. CCP's relationships with area employers ensure programs are responsive to market and industry needs. After classroom time expires, students have the opportunity for apprenticeships, job shadowing, and employment placement.¹⁰



The **Goldman Sachs, 10,000 Small Businesses program**, is a national technical assistance program for small business owners that connects a rigorous 15-week curriculum to tactical business improvements. Participants, both CCP students, alumni, as well as non-affiliates, gain practical skills such as negotiation, marketing and employee management that can make an immediate impact on their business functions. Additionally, these business owners receive tools and professional support to develop a strategic and customized growth plan to advance their business to the next level. The program is free to participants, funded by Goldman Sachs and is taught at CCP.

Goldman Sachs has committed \$5 million over five years the program at CCP. Additionally, Goldman Sachs has provided \$10 million to PIDC to distribute to small businesses across the region; \$5.7 million in loans have been approved so far for 22 businesses.¹¹

It's like a business boot camp. I was kind of in my own little bubble and pretty tough on myself. I had a tendency to hold myself back because I didn't think I was ready. This gave me more confidence.

- GS10kSB Graduate Company

¹⁰ See: http://www.gse.upenn.edu/pdf/ahead/ccp_defries.pdf

¹¹ See: http://articles.philly.com/2015-08-08/business/65322535_1_wolff-goldman-sachs-growth-plan

Across the U.S., 10,000 Small Businesses graduates are increasing their revenues and creating new jobs in their communities: 57% reported creating new jobs, 76% reported an increase in revenue, 84% are doing business with each other, and the program also has a 99% completion rate.¹²

2.2.4 ADDITIONAL EDUCATION SERVICES

CCP has multiple programs focused on high school students, from advanced dual enrollment opportunities to targeted programs for the high school dropout population. The college also supports the general student body in need of basic education, English courses, or GED exam preparation – skills necessary to fill the gap between previous education and the CCP degree level. All these programs help students pursue a college education, advance their workforce credentials and learn essential life skills.

Advance at College is a dual-enrollment program providing motivated and talented Philadelphia Public School students with an early opportunity to take college-level courses and experience a college environment while still enrolled in high school or while actively pursuing a GED. Upon completion, students may apply their college credits towards an associate's degree at CCP or transfer the credits to another college or university.

[Students] step up to the challenge and perceive their responsibilities differently in a college setting. They are more independent here, which gives them opportunities to grow and realize they can succeed in college.

- CCP Employee

This program allows students to explore academic and career paths at an early age, providing them with the knowledge to make informed decisions about their future. Students in this program pay a reduced tuition fee of roughly \$99 per credit. Students must be enrolled as 11th- or 12th-grade students in high school in order to enroll, however in some circumstances, students who have completed at least 8th grade may be eligible for enrollment. This rigorous program requires students to place at the college-level on placement tests.

GATEWAY
to
COLLEGE

The **Gateway to College** program focuses on addressing the high school dropout population. This nationwide program began in 2000 and includes more than 30 colleges in 16 states and more than 100 school districts across the country.¹³ This is an alternative education program for the School District of Philadelphia for students ages 16 to 21 who

¹² See: <http://www.ccp.edu/business-and-industry/goldman-sachs-10000-small-businesses-program>

¹³ See: <http://www.communitycollegereview.com/blog/gateway-to-college-program-helping-high-school-dropouts-nationwide>

have dropped out of school but desired to earn their diploma and advance their studies. In addition to receiving their high school diploma, these students will be acquiring college credits towards an associate's degree or certificate program. Typically these students struggled in traditional high school environments but have the desire to achieve an education.

At the onset of the program, about 20 students per term, take a series of foundation courses as a Learning Community. These courses include reading, writing, math, and a college survival and success class. After this term, students enroll in CCP and begin to work towards earning a high school diploma and a college degree. The program typically lasts from one to three years, depending on course load and the number of credits needed. A \$50

*I felt defeated a few years ago
and Gateway brought me back.
They've been helping me.
They've been amazing.*

**- Gateway to College
Graduate**

program fee per semester equals the total costs to the student – Gateway to College' scholarship program covers the rest, including tuition, fees, and books. An academic coordinator is assigned to each student accepted into the program. These coordinators provide support and access to resources to help students succeed in the program, including transcript reviews and academic advising; enrollment and registration assistance; referrals to other CCP resources (e.g., tutoring, student activities, and health services); personal counselling and guidance (including assistance with problem solving, time management, and stress management).¹⁴

Adult Basic Education (ABE) is a free refresher program in reading and writing for those students whose college placement test scores fall below the minimum for placement into developmental or credit courses. Students retake CCP's placement test after completing ABE to re-determine their placement levels for admission into higher-level developmental or credit-bearing courses. This program is a vital component of the city's emphasis on literacy and transitioning into postsecondary education.

CCP offers **GED Preparation** courses to help students prepare for the GED tests. These courses focus on reading, writing, and math skills necessary to succeed on the exam.

The **ESL Institute** offers adult, non-native speakers of English the opportunity to improve basic English language skills as to increase participation in the larger society, prepare for citizenship exams, improve employment opportunities, and better understand American culture.

¹⁴ See: <http://www.ccp.edu/academic-offerings/high-school-student-programs/gateway-college>

2.2.5 ADDITIONAL STUDENT SERVICES

CCP offers a myriad of additional student services to complement the educational experience, including traditional social services, legal assistance, avenues for civic participation, reentry support, and other initiatives. Below is a sampling of some of their most popular and effective programs.



Single Stop USA is a nonprofit organization that connects students to state and federal financial resources and local community services. Nationwide, Single Stop USA delivers these free services to over one million families nationwide.¹⁵

The goal of Single Stop is to help students overcome economic barriers, thereby continuing their education and moving towards economic mobility. The program provides government benefit eligibility screening and application assistance (e.g., food and nutrition programs, health insurance); legal services (to help with issues pertaining to immigration, housing, employment, utilities, and government benefits); financial education (including advice on how to build your assets, credit counseling, financial planning, assistance with debt management, and planning for after graduation); tax preparation services (including determination of tax credit eligibility); and health care enrollment assistance (Medicaid or the Marketplace).

Since initiating this program on campus in October 2013, Single Stop and its partners have served 3,155 students and their families, connecting them to \$9.3 million in benefits, tax refunds, and supportive services. Out of this sum, an estimated \$3 million were from tax refunds alone. See Figure 2.5 for student feedback on their experience with Single Stop.

Not only has Single Stop connected students and their families to many benefits and services, but they have saved them money along the way. For example, tax preparation service average \$150 to \$200 per return,¹⁶ while legal services can run up to many thousands of dollars.

¹⁵ See: <http://www.ccp.edu/student-support/single-stop>

¹⁶ See: <http://www.cbsnews.com/news/how-much-do-you-pay-for-tax-prep/>

FIGURE 2.5 – STUDENT FEEDBACK FROM THE SINGLE STOP PROGRAM

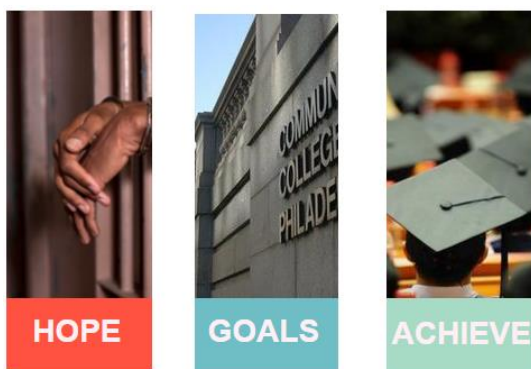
Source: CCP (2016)

The **Fox Rothschild Center for Law and Society** connects several law-related disciplines throughout CCP to broader societal issues. The **Service Learning** initiatives within the Center include the **Expungement Clinics**, made possible through a partnership with Community Legal Services and the Barristers Association of Philadelphia, in which current paralegal students, working under the supervision of practicing attorneys, assist their community members with a criminal record in the expungement process. **Stepping Up for Citizenship Day** provides paralegal students another opportunity to help their community: by helping practicing attorneys with the pro bono representation of naturalization applications.

CCP was one of the host sites for Pennsylvania's first statewide "Deliberative Poll® on the Issue of Marriage in America," presented by the Southwestern Pennsylvania Program for **Deliberative Democracy** (SPPDD). This deliberative poll indicates what a community as a whole might think about a particular issue if that community had time to become informed about the matter through an intensive deliberative process. CCP students and faculty served as moderators and facilitators

for the panels, as well as conduct training for moderators and facilitators, and obtain experts for the panel. This process acts as a vehicle for civic discourse, engaging neighborhoods in structured conversation engaging and investing people in the issues

The **Reentry Support Project**, a program that develops and implements college- and community-wide strategies for increasing the recruitment and retention of students with criminal histories, is also housed in the Fox Rothschild Center for Law and Society.¹⁷ Its mission is twofold: 1) To design and implement programs and services that empower the CCP's students with criminal records to reach their academic goals; and 2) To contribute in meaningful ways to county, state, and federal reentry stakeholder initiatives aimed at increasing public safety and reducing recidivism in the City of Philadelphia.



Since 2010, the Reentry Support Project has been working behind prison walls and at CCP to give over 500 adults with criminal records access to higher education and multi-level support services that can contribute to community reintegration success. For current students with criminal records, the Project provides reentry-focused workshops and events; student support groups; academic major and career selection guidance based on one's criminal record; direct, individualized referrals to campus and community resources and services. For currently and formerly incarcerated students, CCP and its community services providers offer post-secondary credits and non-credit education programs on campus and in the Philadelphia Prison System. More generally, this program partners with diverse local service providers and county, state, and federal reentry stakeholders for the benefit of currently and formerly incarcerated students, advocates for increasing access to higher education for adults with criminal records, and supports and sponsors events that promote public awareness of local and national reentry challenges.

My son has made me the proudest mother. There was not a lot out there for him. Now he has something to look forward to. Now he has hope. This is going to make a difference in his life.

- Parent of Reentry Support Project Graduate

The **Future Forward** program, the first of its kind in the nation, is a pre-trial felony division pilot program developed in conjunction with the Philadelphia District Attorney's Office to provide individuals, ages 24 and older, who have been charged with a non-violent felony crime an alternative to incarceration. During this year-long program, enrollees earn a minimum of 24

¹⁷ See: <http://www.ccp.edu/about-us/community-services>

credits at CCP, complete life skills classes, and engage in a student support group. If they remain arrest free for one year after completing the program, they will also have their record expunged. Federal Pell grants entirely fund the program, so long as the participant meets eligibility requirements. These expenses include tuition, textbooks, supplies, and college fees associated with program administration.¹⁸

CCP is in the process of developing a similar pilot to work with youths between the ages of 18- and 24-years-old.

We're going to break that cycle [of crime] by giving more of our city's young men and women the opportunity to start fresh and reap the benefits that come from a postsecondary education, new life skills, and a clean record for themselves and their families.

- **R. Seth Williams,**
Philadelphia District Attorney

¹⁸ See: <http://www.ccdaily.com/Pages/Campus-Issues/Future-Forward-offers-a-second-chance.aspx>

3.0 BENEFICIARIES OF CCP SERVICES

The programs discussed in Section 2 deliver economic and community benefits in a variety of ways and across a variety of stakeholders. This section discusses and quantifies this value through several lenses, looking at impacts from the perspective of the students, of the regional economy of city and state governments

- 1) Benefits to students: The most direct beneficiaries of CCP's services are of course its students. As described in Section 2, students advance their professional opportunities and their personal well-being through a variety of programs. In this section, we explore one quantifiable aspect of this return, the wage premium enjoyed by CCP alumni due to their educational attainment.
- 2) Benefits to the regional economy: The training and credentialing supplied by CCP increase the productivity of the local workforce. The connection between education level and productivity of a labor force has been well-documented across the educational spectrum. This dynamic increases the profitability of local businesses, and in so doing makes the city and region a more attractive place to locate or grow a company.
- 3) Benefits to local and state government: The benefits to students and the regional economy ultimately translate into benefits to the state and local government. As important as the level of economic growth is the manner in which it is achieved. CCP's programs are a vital part of a balanced growth strategy which helps citizens to build sustainable pathways out of poverty. This in turn not only grows the tax base but contributes to fostering stable and vibrant neighborhoods. Further, it reduces reliance on public assistance programs, and therefore government expenditures.

3.1 BENEFITS TO STUDENTS

CCP's most fundamental mission is to transform the lives of its students. As reviewed in Section 2, students arrive at CCP with a broad spectrum of needs. Some are seeking the first step to a bachelor's degree, others career or technical training, and still others more basic educational skills. CCP meets these diverse student needs through its variety of programs and services.

A CCP education provides its students with direct linkages to sustainable career paths. This opens the door to long-term employment, opportunities for upward mobility, and the potential for increased future earnings within that career path. For many students, their experience at CCP can make the difference between obtaining a "job" and attaining a career.

In recent years, it has become increasingly popular to conceive of and evaluate higher education using a return on investment (ROI) framework. Students invest in their training through tuition

dollars and the time dedicated to schooling. In return, they receive skills and credentialing that increase their earnings potential for the remainder of their careers. While some commentators have questioned the economic value of this trade-off, the consensus view from decades of research is that despite rising costs, higher education remains a high-yield investment for students.¹⁹

There is little question that in today's knowledge-based economy, more education attainment means more employment opportunities and higher earning potential. CCP's commitment to affordable and accessible higher education is vital for society and the students it serves: by educating students who, without access to CCP might only achieve a high school diploma, CCP is ensuring that its students have the skills and credentials to thrive in today's economy. The difference in earning power between people of different educational attainment levels is significant and growing.

Assessing the trade-offs and benefits depends, in large part, on a careful understanding of the student population in question and the economic opportunities afforded that group with and without higher education attainment. On this front, institutions like CCP differ from those schools that compete for students on a national or global scale. Considerable research has demonstrated that the attainment of an associate's degree offers a significant premium in earnings potential and economic opportunity versus those with a high school education only.²⁰ CCP students also realize these returns on a much more modest investment than in most higher education institutions. This accessibility is reflected in CCP's representation of students from across Philadelphia and the socio-economic spectrum.

Importantly, CCP is also committed to maintaining affordability for its students, meaning that it also delivers economic returns from a return on investment perspective. Further, the students that CCP attracts, educates and credentials represent a broad cross-section of the city, including traditionally underserved neighborhoods and populations.

As President Obama recently stated, "In our growing economy, Americans need to have more knowledge and more skills to compete. By 2020, an estimated 30% [of job openings] will require some college or associate's degree. Students should be able to get the knowledge and skills they need without taking on decades worth of student debt."²¹ Notably, tuition to CCP is affordable: \$306 per credit hour for a Pennsylvania resident and \$153 per credit hour for a Philadelphia resident.²² This translates to about \$4,900 tuition per year, representing significant

¹⁹ See, for example, Philip Oreopoulos and Uros Petronijevic, *Making College Worth it: A Review of Research on the Returns to Higher Education*, National Bureau of Economic Research (NBER) Working Paper 19053, May 2013

²⁰ See, for example, Jorge Klor de Alva and Mark Schnieder, *What's the Value of an Associate's Degree? The Return on Investment for Graduates and Taxpayers*. Nexus Research and Policy Center and American Institute for Research, October 2013.

²¹ <https://www.whitehouse.gov/blog/2015/01/08/president-proposes-make-community-college-free-responsible-students-2-years>

²² <http://www.ccp.edu/paying-college/tuition-and-fees>

savings compared to the average four-year in-state and four-year out-of-state costs at approximately \$9,400 and \$23,900 respectively.²³

Additionally, financial assistance is also available to support students through federal aid, direct student loans, and alternative sources of funding. In the 2013-14 school year, approximately two-thirds of CCP's student body received financial aid in the form of grants or scholarship – \$4,135 on average, totaling over \$50 million.

3.1.1 ESTIMATING AGGREGATE WAGE PREMIUM FOR CCP GRADUATES

Alumni of CCP see a significant and documented increase in their earnings potential, which translates to material differences in economic opportunity and quality of life. Significantly, the vast majority of CCP students are Philadelphia residents, and the vast majority of degree earners stay in the city and Commonwealth after graduation and join the local workforce. The wage premium these alumni earn each year due to their educational attainment, therefore, translates into increased household wealth and spending within the city and state economy.

As described throughout this report, the additional earnings potential represents just one of the many benefits accrued by educational attainment, both from the perspective of the student and from the standpoint of the region and its government entities. Further, as reviewed below, the full benefit of the wage premium for all students served by CCP defies reliable quantification, and estimates in this section, therefore, reflect only students who have attained degrees from CCP. For these reasons, this calculation should be understood to represent only a portion of the educational value conveyed by CCP's services. Nonetheless, it is a useful and instructive calculation to undertake regarding its economic and fiscal impacts.

The most straightforward way to estimate the wage premium associated with degrees granted by CCP is to compare the average salaries earned by CCP graduates with the average salary for workers in Philadelphia whose highest level of educational attainment is a high school degree. As shown in Table 3.1, data from the American Community Survey (ACS)²⁴ indicates that the median salary in Philadelphia is approximately \$27,000 per year, while workers whose highest level of attainment is "some college or associate's degree" have a median salary of \$32,800 (a difference of \$5,700). This straightforward calculation represents a baseline from which to estimate the magnitude of incremental earning power associated with CCP's academic services for various categories of degree-earners.

²³ <http://trends.collegeboard.org/sites/default/files/2015-trends-college-pricing-final-508.pdf>

²⁴ The American Community Survey is conducted by the U.S. Census Bureau on an annual basis and includes 1 Year, 3 Year and 5 Year Samples. This data is drawn from the 5 Year 2010-2014 Survey (which contains the largest sample size).

TABLE 3.1 –EDUCATIONAL WAGE PREMIUM, PHILADELPHIA RESIDENTS

Highest Level of Educational Achievement	Median Salary	Source
High School	\$27,100	American Community Survey
Some College/Associate's Degree	\$32,800	American Community Survey
Wage Premium	\$5,700	Calculation
CCP Alumni	\$38,800	CCP Alumni Surveys
Bachelor's Degree	\$45,600	American Community Survey

It is also worth noting that CCP's survey of its 2014 graduates found that employed graduates had an average salary of nearly \$39,000.²⁵ Since this figure may not be an appropriate proxy for a representative sample of graduates over the life of the institution, the more conservative \$5,700 premium yielded by ACS is utilized as the baseline for the calculation in this report.

That baseline is then adjusted to represent the relative earnings potential of various types of degree holders among CCP graduates:

- **Transfer Students** (150%): For those students who use CCP as a stepping stone to a bachelor's degree, the wage premium is even higher than for associate's degree alone. However, not all students who transfer to a four-year institution complete and graduate with a bachelor's degree. Instead of assigning all these students a premium of a bachelor's degree, we inflate the associate's degree premium to be conservative.
- **Associate's Degree in Career or General Studies Students** (100%): For students who graduate CCP with an associate's degree, we estimate their wage premium as the difference between the median salaries of a high school graduate and associate's degree graduate in the City of Philadelphia. As noted above, this premium is conservative because surveyed alumni have a higher number than indicated by the ACS data, and because some of these associate's degree candidates do go on to four-year institutions.
- **Professional Certificate Students** (50%): It is clear that incremental education, not quite to the level of degree granting, but in shorter pieces, provide a professional advantage/opportunity. The literature is not well established in estimating the incremental opportunity gain from each credit, so we have assumed of 50% of the associate's degree associated premium for this student group.

In applying these wage premiums to each student population, we can calculate the annual aggregate wage premium for CCP graduates in the workforce. Using \$5,700 as the baseline wage premium (as shown in Table 3.10), the total annual aggregate wage premium for CCP

²⁵ This figure was nearly identical to the average graduate salary over the 15 year period (1999-2014) over which the survey has been conducted of \$39,200.

graduates and certificate holders estimated to be in the workforce is approximately \$274 million (see Table 3.2).

TABLE 3.2 – ESTIMATED AGGREGATE ANNUAL WAGE PREMIUM FOR CCP DEGREE HOLDERS IN THE WORKFORCE

	Total	Transfer Students	Career / General Studies	Certificate Holders	Source
# of Degrees Granted	60,344	18,111	35,627	6,606	CCP
(x) Est. % within workforce	72%	75%	71%	71%	BLS
= Est. in Workforce	43,550	13,565	25,295	4,690	(Calculation)
% of Est. Wage Premium	N/A	150%	100%	50%	ESI
Est. Wage Premium (\$)	\$6,243	\$8,550	\$5,700	\$2,850	(Calculation)
Aggregate Annual Wage Premium (\$M)	\$274	\$116	\$144	\$13	(Calculation)

Sources: BLS (2014), CCP (2015), ESI (2016)

The aggregate wage premium calculation described above is conservative in its estimate of the total magnitude of CCP contributions for several reasons. It conservatively estimates the number of alumni currently in the workforce and assumes that workforce participation would have been equivalent among those alumni had they not attended CCP.²⁶ Second, it assumes that in the absence of CCP, alumni would have obtained a high school diploma, which is not always the case for the students served by CCP. Finally, and most broadly, it does not attribute a wage premium to thousands of students each year who take credit or non-credit courses at CCP that further their earning potential, but do not ultimately complete a degree or credential.

In practice, students who do not complete a credential may nonetheless enhance their earnings potential in several ways. First, they may be able to demonstrate the value of coursework and skills to a given employer absent a completion credential, and therefore, be more likely to attain and retain employment or a higher wage than had they taken no courses. Next, the social skills and connections associated with post-secondary education may help them obtain and maintain employment or achieve a higher wage. Finally, the core skills imparted by courses like adult education, ESL, and GED-training may be critical in obtaining employment for many students.

Research suggests that there is a wage premium to coursework even in the absence of completion.²⁷ However, this study also demonstrates a significant “diploma effect” suggesting that the wage premium associated with education is not evenly distributed across the educational experience. In other words, this means that one year of coursework does not yield half the

²⁶ Note that labor force participation and employment rates among labor force participants are in fact far higher among adults with an associate's or bachelor's degree than among those with a high school education only.

²⁷ See, for example, Philip Oreopoulos and Uros Petronijevic, *Making College Worth it: A Review of Research on the Returns to Higher Education*, National Bureau of Economic Research (NBER) Working Paper 19053, May 2013.

premium of the attainment of a two-year degree. While it would be possible to devise an estimate of this non-linear relationship, such a calculation would be to some extent speculative.²⁸

LOCAL CAPTURE OF WAGE PREMIUM

In order to calculate the total wage premium attributable to a CCP education within Philadelphia and Pennsylvania, it is necessary to estimate the geographic distribution of alumni living and working in both locations. Graduate surveys conducted by CCP are again instructive to understand this distribution. Surveys of graduates from 2002 to 2012 indicate that approximately 80% of recent graduates are currently working in the City of Philadelphia while about 90% are currently working within the Commonwealth of Pennsylvania.

These proportions can be multiplied by the aggregate annual wage premium for degree holders estimated in Table 3.2 to yield an estimate of the share of that wage premium captured within the city and state economies on an annual basis. CCP graduates working in the Philadelphia economy generate \$219 million in wage premium thanks to their CCP education, while within Pennsylvania the wage premium is \$246 million (see Table 3.3).

**TABLE 3.3 – ESTIMATED AGGREGATE ANNUAL WAGE PREMIUM OF CCP ALUMNI
WITHIN THE PHILADELPHIA AND PENNSYLVANIA WORKFORCES**

	City of Philadelphia	Commonwealth of Pennsylvania
% of Alumni Workforce within Geography	80%	90%
Est. Aggregate Annual Wage Premium (\$M)	\$219	\$246

Sources: CCP (2015), ESI (2016)

ECONOMIC AND FISCAL IMPACTS

The additional household income associated with a CCP degree has spillover effects on the state and local economies through increased spending towards the support of local merchants, local jobs, and local tax base. Accounting for savings rates, tax withholdings, and spending outside of the region and the state, the annual economic impacts from the wage premium may be less than the total value of the wage premium within a particular geography, but still represent a significant contribution to the region and state economies.

Within the Philadelphia economy, an estimated \$219 million in additional wages generates \$120 million in annual total economic output, supporting nearly 780 jobs and \$45 million in earnings. Within Pennsylvania, the \$246 million in additional annual wages is estimated to generate \$343

²⁸ In this, we follow the conservative approach taken by the Nexus Research and Policy Center and the American Institutes for Research to their study *What's the Value of an Associate's Degree*, which states: "due to the absence of systematic links between student-level data and wage data, we were without the data needed to measure the taxpayer gain from students who only take one or a few courses" (6).

million in total economic output, supporting over 2,400 jobs and \$121 million in earnings (see Table 3.4).

**TABLE 3.4 – ESTIMATED ANNUAL ECONOMIC IMPACT OF THE CCP ALUMNI WAGE PREMIUM
WITHIN THE CITY OF PHILADELPHIA AND THE COMMONWEALTH OF PENNSYLVANIA**

	City of Philadelphia	Commonwealth of Pennsylvania
Direct Wage Premium (\$M)	\$219	\$246
Total Output (\$M)	\$120	\$343
Total Employment	773	2,404
Total Earnings (\$M)	\$45	\$121

Sources: CCP (2015), IMPLAN (2013), ESI (2016)

In addition to economic impacts, the state benefits from added taxes generated directly and indirectly from the wage premium associated with CCP graduates. The higher wage paid to CCP graduates represents a direct gain in terms of personal income tax, in addition to the indirect benefits from income, sales and business taxes from the economic activity generated by alumni spending. Combined, the state gains about \$7.5 million each year in tax revenues from the wage premium associated with CCP graduates, while Philadelphia benefits from approximately \$1.5 million each year (see Table 3.5).

**TABLE 3.5 – ESTIMATED ANNUAL FISCAL IMPACT OF THE CCP ALUMNI WAGE PREMIUM
WITHIN THE CITY OF PHILADELPHIA AND THE COMMONWEALTH OF PENNSYLVANIA (\$M)**

Tax Type	City of Philadelphia	Commonwealth of Pennsylvania
Income	\$0.9	\$3.6
Sales	\$0.2	\$3.1
Business	\$0.4	\$0.8
Total	\$1.5	\$7.5

Source: CCP (2015), IMPLAN (2013), Federal Reserve Bank of St. Louis (2011), Commonwealth of Pennsylvania (2013), ESI (2016)

3.2 BENEFITS TO THE REGIONAL ECONOMY

The wage premium described above benefits students and also the regional economy since the additional household income yielded by increased wages circulates through the economy in the form of local spending on goods and services. More broadly, it is reflective of an increase in skills and productivity which are crucial to regional economic growth.

Notably, per capita incomes are strongly correlated with an individual's level of educational attainment. At a more macro level, 58% of a city's success, as measured by per capita income, can be explained by the percentage of the adult population with a college degree. Additionally, cities with higher levels of education have faster rates of income growth. Experts have noted that improving education levels within metropolitan areas could be one of the strongest measures for improving income and economic wellbeing.²⁹

Extensive research has demonstrated the connection between educational attainment and economic growth for regions.³⁰ Broadly speaking, an educated workforce leads to innovation and productivity gains that increase economic value in non-linear ways (sometimes referred to as “returns to capital”). These benefits are not captured entirely by the workforce and by the wage premium achieved through increased educational attainment. For example, research suggests in well-educated areas, wages increase even for those workers with a lower education level.³¹

From a competitive framework, a more productive workforce makes the city and region a more attractive place to locate and grow a business. This has the potential to create a virtuous cycle through agglomeration effects, with the growth of industry and service clusters supporting each other. This connection is enhanced by the sector partnerships described in Section 2, which provide continuing education for the existing workforce, encourage business formation, growth, and entrepreneurship, and ensure that CCP students are developing the skills that employers require. Tangibly, the Goldman Sachs 10,000 Small Businesses program, housed at CCP, ignites business growth and job creation. Within the first six months of completing the program, nearly half of program participants added jobs, and two-thirds increased revenues.³² This program and others also contribute to growing the volume of innovation activity in the region, which serves as a primary growth engine in the modern economy.

It is important to recognize CCP's unique role within the vast regional higher education sector. The education and medical sectors have been the engine of Philadelphia's economic growth in recent decades to a larger degree as an “exporter” of knowledge. The region's many highly selective universities draw students from around the nation and world into the Philadelphia area.

²⁹ See: <http://kresge.org/sites/default/files/Uploaded%20Docs/Talent-Dividend-Final-Report.pdf>.

³⁰ See, for example, Ed Glaeser, Giacomo Ponzetto and Kristina Tobio, *Cities, Skills and Regional Change*, National Bureau of Economic Research (NBER) Working Paper 16934, April 2011.

³¹ See, for example, Enrico Moretti, Estimating the Return to Higher Education: Evidence from Longitudinal and Repeated Cross-Sectional Data, *Journal of Econometrics* (2004).

³² See: http://articles.philly.com/2015-08-08/business/65322535_1_wolff-goldman-sachs-growth-plan.

These students bring their tuition and discretionary spending dollars to Philadelphia, and often develop a lifelong connection to the area impacting future employment, business location, and donation decisions.

All of these are essential and material long-term benefits to the regional economy. However, from the perspective of the students attending these institutions, the particular benefit derived from their existence is less clear. Schools that draw from a national pool of applicants by definition face national competition and admit students with a broad range of alternative options that are also likely to lead to promising employment opportunities (possibly in other geographies).

CCP, by contrast, serves a very different student population. The vast majority of CCP enrollees are residents of Philadelphia, and many do not have the financial or social resources to make attendance at an out of market school a realistic option. Further, the vast majority of CCP alumni live and work in Philadelphia upon graduation. Stated simply, the impact of CCP is therefore to increase the education and skill level of Philadelphia residents. The economic and social impact of this core activity does not follow the knowledge export model of the region's nationally competitive educational institutions. Rather, the result is generated by increasing the earnings potential, skill level and productivity, and quality of life of the existing residential population of Philadelphia. These two facets are highly complementary.

It is also important to recognize that, particularly in a city like Philadelphia where educational attainment continues to lag national benchmarks, there remains significant “untapped” economic potential in under-educated portions of the population. Importantly, research on returns to education has focused not only on the average student but on “marginal” students, defined as those closest to the decision point on whether or not to pursue higher education.³³ From a public policy standpoint, the key question for initiatives like those which support expanded access to Community College is rightly thought of not of the benefits achieved by the average current community college student, but by those additional students that would be added. Fortunately, research indicates that benefits may be even greater for those groups:

The majority of empirical literature suggests that the returns to marginal students are at least as high as average, if not higher....if individuals with low levels of social or cultural capital face especially poor labor market outcomes in the absence of college, then, as a result of this different college selection mechanism, students who are least likely to go to college may actually have the highest potential returns.³⁴

Said another way, the under-education of the Philadelphia Workforce is holding our economy back. This is particularly true among underserved groups (such as minorities, immigrants, ex-offenders) whose considerable economic potential in many cases remains untapped due to a lack

³³ Note that marginal is here used in its economic sense (referring to “incremental” or “additional”) rather than in a normative sense with regards to the academic qualifications of students.

³⁴ *Making College Worth It: A Review of Research on the Returns to Higher Education*, Philip Oreopoulos & Uros Petronijevic, National Bureau of Economic Research Working Paper, May 2013.

of education and opportunity. Absent opportunities provided by CCP or other similar institutions, these groups face poor labor market outcomes, reliance on government services, and in many cases contribute to debilitating cycles of poverty within families and neighborhoods. Expanding educational opportunities for these groups is thus a high yield investment from the standpoint of economic growth, as well as public policy. Additional public policy dimensions and considerations from the perspective of state and local governments are explored in the next section.

3.3 BENEFITS TO LOCAL AND STATE GOVERNMENT

Benefits that accrue to individuals and the economy are also reflected in the local and state government entities. This is true both in a fiscal sense, as balanced economic growth increases government revenues and reduces the need for expenditures, and more broadly in government's role in creating opportunity and improving the quality of life for its citizens. Increases in both household wealth and firm productivity increase various state and local tax bases, generating revenue without raising tax rates.

Further, just as pre-K education has been demonstrated to yield a positive “return on investment” for local governments based on long-term returns, city and state governments also realize significant expenditure savings when higher educational attainment and employment is increased among its residents. Major cost centers that have been demonstrated to be correlated with educational attainment include public health, public safety, and assistance programs. CCP's educational mission is in this respect a sound public investment for the city and state regarding its real fiscal return. More broadly, institutions like CCP are essential cogs for the balanced growth that stabilizes communities and improves the quality of life in a sustainable way. The full spectrum of programs and services described in Section 2 illustrate how CCP touches a large group of residents and helps them improve their lives in a variety of ways.

FISCAL BENEFITS

CCP's services help to build the local and state tax bases in a variety of ways. As described above, the education and credentialing functions of CCP are associated with a significant wage premium. Much of this additional household wealth is retained within the local and state economy and eventually circulates through the local economy in the form of consumer spending. This indirect and induced economy activity generates tax revenue (in addition to supporting jobs). As estimated in Section 3.1.1, the state economy receives \$7.5 million in income, sales, and business taxes each year, while Philadelphia benefits from approximately \$1.5 million annually.

Further, the human capital and workforce development contributions of CCP to the regional economy have significant tax base implications. The increased productivity of firms ultimately builds their bottom line, a portion of which is captured through local and state business taxes. Even more importantly, as described in Section 3.2, a more productive workforce translates into a more attractive place to grow or locate a business. Cities and states operate in a highly competitive environment for business attraction and retention, and improving the region's

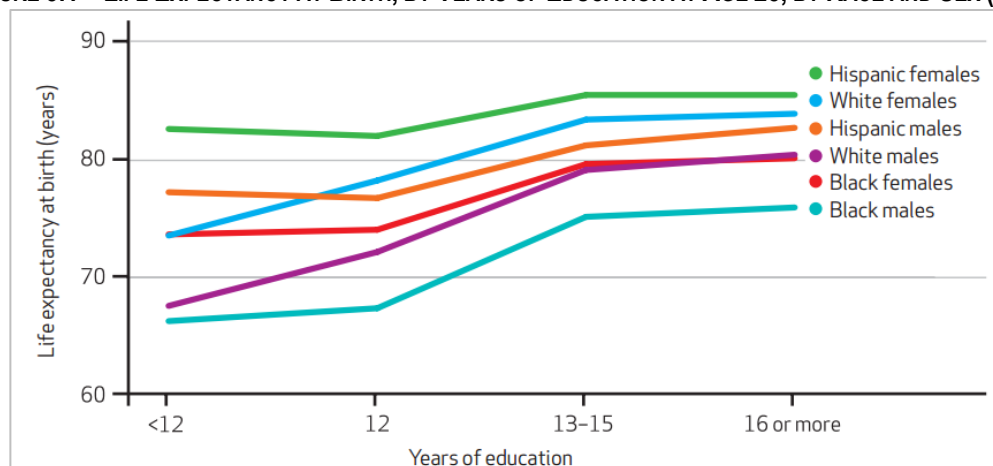
competitive positioning has implications for the number and scale of business that choose to locate there. This has implications for both business tax base, and more broadly, the employment tax base.

In addition to fiscal benefits accruing from increases in the tax base, research suggests that educational attainment is associated with significant quality of life improvements that result, among other benefits, in reductions in needed government expenditures.³⁵ Key areas include public health, public safety, and reliance on government assistance programs.

Public Health

There is a strong statistical correlation between increases in education and improved health outcomes. In a study published in 2012 in *Health Affairs*, the authors calculate the difference in life expectancy of varying levels of education between individuals of different races and sex combinations. In all groups, they observed a substantial increase in life expectancy as years of education increase, especially among people with just a high school degree, and individuals with some college or an associate's degree. Most stark, both white and black males life expectancy improve from 72 and 68 with a high school degree, respectively, to 79 and 75 with an associate's degree, respectively (see Figure 3.1).

FIGURE 3.1 – LIFE EXPECTANCY AT BIRTH, BY YEARS OF EDUCATION AT AGE 25, BY RACE AND SEX (2008)



Source: Olshansky et al. (2012)³⁶, Centers for Disease Control and Prevention (2009), U.S. Census (2008)

Another study from the National Bureau of Economic Research found that individuals with higher levels of education report having lower morbidity from the most common acute and chronic

³⁵ See: Where Value Meets Values: The Economic Impact of Community Colleges. Economic Modeling Specialist Intl (EMSI), February 2014

³⁶ Olshansky, S. Jay, Toni Antonucci, Lisa Berkman, Robert H. Binstock, Axel Boersch-Supan, John T. Cacioppo, Bruce A. Carnes, Laura L. Carstensen, Linda P. Fried, Dana P. Goldman, James Jackson, Martin Kohli, John Rother, Yuhui Zheng and John Rowe. 2012. "Differences in Life Expectancy Due to Race and Educational Differences are Widening, and Many May Not Catch Up." *Health Affairs*, (31): 1803-1813.

diseases. For example, educated people are less likely to be hypertensive, or to suffer from emphysema or diabetes. These individuals also have better physical and mental functioning, including less anxiety or depression, compared to less well-educated peers. Lastly, better-educated people report spending fewer days in bed or not at work because of disease, which directly impacts economic output and worker productivity. All of these results could be in part because the better educated have healthier behaviors – compared to their less well-educated peers, fewer participate in smoking, drinking, illegal drugs, poor diet/exercise regimens, and many use preventative medical care.³⁷

From an economic impact perspective, average annual public health costs to the country are \$170 per college graduate, compared to \$1,000 per high school graduate and \$2,700 per high school dropout.³⁸ Clearly, if more individuals moved into the college graduate category, the government would have to foot a smaller bill for public health costs. Nationwide, a recent study estimates that education obtained at America's community colleges yields an aggregate government health-related savings of \$12 billion.³⁹

Public Safety

Increased educational attainment produces consequent effects to public safety in local communities. For starters, advanced schooling improves the likelihood that individuals participate in legitimate work (i.e., non-criminal activity) and increases wage rates, subsequently intensifying the opportunity cost of committing a crime.⁴⁰

From an economic perspective, reductions in crime cause savings in the form of avoided costs to the justice system, for example, police protection, judicial, and legal, and corrections. In the Commonwealth of Pennsylvania, it costs \$42,000 to incarcerate an inmate.⁴¹ Additionally, one must consider avoided victim costs, and the benefits stemming from the added productivity of individuals who would have otherwise been incarcerated. A study done in 2008 by the Center for Economic and Policy Research estimates that, due to incarcerations and criminal records, the U.S. economy lost the equivalent of 1.5 to 1.7 million workers. This translates to a hit to GDP: incarceration costs the U.S. economy between \$57 and \$65 billion per year in lost output.⁴² CCP's Fox Rothschild Center for Law and Society provides an Expungement Clinic to assist community members with criminal records through the expungement process, thereby improving the economic contribution for these individuals.

³⁷ Cutler, David M. and Adriana Lleras-Muney. 2006. "Education and Health: Evaluating Theories and Evidence." *National Bureau of Economic Research*, Working Paper 12352.

³⁸ See: http://www.elc-pa.org/wp-content/uploads/2011/06/BestInvestment_Full_Report_6.27.11.pdf

³⁹ Economic Modeling Specialists Intl. 2014. "Where Value Meets Values: The Economic Impact of Community Colleges."

⁴⁰ See, for example: Lochner, Lance. 2008. "Education and Crime." *International Encyclopedia of Education*, 3rd Edition.

⁴¹ See: <http://www.vera.org/files/price-of-prisons-pennsylvania-fact-sheet.pdf>

⁴² See: <http://cepr.net/documents/publications/ex-offenders-2010-11.pdf>

Schooling significantly reduces the probability of incarceration. The strongest impacts of education are associated with a decrease in rates of murder, assault, and motor vehicle theft. Additionally, a college education for racial minorities, particularly blacks, reduces their probability of incarceration by 3.5%.⁴³ A 5% increase in the college graduation rate produces a 19% reduction in the homicide rate and has an even higher effect when considering male graduates in particular.⁴⁴ A 2004 study by the UCLA School of Public Policy and Research found that a \$1 million investment in incarceration will prevent approximately 350 crimes while the same investment in education will prevent over 600 crimes.⁴⁵ CCP's commitment to students with criminal histories through the Reentry Support Project is making a meaningful impact on these students' lives, and the public safety and economic vitality of the city.

Public Assistance

There is an undeniable link between a lack of education and poverty. Education is seen by many as the primary means of social mobility, enabling those born into a lower income family to rise the ranks of opportunity. For example, out of individuals who grew up in low-income families, 46% of those who did not earn a college degree stayed in the lowest income bracket, compared to 16% for those who did earn a college degree.⁴⁶ Low-income individuals often rely on public assistance to supplement their earnings (or lack thereof).

With the rise in education levels comes higher economic opportunity and subsequent reduction in reliance on government supports. As individuals achieve higher levels of education, they have access to more jobs with better benefits. Nearly 95% of college graduates have employer-provided health care, compared to 77% of high school graduates and 67% of high school dropouts.⁴⁷ Government benefits come from many sources, such as Temporary Assistance for Needy Families (TANF), Supplemental Nutrition Assistance Program (SNAP), Medicaid, Medicare, Supplemental Security Income (SSI), unemployment insurance, and housing benefits. Although the federal government provides funding for all of these benefits, the states also assist in the financing of TANF, Medicaid, and SSI.⁴⁸ Many of the beneficiaries of these programs have a high school education at most. For example, 95% of TANF recipients lack education beyond a high school degree (see Figure 3.2).

⁴³ See, for example: Lochner, Lance and Enrico Moretti. 2004. "The Effect of Education on Crime: Evidence from Prison Inmates, Arrests, and Self-Reports." *American Economic Review*, 94(1):155-189.

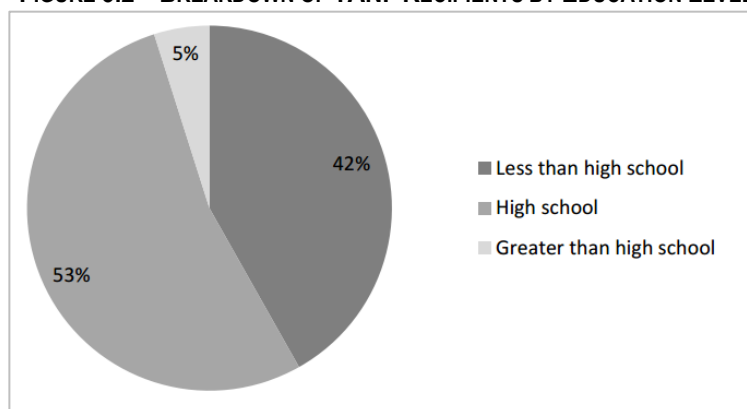
⁴⁴ See: <http://www.politics.as.nyu.edu/docs/IO/5628/Gonzalez.pdf>

⁴⁵ See: https://issuu.com/uclapubaffairs/docs/correctional_education_as_a_crime_c

⁴⁶ See: http://www.huffingtonpost.com/howard-steven-friedman/americas-poverty-education_b_1826000.html

⁴⁷ See: <http://www.coveringpoverty.org/tutorials/education/>

⁴⁸ See: <http://www.econlib.org/library/Enc/Welfare.html>

FIGURE 3.2 – BREAKDOWN OF TANF RECIPIENTS BY EDUCATION LEVEL

Source: U.S. Department of Health and Human Services

Each of these issues is of course not merely fiscal in nature but has the enormous quality of life implications for the citizens of Philadelphia. Nonetheless, they illustrate the simple fact that from a government standpoint, supporting educational advancement is a sound investment, not a cost, with a significant fiscal return.

Community Benefits

Ultimately, government policy is not just about balancing budgets, but about improving the lives of its citizens. In a city with an elevated poverty rate, a shrinking middle class, and lagging educational attainment, CCP plays an essential role in a balanced growth strategy that produces sustainable change in every neighborhood and corner of the city.

As reviewed in Section 2.1, CCP students are largely representative of the population of Philadelphia. They hail from every neighborhood and represent a broad range of ethnic and socioeconomic groups. The vast majority of the student body is from the city and stays within the city after graduation. The skills and credentialing provided by CCP, therefore, is not exported out of the region but instead is brought back to Philadelphia's neighborhoods in the thousands each year.

The opportunities enabled by CCP for its students translate to a significant impact on these communities. Educational attainment and career advancement are associated with stability and quality of life improvements that can translate to families and across generations. Human capital development represents not a short-term fix, but a sustainable pathway out of poverty accessible to the broad spectrum of Philadelphia residents. At a time when the Philadelphia School District is faced with vast budgetary challenges, CCP also plays an essential role in supplementing the K-12 education system, serving as an outlet for dedicated students who may have been underserved. As reviewed in Section 2, CCP been lauded for its success retaining entering students who require remedial assistance, as well as for its outreach to and success with minority students, women, and other underserved populations.

4.0 ECONOMIC FOOTPRINT

Localities benefit from the presence of college universities, as they represent job opportunities for residents, purchasing power to support local merchants, and physical and programmatic resources for the community as a whole. This can yield a symbiotic relationship between an institution and municipality.

CCP's ongoing operations are a significant contributor to the economies of Pennsylvania and Philadelphia. With annual operating expenditures of \$145 million, CCP is a major employer of Pennsylvania residents and an important procurer of goods and services from local companies. These ongoing activities are a foundational aspect of the economic vitality of the city and state, as well as a substantial tax revenue generator. As CCP's operating footprint continues to grow, so too will the attendant economic impacts quantified in this chapter.

Another important way that CCP is a contributor to the city and state economies is through its capital investments. These projects entail significant construction activity, which supports construction-related jobs, create demand for various goods and services, and generate statewide tax revenues, in addition to improving CCP's facilities over the long-term.

4.1 DIRECT ECONOMIC ACTIVITY

Direct economic activity is divided into two categories – operating and capital expenses. Operating expenses are ongoing costs affiliated with keeping the College in operation (e.g., salaries and procurement contracts). Capital expenses, however, are purchases that are planned for specific times, including construction or equipment upgrades. Since capital expenditures can vary from year to year, annualizing expenditures over a period of time provides a useful measurement of the average annual impact from capital investment activity.

Some categories, such as student and visitor ancillary spending, are typically included in an analysis of economic impact. However, these categories are excluded from this analysis on account that most spending occurring on or near CCP's campuses is most likely transferred from elsewhere in the city, rather than being brought into the city's economy from outside the city. Since this spending primarily represents a shift within the city, rather than net new spending imported from the outside, this activity is conservatively excluded from the quantification of economic impact within this study.

ANNUAL OPERATING EXPENDITURES

CCP's annual operating expenditures for FY 2015 totaled \$145 million. Compensation and benefits for CCP's 921 full-time and 707 part-time employees represent the largest expenditure category, totaling \$113 million. Nearly 90% of these wages and benefits are earned by residents

of Pennsylvania. Additionally, CCP spends \$32 million on other operating items, which include purchases of goods and services (see Table 4.1).

TABLE 4.1 – CCP DIRECT EXPENDITURES AND EMPLOYMENT, FY 2015

Category	Total
Employees	1,628
Full Time	921
Part Time, Salaried	641
Part Time, Hourly	66
Compensation and Benefits Paid (\$M)	\$113
Other Operating Expenses (\$M)	\$32
Total Expenses (\$M)	\$145

Source: CCP (2015), ESI (2016)

In addition to directly employing local residents, procurement data provided by CCP indicates that the vast majority of operating expenses go to local businesses. Vendor data provided for CCP FY 2015 procurement activities identified \$32 million in spending with Pennsylvania-based businesses, \$22 million of which was transacted with Philadelphia-based businesses.

CAPITAL INVESTMENTS

Capital investments take the form not only of major projects producing new and upgraded facilities, but also investments in more basic facilities and equipment and ongoing renewal and replacement. Each of these investments types is significant from an economic impact standpoint. CCP is currently exploring a public-private partnership to develop a new commercial-residential complex at 15th and Hamilton. Expenditures across these three categories totaled \$100 million over fiscal years 2011-2015, or \$20 million per year (see Table 4.2).

TABLE 4.2 – CCP CAPITAL EXPENDITURES (\$M)

Capital Investment Type	FY 2011-2015	Annualized
Major Projects	\$90.7	\$18.1
Facilities & Equipment	\$7.4	\$1.5
Ongoing Renewal & Replacement	\$2.1	\$0.4
Total	\$100.2	\$20.0

Source: CCP (2015)

4.2 ECONOMIC IMPACT OF ANNUAL OPERATING EXPENDITURES & CAPITAL INVESTMENTS

The economic impact of any good is calculated by summing the direct, indirect, and induced effects of the total spending. Direct effects are the economic transactions that occur between CCP and its vendors to procure its goods or services. Indirect effects are the spillover demand impacts of CCP's purchase of these goods and services. For example, when CCP engages in a contract with a vendor for a specific dollar amount, this vendor will use some of this amount to purchase additional goods or services to continue to supply its business with the inputs it needs to continue to produce its good or service. The economic transaction between the vendor and *its* vendors is the indirect effect. Induced effects are spillover demand impacts of the labor income from CCP and its vendors' operations. These individuals, both CCP employees, and employees of CCP's vendors will spend their income on housing, utilities, groceries, and other consumer goods and services. The economic transaction between the employee and each of these vendors is considered the induced effect.

OPERATING EXPENDITURES

Beyond the direct spending by CCP, the expenditures by the institution also generate significant indirect and induced impacts to the city and state.⁴⁹ The \$145 million in direct expenditures generated \$276 million in total output within the state, supporting nearly 2,500 jobs and \$146 million in earnings. The bulk of that impact takes place within the City of Philadelphia (see Table 4.3).

**TABLE 4.3 – ECONOMIC IMPACT OF CCP'S FY 2015 OPERATING EXPENDITURES
WITHIN THE CITY OF PHILADELPHIA AND THE COMMONWEALTH OF PENNSYLVANIA**

FY 2015 Operations	City of Philadelphia	Commonwealth of Pennsylvania
Direct Output (\$M)	\$131	\$145
Indirect and Induced Output (\$M)	\$71	\$131
Total Output (\$M)	\$202	\$276
Total Employment⁵⁰	2,041	2,431
Total Earnings (\$M)	\$91	\$146

Source: CCP (2015), IMPLAN (2013), IPEDS (2015), ESI (2016)

⁴⁹ Economic impacts are commonly calculated from business sales or revenue. CCP, as a college, has a larger proportion of capital and non-operating expenses than an average business. In addition, we consider economic impacts from CCP's capital expenditures separately from operations. As such economic impacts from CCP's operations are based on operating expenditures, rather than total revenues.

⁵⁰ Total Employment (and thus, Total Earnings) includes direct, indirect, and induced jobs, as estimated by IMPLAN. These estimates are based in job-years, or how many jobs are supported annually. The direct employment estimated through this annualized base varies from the direct employment shown in earlier Table 2.1, which is reflective of all employees on the payroll within a fiscal year, regardless of the duration of their employment.

CAPITAL INVESTMENTS

CCP's capital investments produce spillover impacts into the local economy as its vendors ramp up their activities in responses to this demand and as construction and other workers spend a portion of their earnings within the city and state economies.

The scale of these one-time impacts is significant.⁵¹ At the annualized level, CCP capital investment from FY 2011-2015 generated about \$43 million in total output within the state, supporting more than 380 jobs and \$27 million in earnings. The bulk of that impact took place within the City of Philadelphia (see Table 4.4).

**TABLE 4.4 – ANNUAL ECONOMIC IMPACT OF CCP'S CAPITAL EXPENDITURES
WITHIN THE CITY OF PHILADELPHIA AND THE COMMONWEALTH OF PENNSYLVANIA**

	City of Philadelphia	Commonwealth of Pennsylvania
Direct Output (\$M)	\$17	\$17
Indirect and Induced Output (\$M)	\$8	\$27
Total Output (\$M)	\$25	\$43
Total Employment	133	386
Total Earnings (\$M)	\$11	\$27

Source: CCP (2015), IMPLAN (2013), ESI (2016)

4.3 INDUSTRY DISTRIBUTION OF ECONOMIC IMPACT

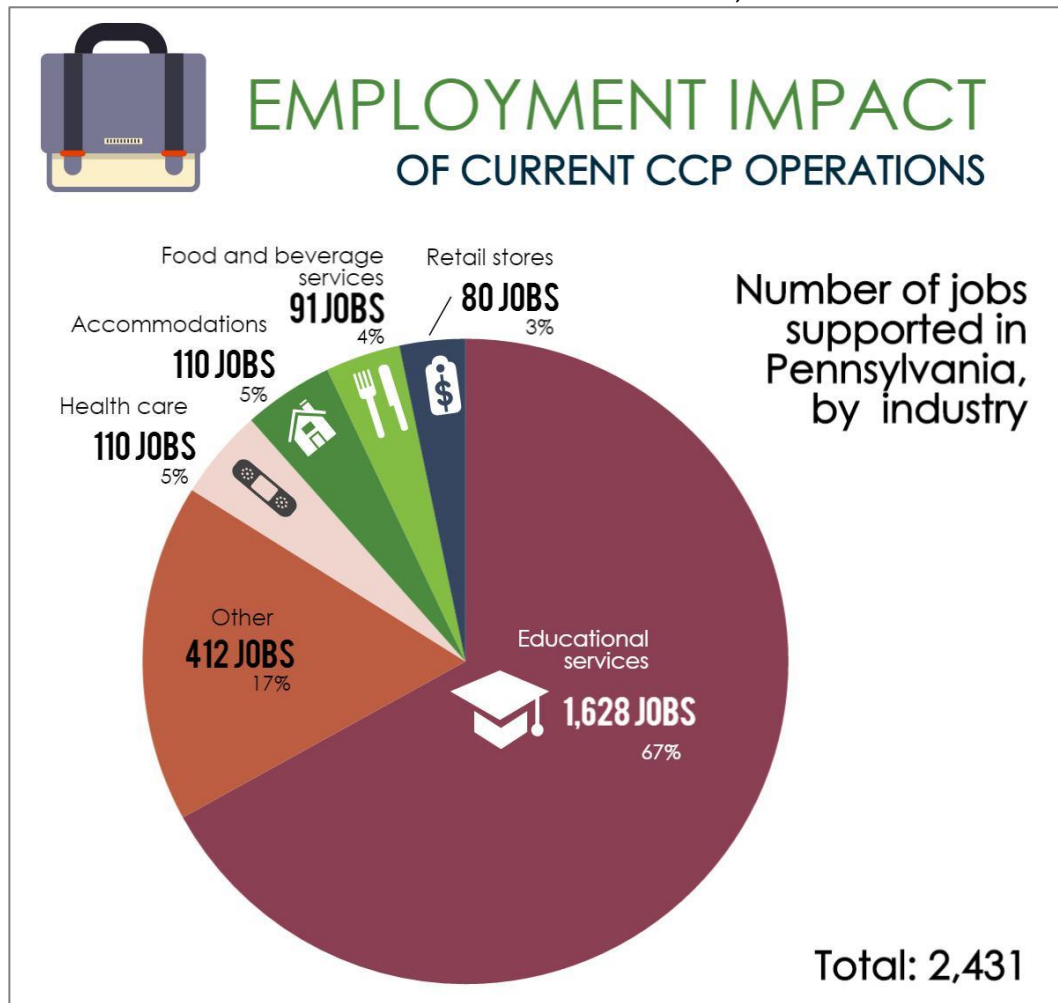
In an interconnected economy, CCP's operating activity and capital investments have impacts well beyond the educational services and construction industries. Supply chain impacts from local procurement ripple through industries providing a variety of goods and services. Moreover, the local wages supported not only by CCP's activities but by those of its vendors also circulate through the local economy as they are re-spent throughout a variety of sectors.

OPERATING EXPENDITURES

The employment impacts from CCP's operating activities within the state economy affect industries beyond educational services. While the educational services sector derives the largest benefit from CCP's employment impact, industries besides educational services comprise over one-third of the total employment impact from CCP operations in the city and state (see Figure 4.1).

⁵¹ Capital investment activities represent discrete, one-time set of economic activities, rather than ongoing amounts of economic activity.

FIGURE 4.1 – INDUSTRY DISTRIBUTION OF EMPLOYMENT GENERATED BY CCP’S ANNUAL OPERATIONS WITHIN THE COMMONWEALTH OF PENNSYLVANIA, FY 2015

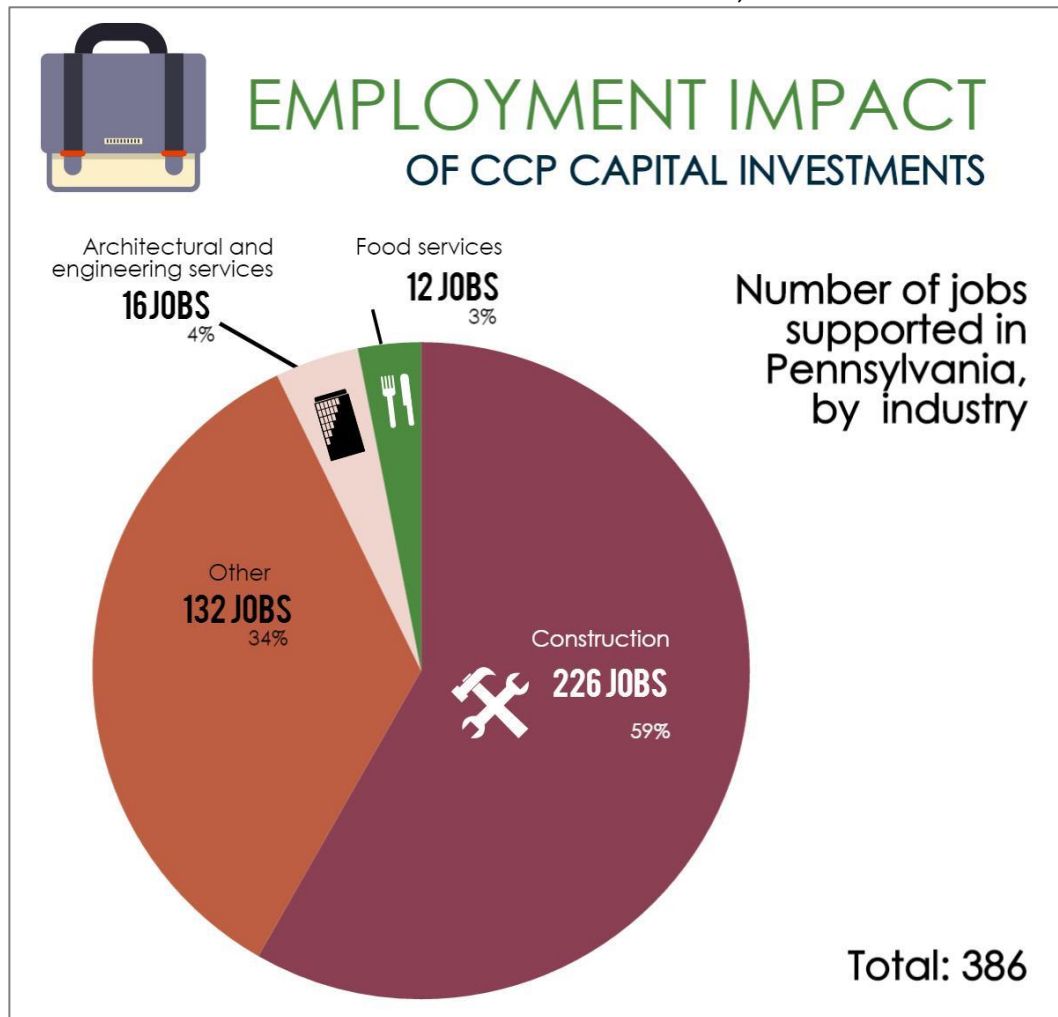


Source: CCP (2015), IMPLAN (2013), ESI (2016)

CAPITAL INVESTMENTS

The impacts of construction activity associated with CCP’s capital investments spreads to industries beyond the construction sector. While the construction industry is the largest individual beneficiary from these capital investments, industries besides construction are estimated to have received 41% of the total employment impact from CCP’s capital expenditures (see Figure 4.2).

FIGURE 4.2 – INDUSTRY DISTRIBUTION OF EMPLOYMENT GENERATED BY CCP'S CAPITAL INVESTMENTS WITHIN THE COMMONWEALTH OF PENNSYLVANIA, FY 2015



Source: CCP (2015), IMPLAN (2013), ESI (2016)

4.4 FISCAL IMPACT FROM DIRECT OPERATING EXPENDITURES AND CAPITAL INVESTMENTS

Although CCP is a nonprofit entity, the fiscal impacts generated by its activity are substantial. CCP's operating and capital activities increase state and local tax bases both directly through its activities (e.g., employment, which generates taxable income) and indirectly via spending by CCP's vendors, and spending by CCP and non-CCP employees.

OPERATING EXPENDITURES

CCP's operations generate \$4.4 million in income, sales, and business taxes annually to City of Philadelphia government and nearly \$7 million to the Commonwealth of Pennsylvania. The

largest component of tax revenues provided to the city is \$3 million in income taxes, which are a product of both CCP's large direct employment base and the indirect and induced jobs supported by its operations. The most substantial portion of fiscal impact to the state is \$3 million per year from income taxes (see Table 4.5).

**TABLE 4.5 – FISCAL IMPACTS OF CCP'S ANNUAL OPERATIONS
WITHIN THE CITY OF PHILADELPHIA AND COMMONWEALTH OF PENNSYLVANIA, FY 2015 (\$M)**

Tax Type	City of Philadelphia	Commonwealth of Pennsylvania
Income	\$3.4	\$3.4
Sales	\$0.4	\$2.8
Business	\$0.7	\$0.7
Total	\$4.4	\$6.8

Source: CCP (2015), IMPLAN (2013), Federal Reserve Bank of St. Louis (2011), Commonwealth of Pennsylvania (2013), City of Philadelphia (2013), ESI (2016)

Note: Numbers may not add due to rounding

CAPITAL INVESTMENTS

Another important way CCP contributes to Philadelphia and Pennsylvania is through tax revenues generated from its capital projects. These projects help create construction jobs, expenditures on building materials, and revenues to businesses within the city, in addition to generating income, sales, and business taxes to the city and state governments. Annualized capital investments by CCP from FY 2011-2015 produced approximately \$320,000 per year in tax revenues to the city, and \$1.3 million per year in tax revenues to the state (see Table 4.6).

**TABLE 4.6 – FISCAL IMPACTS OF CCP'S ANNUALIZED CAPITAL EXPENDITURES
WITHIN THE CITY OF PHILADELPHIA AND COMMONWEALTH OF PENNSYLVANIA, FY 2015 (\$M)**

Tax Type	City of Philadelphia	Commonwealth of Pennsylvania
Income	\$0.21	\$0.67
Sales	\$0.04	\$0.48
Business	\$0.07	\$0.11
Total	\$0.32	\$1.27

Source: CCP (2015), IMPLAN (2013), Federal Reserve Bank of St. Louis (2011), Commonwealth of Pennsylvania (2013), City of Philadelphia (2013), ESI (2016)

5.0 CONCLUSION

This report has identified, described and quantified the variety of contributions of the Community College of Philadelphia (CCP) to Philadelphia and Pennsylvania. In addition to being the largest public institute of higher education in Philadelphia, CCP is truly the “city’s college,” serving a student body that reflects the broad geographic, demographic and educational diversity of the city.

CCP provides a variety of academic programs to meet the range of needs of this student population. Its open-admissions status is supplemented by a variety of programs above and beyond its transfer path and associate’s degrees that enable them to meet the needs of a broad spectrum of Philadelphians. These include professional certificate programs, industry partnerships, General Educational Development (GED) courses, English as a Second Language (ESL) courses, re-entry programs, and more. These programs ensure that impacts of CCP’s mission and offerings are not tied solely to its credentialing and degree-granting functions, but in the variety of ways that it serves a broad cross-section of Philadelphians and helps to further their career and life opportunities.

CCP’s students are not the only beneficiaries of these activities. As an anchor institution, major employer, and large procurer of local goods and services, CCP’s direct activities have a significant impact on the regional economy. Further, the educational and credentialing services provided by CCP are a vital part of the city and region’s workforce development strategy, improving the productivity of the local economy and ultimately making the area a more attractive place to locate and grow a business.

Further, the city and state governments benefit substantially from these educational and economic gains associated with CCP. Benefits accrue to the government on both sides of the financial ledger, with increased economic activity and household wealth translating to growth in the tax base, while government savings accrue from reduced expenditure needs in areas like public health, public safety, and public assistance. As important as the fiscal implications are is the manner in which they are delivered. CCP’s services help a broad spectrum of Philadelphian’s access sustainable paths to opportunity and success, stabilizing communities and building a stronger city from the ground up.

5.1 SUMMARY OF CALCULATED IMPACTS

Among those benefits described above, three categories have been quantified on an annualized basis regarding their effects on the city and state economic and tax revenues. These are:

- CCP's operating activities, which employ thousands of individuals and represent a large volume of procurement opportunities for local vendors;
- CCP's capital investments, which provide a steady stream of activity for local vendors in the construction activity, and serve as community anchors; and
- The annual wage premium enjoyed by CCP graduates as a result of their education, which translated to a significant increase in household wealth and spending within the city and state economy.

As described throughout this report, these categories do not reflect the entirety of CCP's impact on its students, the regional economy, or local government. Nonetheless, it is worthwhile and instructive to quantify these impacts where possible. In total, estimated annual impacts from these three categories sum to (see Table 5.1):

- \$346 million in annual output within the City of Philadelphia, supporting nearly 3,000 direct, indirect, and induced jobs with nearly \$150 million in earnings, and generating more than \$6 million in tax revenues
- \$663 million in annual output within the Commonwealth of Pennsylvania, supporting over 5,200 jobs with \$300 million in earnings and generating nearly \$16 million in tax revenues

TABLE 5.1 – ANNUAL ECONOMIC IMPACT OF CCP'S OPERATING EXPENDITURES, CAPITAL INVESTMENTS, AND ALUMNI WAGE PREMIUM WITHIN THE CITY OF PHILADELPHIA AND COMMONWEALTH OF PENNSYLVANIA

City of Philadelphia	Operations	Capital Investment	Wage Premium	Total
Economic Impact (\$M)	\$202	\$25	\$120	\$346
Employment (Jobs)	2,040	130	770	2,950
Labor Earnings (\$M)	\$91	\$11	\$45	\$148
Tax Revenue (\$M)	\$4.4	\$0.3	\$1.5	\$6.3
Commonwealth of Pennsylvania	Operations	Capital Investment	Wage Premium	Total
Economic Impact (\$M)	\$276	\$43	\$343	\$663
Employment (Jobs)	2,430	390	2,400	5,220
Labor Earnings (\$M)	\$145	\$27	\$121	\$293
Tax Revenue (\$M)	\$6.8	\$1.3	\$7.5	\$15.5

Source: ESI (2016)

Note: Numbers may not add due to rounding

APPENDIX A: ECONOMIC AND FISCAL IMPACT METHODOLOGY

Quantification of the categories above yields an estimate of direct incremental economic activity attributable to CCP across a variety of local geographies and spending categories. ESI uses standard Input-Output modeling techniques to evaluate the full range of economic impact, employment impact, and fiscal impact associated with that direct activity. This section briefly reviews the theory and mechanics of that process. ESI has produced hundreds of economic impact reports using this basic approach, with models customized based on the geographies of interested parties and nature of the spending specific to each study.

INPUT-OUTPUT THEORY

In an inter-connected economy, every dollar spent generates two spillover impacts:

- First, some amount of the proportion of that expenditure that goes to the purchase of goods and services gets circulated back into an economy when those goods and services are purchased from local vendors. This represents what is called the “indirect effect,” and reflects the fact that local purchases of goods and services support local vendors, who in turn require additional purchasing with their own set of vendors.
- Second, some amount of the proportion of that expenditure that goes to labor income gets circulated back into an economy when those employees spend some of their earnings on various goods and services. This represents what is called the “induced effect,” and reflects the fact that some of those goods and services will be purchased from local vendors, further stimulating a local economy.

The role of input-output models is to determine the linkages across industries in order to model out the magnitude and composition of spillover impact to all industries of a dollar spent in any one industry. Thus, the total economic impact of CCP is the sum of its own direct economic footprint (net of any identified displaced economic activity effects) plus the indirect and induced effects generated by that direct footprint.

INPUT-OUTPUT MODEL MECHANICS

To model the impacts resulting from the direct expenditures of CCP, ESI developed a customized economic impact model using the IMPLAN input/output modeling system. IMPLAN represents an industry standard approach to assessing the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes.

IMPLAN is one of several popular choices for regional input-output modeling. Each system has its nuances in establishing proper location coefficients. IMPLAN uses a location quotient to determine its regional purchase coefficient (RPC). This represents the proportion of demand for a

good that is filled locally; this assessment helps ascertain the multiplier for the localized region. Additionally, IMPLAN also accounts for inter-institutional transfers (e.g. firms to households, households to the government) through its Social Account Matrix (SAM) multipliers. IMPLAN takes the multipliers and divides them into 440 industry categories in accordance with the North American Industrial Classification System (NAICS) codes.

EMPLOYMENT IMPACTS

One of the key outputs of IMPLAN modeling is employment impacts within the modeled geography. This includes both the number of jobs and the labor income associated with that employment. Importantly, employment impacts are generated for direct, indirect and induced activity, with total impacts representing the sum of those categories. Since these indirect and induced impacts are caused by supply chain and employee spending, they tend to ripple across a wide range of industries within the broader economy, well beyond the categories like lodging, food, and beverage that capture the bulk of the initial spending and perceive themselves as directly servicing visitors. It is, therefore, useful to break out impacts by category to illustrate the full impact of CCP on employment (as well as economic activity in general).

FISCAL IMPACTS

The economic impacts described above, in turn, produce one-time or ongoing increases in various tax bases, which yield temporary or permanent increases in various tax revenues. Careful consideration must be given to the particular tax structure of different jurisdictions to estimate fiscal impacts appropriately. To support our extensive work on economic and fiscal impacts in the Philadelphia region, ESI has developed a custom fiscal impact model that translates total economic impacts (as estimated by the IMPLAN model described above) into their commensurate tax revenue gains for the City and Commonwealth.

It is important to note that while the city of Philadelphia economy is wholly contained within the Commonwealth economy, the city is a distinct government entity from the Commonwealth. Therefore, estimated fiscal impacts to the city and state are entirely separate and additive from the standpoint of evaluating the full fiscal impact of CCP.

APPENDIX B: ABOUT ECONSULT SOLUTIONS, INC.

This report was produced by Econsult Solutions, Inc. (ESI). ESI is a Philadelphia-based economic consulting firm that provides businesses and public policymakers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community, and neighborhood development, planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have outstanding professional and academic credentials, including active positions at the university level, extensive experience at the highest levels of the public policy process and extensive consulting experience.

