

BUILDING THE COMMON GOOD: THE NATIONAL IMPACT OF COUNCIL FOR CHRISTIAN COLLEGES & UNIVERSITIES (CCCU) INSTITUTIONS

FINAL REPORT – December 12, 2017

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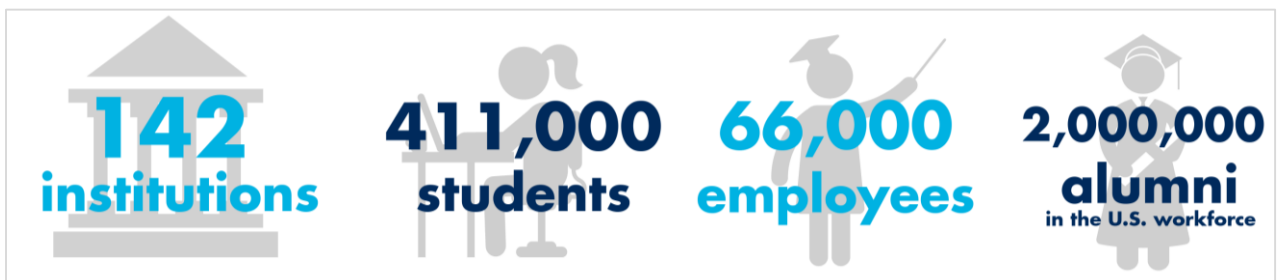
EXECUTIVE SUMMARY

This report describes the national economic, societal, and community impacts of the 142 US institutions of the Council for Christian Colleges & Universities (CCCU). CCCU institutions are diverse in geographic location, size, age, historical roots, and curricular emphasis, but every CCCU institution shares three basic commitments:



- **Biblical Truth:** Each CCCU institution is committed to integrating the Bible—divinely inspired, true, and authoritative—throughout all aspects of the institution, including teaching and research. CCCU professors pursue academic excellence because they are committed to God as the author of truth, and they know that biblical truth has implications for every academic discipline.
- **Christian Formation:** Each CCCU institution is committed to fostering Christian virtues rooted in the Scriptures and nurtured through the institution’s curricular and co-curricular programs. CCCU institutions form students of moral commitment who live out Christian virtues such as love, courage, and humility in every aspect of their lives.
- **Gospel Witness:** Each CCCU institution is actively committed to advancing God’s redemptive purposes in the world by graduating students who live and share the Gospel in word and deed. CCCU graduates are hopeful realists who recognize the brokenness of the world but believe that God has called them to work for its healing – as doctors, teachers, marketers, engineers, parents, soccer coaches, and in a host of other ways.

As CCCU educators pursue these common commitments on their campuses, they create a profound impact on students, communities, and the nation.

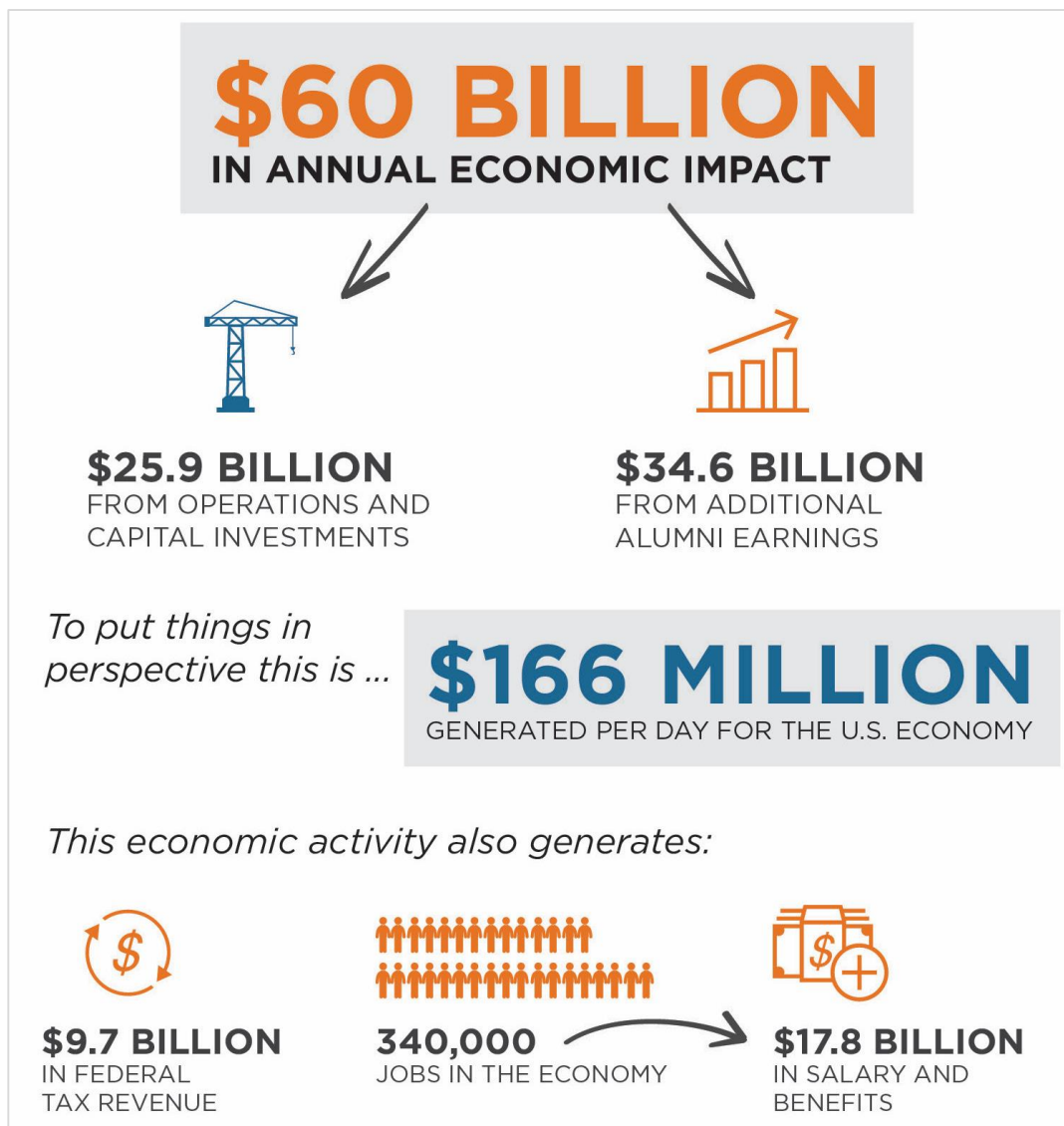


CCCU: Advancing Faith and Intellect for the Common Good



ECONOMIC IMPACT

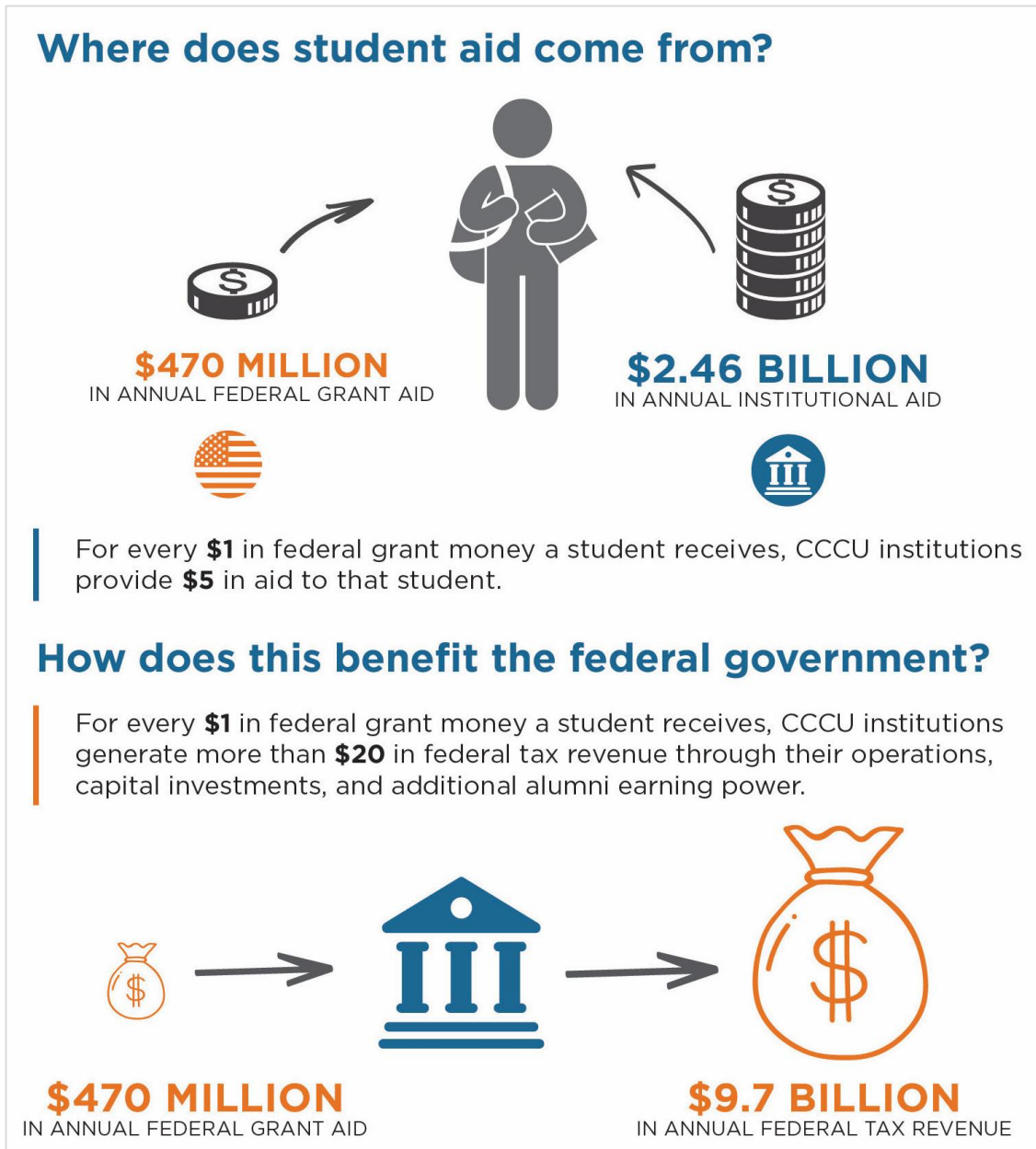
In addition to their education and social mission, these institutions have a significant impact on the national economy through annual operations and capital investments, the wage premium conferred on graduates, and additional benefits brought to local communities. In the aggregate, CCCU institutions are responsible for more than **\$60 billion in total economic output on an annual basis**, or \$166 million each day. This activity is generated by a combination of institutional expenditures on operations and capital investments (\$25.9 billion) and the additional alumni earning power of CCCU alumni (\$34.6 billion). In total, it supports nearly **340,000 full-time equivalent (FTE) jobs** and **\$18 billion in earnings**, and generates nearly **\$10 billion in federal tax revenue annually**.



Source: Econsult Solutions (see Report Section 7 for more information)

RETURN ON INVESTMENT

At a time when higher education is under heavy scrutiny for its value proposition, CCCU institutions and their students are delivering a significant return on investment for the federal government. **CCCU institutions provide \$5 in institutional aid for every \$1 in federal grants** received by CCCU students. More broadly, this federal investment in students leverages the significant private sector investment that enables the range of economic activity associated with CCCU institutions. In total, this activity **returns more than \$20 in federal tax revenue for every \$1 in federal grants**.

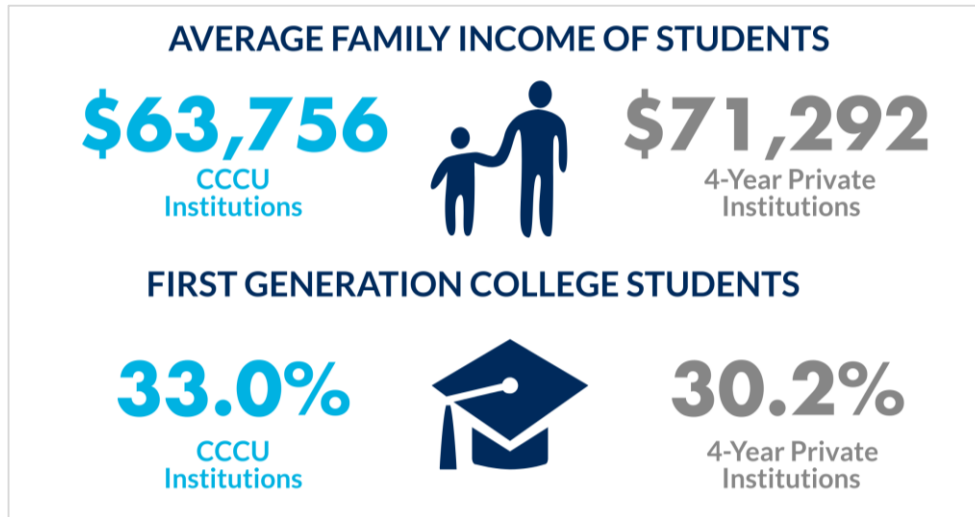


Source: Econsult Solutions (see Report Section 5 for more information)

SOCIAL IMPACT

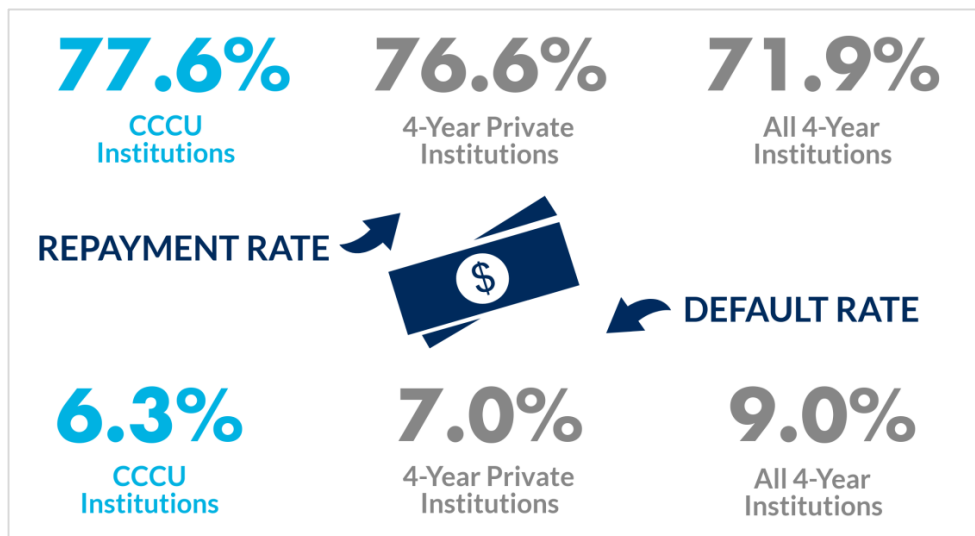
The faith-infused experience offered by CCCU institutions transforms students and produces additional personal and societal benefit. CCCU institutions are living out their organizational values in ways that help their graduates to contribute to society in numerous ways.

- CCCU students are more likely to be **first-generation college students** and to receive federal loans, and are **less likely to come from high earning families**.



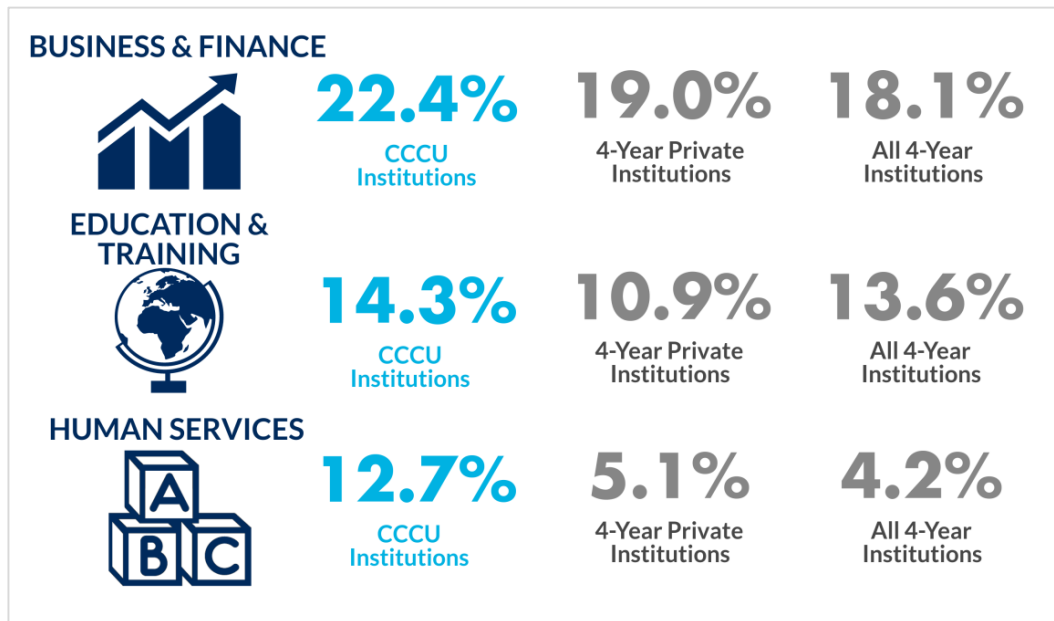
Source: Econsult Solutions analysis of IPEDS Data (2015) (see Section 5.3 for more detail)

- CCCU alumni have a **higher loan repayment rate** and **lower loan default rate** than peer institutions.



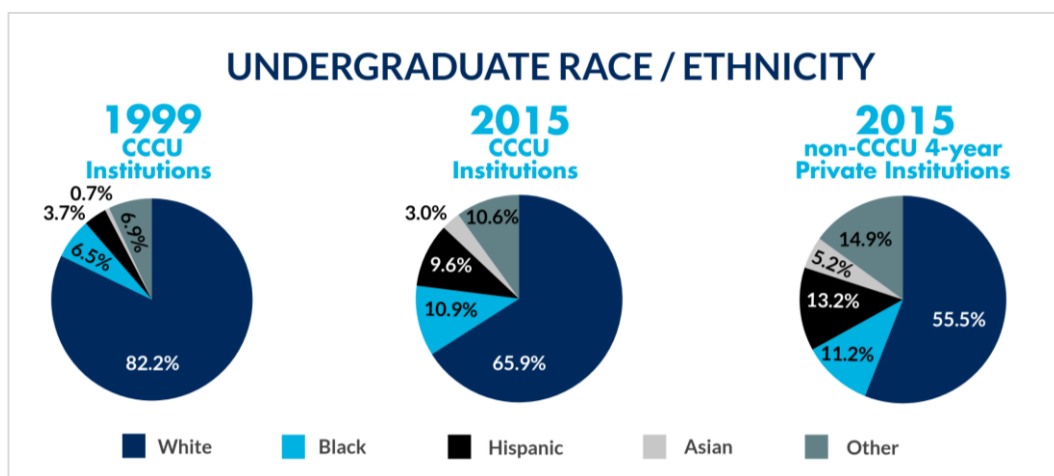
Source: Econsult Solutions analysis of IPEDS and Department of Education Data (2015, FY 2014) (see Section 5.4 for more detail)

- CCCU students and alumni bring a faith-informed perspective to careers in a wide range of fields, including business and finance, which represents the top career cluster for CCCU students. In addition, CCCU students are **overrepresented in fields that may not maximize earnings but deliver social benefits** such as education and human services.



Source: Econsult Solutions analysis of IPEDS Data (2015) (see Section 5.2 for more detail)

- Since the turn of the century, the **racial and ethnic composition of CCCU's campuses have become markedly more diverse.**



Source: Econsult Solutions analysis of IPEDS Data (1999, 2015) (see Section 5.3 for more detail)

COMMUNITY IMPACT

CCCU institutions are anchors in their communities, committed to producing many economic and social benefits at a very local level:

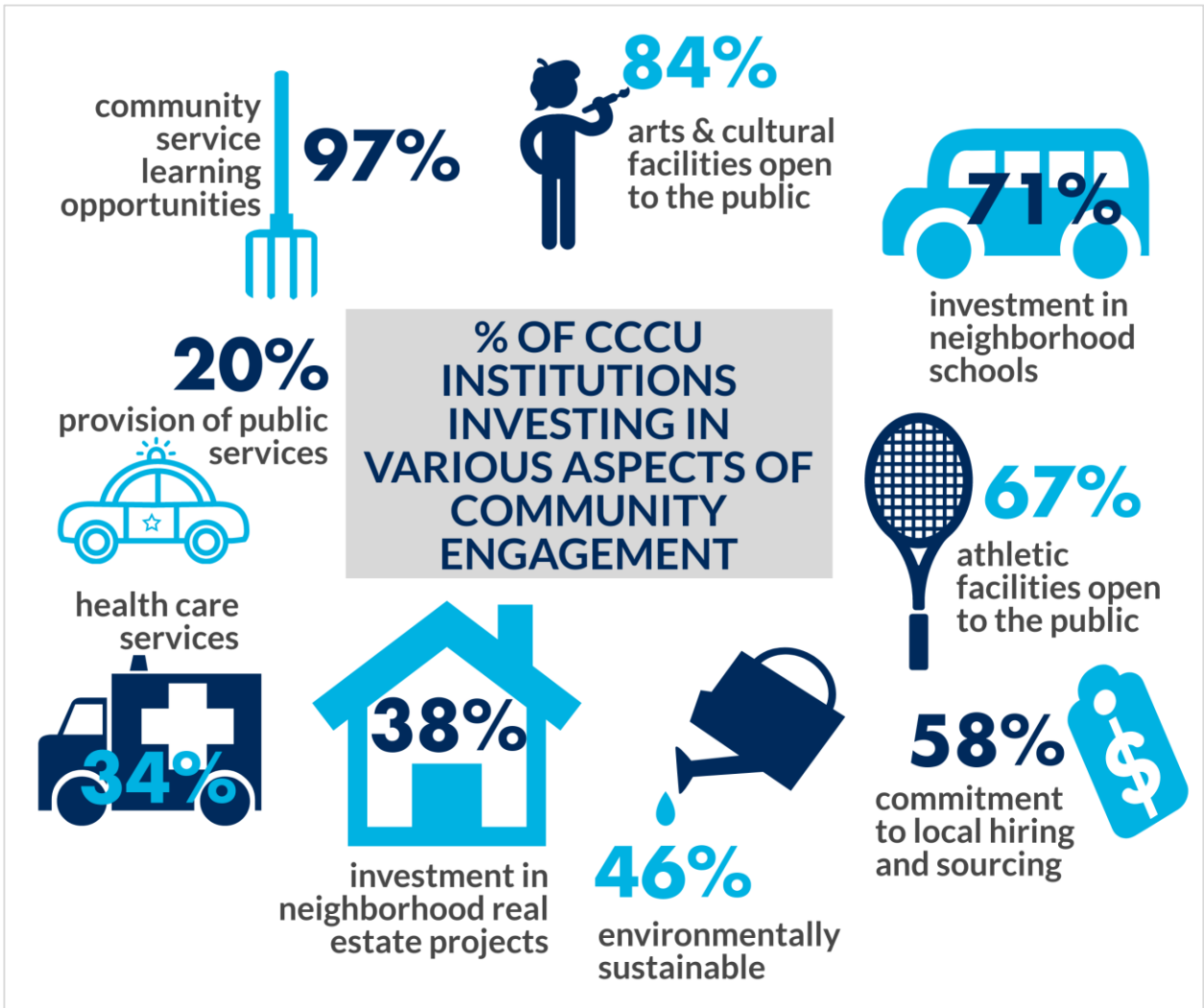
- **Community service and service learning** programs give students and faculty the opportunity to integrate direct opportunities for service into their academic experiences. In aggregate, CCCU students perform an estimated **5.4 million community service hours per year**, which is equivalent to a team of 2,700 people working year-round to improve communities across the country. The near-universal participation of CCCU institutions reflects their leadership in this area, which represents a natural extension of their faith-infused institutional values and missions.



Source: Survey of CCCU Institutions (see Section 6 for more detail)

- Institutions invest in **K-12 educational efforts in their local communities** through collaboration with local public, private, and charter schools. CCCU institution campuses also provide significant **community amenities**, as centers of education, art and culture, and recreation areas that are accessible to the public.
- Economic gains are felt most concretely in local communities, intensified by the **local hiring and sourcing** programs undertaken by the majority of institutions. Further, **students and visitors bring significant spending power** into host communities, supporting and sustaining local retail activity and jobs.

Local communities benefit from a wide range of programs undertaken by CCCU institutions:



Source: Survey of CCCU Institutions (see Section 6 for more detail)

Christian colleges and universities provide a unique and valuable place for students to discern their vocation through the study of their chosen discipline. They also develop a deeper relationship with God, with their peers and professors, and by serving in their surrounding communities. Rigorous academics prepare our students for life, including enrolling in top-tier graduate programs. Our educational missions shape students who act for the public good – often at a cost to themselves – out of a love for Jesus Christ and for the world around them.

- Shirley V. Hoogstra
CCCU President

1.3 ORGANIZATION OF REPORT

This report reviews key contributions that CCCU institutions make to the economy, society and local communities in which they are located:

- Section 2: Economic Impact from Annual Operations quantifies the impact of the ongoing operations of CCCU institutions including employment, procurement, and provision of educational services;
- Section 3: Economic Impact from Capital Investments quantifies the impacts of CCCU institutions' physical investments in construction, renovation, and maintenance of their campuses;
- Section 4: Economic Impact from Wage Premium estimates the economic benefits associated with the education and credentialing of CCCU institutions on the earning potential of the national workforce;
- Section 5: Societal Impact illustrates how CCCU institutions live out their organizational values in ways that help to transform their students and alumni and benefit local communities and broader society; and
- Section 6: Institutional Commitment to Community Impact describes how CCCU institutions deliver tangible local impacts borne of their presence in and service to their host communities.
- Section 7: Conclusion aggregates the economic impacts calculated and illustrated in the report, and summarizes the key ways in which CCCU institutions benefit not only the economy but also their students, host communities and society more broadly.

1.4 DATA AND METHODOLOGY

Much of the data used in this analysis came directly from CCCU institutions in the form of survey responses. Of the 142 US CCCU institutions, 126 completed the survey, a remarkable response rate of 88 percent. From this dataset of reported information, key inputs for the few remaining non-reporting institutions were extrapolated where the data were not publicly available.

Economic and fiscal impacts are estimated on an annualized basis and in a non-overlapping fashion to ensure that they could be appropriately summed to an aggregate nationwide. Results should be understood as the best estimate of "current" activity levels, rather than as an accounting exercise for any one specific period. The appendices to this report provide additional detail on the modeling techniques utilized throughout this analysis.



1.5 ABOUT THE COUNCIL FOR CHRISTIAN COLLEGES & UNIVERSITIES (CCCU)

The Council for Christian Colleges & Universities (CCCU) is a global higher education association dedicated to a transformative mission: “To advance the cause of Christ-centered higher education and to help our institutions transform the lives of students by faithfully relating scholarship and service to biblical truth.” The Council for Christian Colleges & Universities is a higher education association of more than 180 Christian institutions around the world. With campuses across the globe, including more than 150 in the U.S. and Canada and nearly 30 more from an additional 18 countries, CCCU institutions are accredited, comprehensive colleges and universities whose missions are Christ-centered and rooted in the historic Christian faith. Most also have curricula rooted in the arts and sciences.



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1.6 ABOUT ECONCONSULT SOLUTIONS, INC.

Econsult Solutions, Inc. (“ESI”) is a Philadelphia-based economic consulting firm that provides businesses and public policy makers 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, wide experience at the highest levels of the public policy process and extensive consulting experience.



2.0 ECONOMIC IMPACT FROM ONGOING OPERATION

2.1 SECTION OVERVIEW

CCCU institutions represent **\$8.5 billion** in direct operating expenditures and more than **66,000 full-time equivalent employees (FTEs)**. With spillover effects included, CCCU institutions support **134,000 jobs** and **\$22 billion** in annual economic output, **generating \$1.9 billion** in federal tax revenue each year.

2.2 DIRECT OPERATING EXPENDITURES

The 142 CCCU institutions in the US enroll approximately 411,000 students, an average of 2,900 per school, with an average operating budget of \$60 million.¹ Collectively, they employ more than 66,500 FTE faculty and staff and spend \$8.5 billion in operating expenses, of which nearly half (\$4.1 billion) goes towards salaries and benefits for their employees (see Table 2.1).

TABLE 2.1 – DIRECT ANNUAL OPERATIONS OF CCCU INSTITUTIONS IN THE US

Annual Operations	Total	Average
Total US CCCU Institutions	142	1
Total Student Headcount	411,000	2,900
Total FTE Employees	66,500	470
Expenditures on Salaries and Benefits	\$4.1 billion	\$29 million
Other Operating Costs	\$4.4 billion	\$31 million
Total Annual Operating Budget	\$8.5 billion	\$60 million

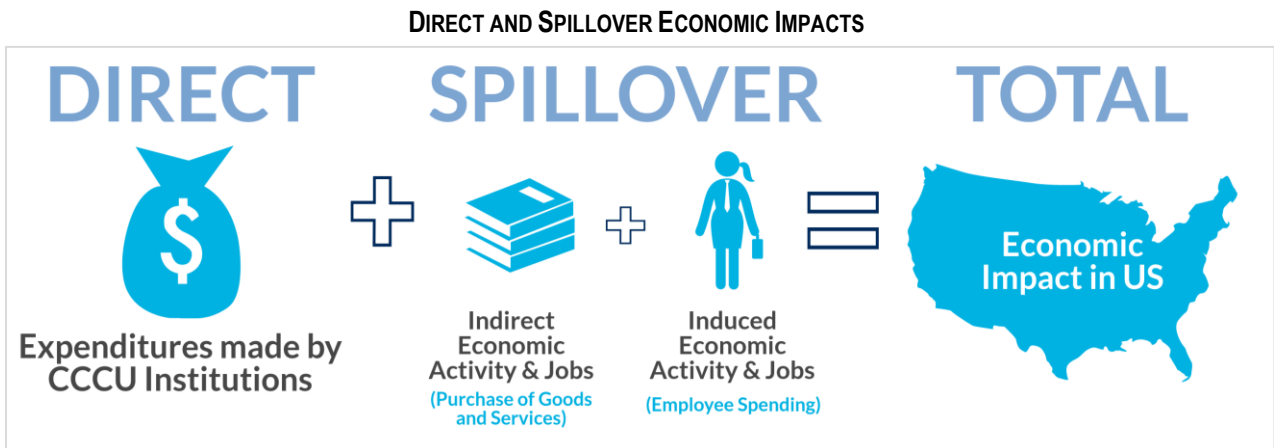
Source: CCCU Institutions (2017), Econsult Solutions (2017)



¹ Most institutions' operating budgets are based on 2017 figures; no institution submitted data for an operating year prior to 2015.

2.3 SPILLOVER EFFECTS FROM ANNUAL OPERATIONS

Direct operations produce “spillover” effects at both the local and national levels, stimulating regional business activity and supporting higher employment across a variety of sectors. The total economic impact is the sum of the **direct expenditures** made by CCCU institutions, the **indirect impacts** that result from institutional spending on goods and services with vendors across the country, and the **induced impacts** that result when employees spend their wages in communities throughout the US.²



While ongoing operations represent the largest category of direct expenditures by CCCU institutions, they are just one of three categories of direct and spillover impacts calculated in this report. Section 3 calculates the total economic impact of capital investments made by CCCU institutions, while Section 4 calculates the total economic impact of additional household spending by CCCU alumni enabled by the wage premium they gain from their education.³ These economic impact categories are mutually exclusive and non-overlapping, such that they can be summed to an aggregate annual economic impact of CCCU institutions (as shown in Section 7).

² This study represents an analysis of gross not net impacts. Therefore, no consideration was given to any counterfactual in which, without the existence of these institutions, other institutions or economic sectors increase their activity to offset some or all of this lost activity.

³ Note that in the case of the wage premium, all impacts are classified as induced (i.e. higher household spending by employees throughout the economy) and the direct spending by CCCU institutions is \$0. These induced impacts are in effect generated by the spending captured within the annual operations as described in this section, which covers the education function of the institutions.

Inclusive of these spillover impacts, the annual operations CCCU institutions are responsible for \$22.0 billion in total economic output each year, supporting 134,000 jobs and \$7.5 billion in earnings (see Table 2.2). Hence, every dollar spent by CCCU on its ongoing operations institutions produces another \$1.60 in economic impact (for a total of \$2.60), and every direct CCCU employee supports an additional job in the national economy.

TABLE 2.2 – ANNUAL ECONOMIC IMPACT OF CCCU INSTITUTION OPERATIONS WITHIN THE US

Annual Operating Impact	Output	Employment	Earnings
Direct Impact	\$8.5 billion	66,450 FTE	\$4.1 billion
Indirect and Induced Impact	\$13.5 billion	67,890 FTE	\$3.4 billion
Total Impact	\$22.0 billion	134,340 FTE	\$7.5 billion

Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)

ANNUAL IMPACT FROM CCCU INSTITUTION OPERATIONS

 **\$22**
billion

in total economic impact

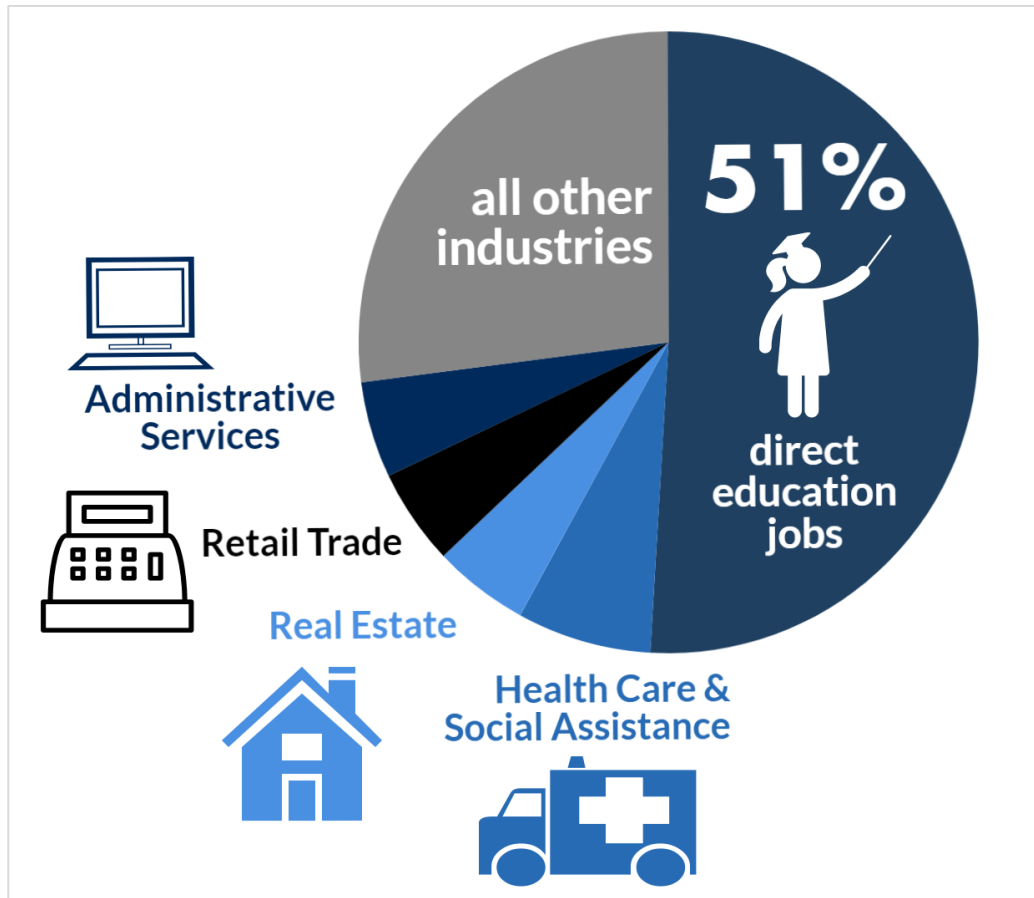
 **134,000**

total jobs supported

2.4 EMPLOYMENT IMPACTS BEYOND THE EDUCATION SECTOR

The economic impact from the operations of CCCU institutions supports employment across a wide variety of industries beyond the education sector. More than 68,000 additional jobs⁴ each year are supported in industries outside of educational services, including in healthcare, real estate, and food services (see Figure 2.1).

FIGURE 2.1 – INDUSTRY DISTRIBUTION OF EMPLOYMENT IMPACT OF CCCU INSTITUTION OPERATIONS



Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)

This employment is attributable to the operational spending of CCCU institutions, and is additive to the employment impact of CCCU students and alumni (which are discussed in Section 4).

⁴ These direct, indirect, and induced job totals do not include students jobs on campus.

2.5 FEDERAL TAX REVENUE GENERATED

The economic impact from the ongoing operations of CCCU institutions grow various tax bases and therefore generate significant tax revenue each year. Hence, though CCCU institutions are themselves tax-exempt, they are still tax-generating for the federal government and for state and local governments. In total, CCCU institution operations generate \$1.9 billion in federal tax revenues (see Table 2.3). Not calculated here, but equally significant, are additional local and state taxes that are also generated by CCCU institution operations.

TABLE 2.3 – ANNUAL FEDERAL TAX REVENUE GENERATED BY CCCU INSTITUTION ONGOING OPERATIONS

Tax	Annual Tax Revenue
Social Security Tax	\$893 million
Personal Income Tax	\$678 million
Tax on Production and Imports	\$94 million
Corporate Profits Tax	\$214 million
Total Federal Tax	\$1.9 billion

Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)



IMPACT FROM OPERATIONS



Indiana Wesleyan University is an evangelical Christian comprehensive university founded in 1920 at its main campus in Marion, Indiana. The university has an annual operating budget of \$204 million and employs more than 3,300 full and part-time faculty and staff across its campuses. The wages earned by these employees and the goods and services procured by the university produce spillover economic impacts in the Marion region and throughout the state and national economies. They also generate a considerable amount of local, state, and federal government revenues.

LOCAL IMPACT



Sterling College is a private four-year college founded in 1887. The college is located in Sterling, Kansas, a small town with a population of around 2,300 people. With an annual operating budget of \$20 million and nearly 200 staff and faculty, Sterling is a key driver of the town's economy, directly supporting nearly 20% of the town's direct employment base. The college represents employment opportunities in a range of fields (academic, administrative, facilities, etc.) for local residents, and draws student and visitor spending into the community.

MERRILLVILLE EDUCATION CENTER AT INDIANA WESLEYAN UNIVERSITY



Source: Indiana Wesleyan University

3.0 ECONOMIC IMPACT FROM CAPITAL INVESTMENTS

3.1 SECTION OVERVIEW

CCCU institutions annually invest about **\$1.4 billion in new buildings, major renovations, and large-scale maintenance projects**. This represents economic opportunity in communities throughout the US, particularly for construction workers and employees in other supportive sectors, and yields an aggregate **\$3.9 billion** in economic output, supporting **19,000 jobs** and generating **\$280 million** in federal tax revenues.

3.2 DIRECT CAPITAL INVESTMENTS

Aggregate annual capital investments by CCCU institutions total an estimated \$1.4 billion, or approximately \$10 million per institution per year.⁵ This represents a wide range of project types, from new construction to major renovation to large-scale maintenance.



⁵ Note that information on capital investments was collected over a multi-year period and annualized in order to accurately capture a typical activity level. This approach smooths out year to year changes due to the particular needs and financial considerations of institutions, and addresses the fact that large project may be financed and completed over multiple years.

3.3 SPILLOVER EFFECTS FROM CAPITAL INVESTMENTS

Capital investments put construction workers to work, and have significant spillover effects as throughout the supply chain and as workers spend their earnings.⁶ The capital investments made by CCCU institutions generate an estimated \$3.9 billion in total economic output each year, supporting 19,100 jobs, and \$1.0 billion in earnings (see Table 3.1). Said another way, each time a CCCU institution spends \$1 million on a capital project, it produces another \$1.8 million in national economic impact and supports 14 jobs across the national economy.

TABLE 3.1 – ANNUAL ECONOMIC IMPACT OF CCCU INSTITUTION CAPITAL INVESTMENTS WITHIN THE US

Annual Capital Investment	Output (\$B)	Employment (FTE)	Earnings (\$B)
Direct Impact	\$1.4 billion	6,930	\$0.3 billion
Indirect and Induced Impact	\$2.5 billion	12,140	\$0.7 billion
Total Impact	\$3.9 billion	19,070	\$1.0 billion

Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)

ANNUAL IMPACT FROM CCCU INSTITUTION CAPITAL INVESTMENTS

 **\$3.9 billion**
in total economic impact

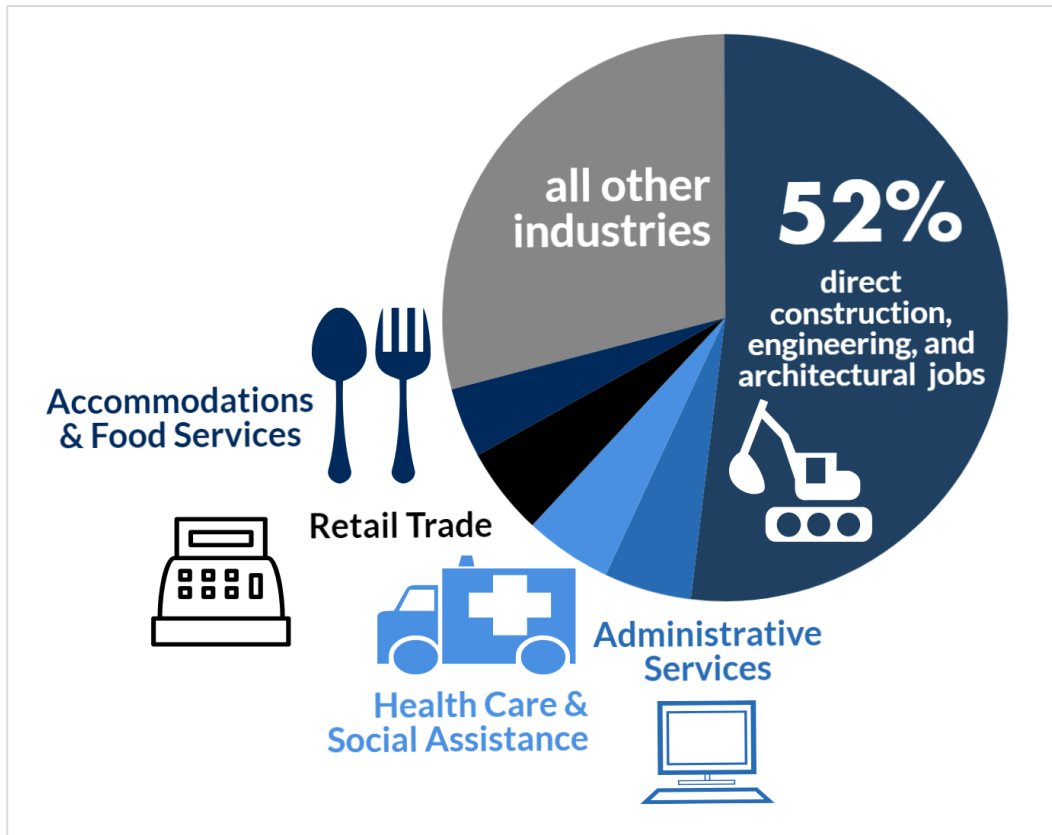
 **19,000**
total jobs supported

⁶ This economic impact study is an analysis of gross and not net impacts. Therefore, no consideration was given to any counterfactual in which, without the existence of these institutions, their capital investment dollars would be otherwise deployed to other productive uses somewhere in the national economy.

3.4 EMPLOYMENT IMPACTS BEYOND THE CONSTRUCTION SECTOR

While capital investments put construction workers to work, they also support employment in a wide range of sectors. In fact, nearly half of the employment impact from CCCU institution capital investments is in industries outside of construction, engineering and architecture (see Figure 3.1).

FIGURE 3.1 – INDUSTRY DISTRIBUTION OF EMPLOYMENT IMPACT OF CCCU INSTITUTION CAPITAL INVESTMENTS



Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)

3.5 FEDERAL TAX REVENUES GENERATED

Capital investments, and the spillover impacts from them, also grow various federal tax bases. CCCU institution capital investments produce an estimated \$284 million in federal tax revenues each year, as well as additional tax revenues to various state and local governments (see Table 3.2).

TABLE 3.2 – ANNUAL FEDERAL TAX REVENUE IMPACT GENERATED BY CCCU INSTITUTION CAPITAL INVESTMENTS

Tax	Annual Tax Revenue
Social Security Tax	\$126 million
Personal Income Tax	\$105 million
Tax on Production and Imports	\$12 million
Corporate Profits Tax	\$40 million
Total Federal Tax	\$284 million

Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)



CAPITAL INVESTMENTS

CAMPBELL UNIVERSITY

Campbell University in Buies Creek, North Carolina made \$67 million in capital investments from FY 2014 - FY 2016. Notable projects included the 70,000-square foot Smith Hall of Nursing and Health Sciences to house Campbell's nursing, physical therapy, and medical research programs. The facility features state-of-the-art labs and is designed as a space for collaborative learning. These investments represented significant economic opportunities for the local construction sector during that time period, and also increased Campbell's physical and economic footprint moving forward.

IMPACT FROM CAPITAL INVESTMENTS



DBU

DALLAS BAPTIST UNIVERSITY

Dallas Baptist University is a Christian liberal arts university located in Dallas, Texas. Through its "Transform" campaign Dallas Baptist is investing \$8.5 million in the development of Ford Village, which will house 500 additional students within a 20-acre complex. At the center will be DBU's first "Residential College," a living-learning community that will engage students with a holistic educational experience that will focus on the concept of Christian servant leadership and how it influences a variety of vocations.

TRACEY F. SMITH HALL OF NURSING & HEALTH SCIENCES AT CAMPBELL UNIVERSITY



Source: *Business North Carolina*



4.0 ECONOMIC IMPACT FROM WAGE PREMIUM

4.1 SECTION OVERVIEW

CCCU alumni are able to earn more than they would have otherwise earned but for their educational credentials. Our analysis indicates that CCCU institutions have graduated nearly **2 million alumni into the workforce**, and that these alumni are collectively earning **\$22.5 billion** more in income each year as a result of their education. This translates into an **additional \$34.6 billion** in economic impact within the national economy annually, supporting **186,000 jobs** and generating **\$7.5 billion** in federal tax revenue.

4.2 ADDITIONAL ALUMNI EARNINGS FROM WAGE PREMIUM

Higher education makes a substantial economic difference for students, who experience a “wage premium” for additional educational attainment that represents a return on their investment. The collective return to the economy is even greater, increasing productivity and infusing additional spending as employees translate their higher wages into household spending.

This analysis draws on national research and data to estimate the additional earnings potential that CCCU alumni in the workforce have gained through the educational attainment. The economic impact of these earnings are translated into household spending, and the effects of that spending are expressed in terms of economic impact, jobs, and tax revenues. Appendix C contains a detailed description of the methodology and data utilized to undertake this calculation.⁷

⁷ Consistent with the approach throughout this analysis, this methodology treats the national population and level of employment as fixed independent of the presence of CCCU institutions. Absent CCCU institutions, the same employment positions are assumed to be filled by employees with lesser educational credentials, and accordingly lower earnings. The difference between these two scenarios is the estimated wage premium attributable to CCCU institutions.

Based on institution and workforce data, it is estimated that there are nearly 2 million alumni of CCCU institutions currently in the US workforce, a figure that grows larger by the year. Wage gains associated with the completion of various degrees at CCCU institutions indicate that these alumni enjoy a collective \$22.5 billion annual wage premium from the education and credentialing from a CCCU institution (see Table 4.1). Said another way, CCCU institutions have produced almost 2 million alumni currently employed in the US economy, and whose earnings is an aggregate of \$22.5 billion higher as a result of the education they received at a CCCU institution.

TABLE 4.1 – AGGREGATE INDIVIDUAL WAGE PREMIUM FOR CCCU ALUMNI EACH YEAR

Alumni Attainment Level	Est. CCCU Alumni in Workforce	Est. Annual Premium per Alum	Aggregate Annual Wage Premium
Associates Degree	122,600	\$2,900	\$0.4 billion
Bachelor's Degree	1,423,900	\$12,480	\$17.8 billion
Advanced Degree	412,200	\$10,580	\$4.4 billion
Total	1,958,700	\$11,480	\$22.5 billion

Source: CCCU Institutions (2017), Bureau of Labor Statistics (2017), Econsult Solutions (2017)



4.3 NATIONAL ECONOMIC IMPACT FROM WAGE PREMIUM

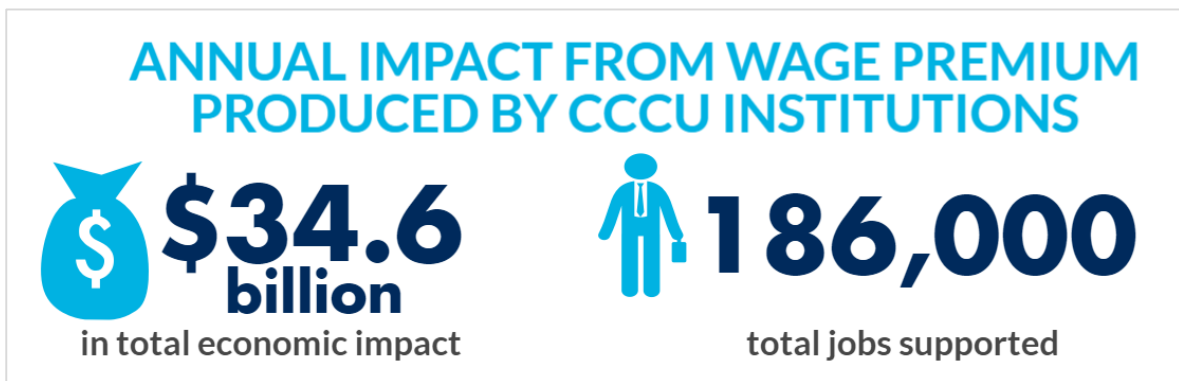
This additional household income within the US enriches the national economy through increased spending.⁸ This in turn supports merchants, jobs, and tax bases in communities across the country.

This household spending generates on an annual basis \$34.6 billion in total economic output; supporting 186,000 jobs and \$9.0 billion in earnings (see Table 4.2). This represents the aggregate economic impact supported by the higher earning capacity (and therefore higher household spending) of CCCU institution alumni.

TABLE 4.2 – ANNUAL ECONOMIC IMPACT FROM CCCU ALUMNI WAGE PREMIUM WITHIN THE US

Wage Premium	National
Wage Premium	\$22.5 billion
Total Output	\$34.6 billion
Total Employment	186,000 FTE
Total Earnings	\$9.3 billion

Source: CCCU Institutions (2017), Bureau of Labor Statistics (2017), IMPLAN (2015), Econsult Solutions (2017)



⁸ The modeling approach accounts for savings rates, tax withholdings, and spending outside of the US, with the remaining income recirculated through the national economy in the form of increased household spending.

4.4 EMPLOYMENT IMPACT ACROSS MANY INDUSTRIES

The wage premium gained by CCCU degree-holders supports spending across a range of sectors in the U.S. economy, which in turn supports employment. Our analysis finds that health care and retail industries benefit the most from an employment standpoint, as these two industries account for nearly 30 percent of jobs supported by the wage premium. The spending engendered by the wage premium of CCCU alumni also supports employment across a wide range of sector such as hospitality, finance, administrative and professional services (see Figure 4.1).

FIGURE 4.1 – INDUSTRY DISTRIBUTION OF EMPLOYMENT IMPACT FROM CCCU INSTITUTION WAGE PREMIUM



Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)

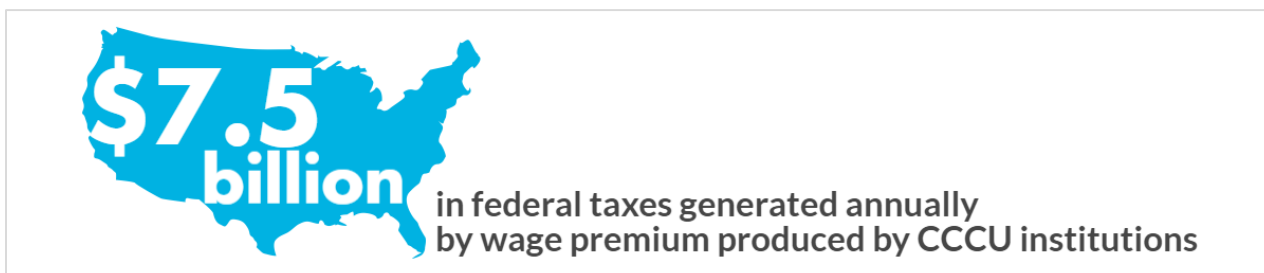
4.5 AGGREGATE FEDERAL TAX REVENUE IMPACT FROM WAGE PREMIUM

The economic activity from the CCCU wage premium produces additional tax revenues in multiple ways. Additional household income is taxed directly, and the activity it produces also generates tax revenue as it works its way through the national economy in the form of more household spending. **Combined, the federal government gains about \$7.5 billion each year in tax revenues from the wage premium associated with CCCU institution graduates** (see Table 4.3).⁹ These impacts also generate additional tax revenues to various state and local governments.

TABLE 4.3 – ANNUAL FEDERAL TAX REVENUE IMPACT FROM CCCU INSTITUTION WAGE PREMIUM

Tax	Annual Tax Revenue
Social Security Tax ¹⁰	\$3.7 billion
Personal Income Tax ¹¹	\$3.1 billion
Tax on Production and Imports	\$0.2 billion
Corporate Profits Tax	\$0.5 billion
Total Federal Tax	\$7.5 billion

Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)



⁹ This figure includes social security and personal income taxes paid directly on the additional income of CCCU alumni in addition to the taxes paid as a result of the indirect and induced spillover effects of this increase in income.

¹⁰ This includes both the employer contribution and employee contribution to the federal social security tax.

¹¹ IMPLAN's fiscal model assumes an effective tax rate of nearly 10 percent on personal income after appropriate deductions. This figure may well be conservative with respect to the wage premium of CCCU alumni, since the wage premium represents an incremental increase for existing earners, rather than the initial base of earning. Due to the structure of federal tax brackets, the tax rate on these marginal earnings may well be higher than the effective rate on all income assumed by IMPLAN.

PREPARING TOMORROW'S WORKFORCE



Messiah College in Mechanicsburg, Pennsylvania, has more than 28,000 active alumni, more than half of whom still live within the state of Pennsylvania. The most popular fields of study for graduates are science, business, and health, supplying the state and local economy with skilled candidates in these in-demand fields. Their education and credentials enable them to contribute to the economy at a higher level, and in turn allows them to earn higher incomes, resulting in increased spending within local economies.

ENTREPRENEURIAL INFLUENCE



Covenant College is a liberal arts college in Lookout Mountain, Georgia. Covenant and its students are major participants in Chattanooga's growing entrepreneurial scene. Covenant's Seed Project initiative encourages students to develop ideas among their peers through a full incubation program starting with an ideation workshop and concluding with a pitch event. More broadly, Covenant has been integral to the region's emerging entrepreneurship culture, and Covenant alumni, staff and students founded or run more than 150 Chattanooga businesses in fields ranging from technology to retail to community service.

MESSIAH COLLEGE STUDENTS IN THE CLASSROOM



Source: Messiah College

5.0 SOCIETAL IMPACT

5.1 SECTION OVERVIEW

While the three previous sections have focused on quantifiable categories of economic impacts, the impact of CCCU institutions on the communities in which they are located and on society as a whole are equally important. At a time when higher education is under heavy scrutiny for its value proposition to society, CCCU institutions are living out their organizational values in ways that are true to their commitment to transform individuals and benefit society. National data indicate that students at CCCU institutions are more likely than their peers to be **first-generation college students**, more frequently pursue **degrees in socially beneficial professions**, and have above-average **loan repayment rates**. These attributes illustrate the strength of the holistic educational approach pursued by CCCU institutions in preparing a diverse array of students not just for a career but for rich and full lives.

5.2 SOCIALLY BENEFICIAL PROFESSIONS

As established in the previous section, CCCU alumni derive a considerable wage premium from the education and credentialing that they receive. However, the fact that students earn a degree from a CCCU institution and therefore can make more money in the workplace is only part of the impact story. National data drawn from the US Department of Education's "College Scorecard" reporting system also indicates that students at CCCU institutions pursue a different mix of degrees than students at peer institutions.¹² CCCU alumni bring a faith-instilled perspective and values into a wide range of disciplines, including business & finance, which represents the top career cluster for CCCU students.

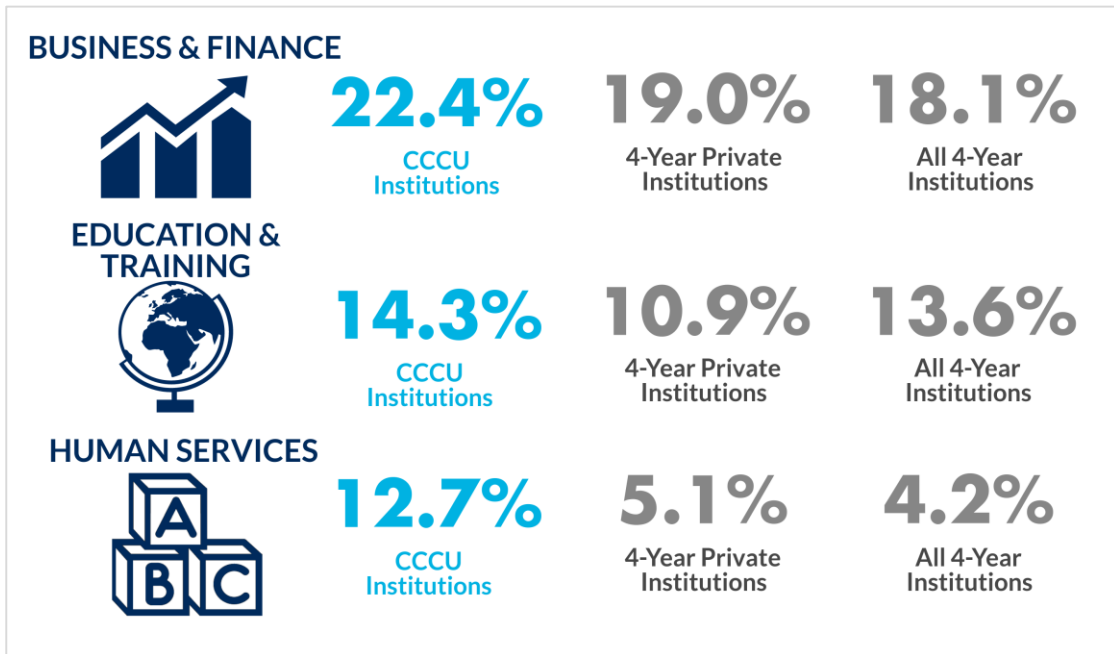
In addition, CCCU students are overrepresented in professions such as education and human services which may not maximize earnings but which are of great social benefit to local communities and the nation as a whole. This distribution reflects of the value CCCU institutions place on sending forth graduates who can make an impact on people and communities (see Table 5.1).

¹² The primary comparison set utilized for the analysis in this chapter is as all non-CCCU 4-year private institutions and all 4-year institutions within the Department of Education's College Scorecard database during the 2014-2015 academic year. This Department of Education analysis, available online at <<https://collegescorecard.ed.gov/>> draws on institution-reported data through the Integrated Postsecondary Education Data System (IPEDS) system. IPEDS results throughout this analysis for both CCCU and comparison sets reflect the weighted average of institutions within each set.

TABLE 5.1 – STUDENT DEGREES BY CAREER CLUSTER

Career Cluster of Degrees	CCCU Institutions	4-Year Private Institutions	All 4-Year Institutions
Business, Sales, Management and Administration, Finance	22.4%	19.0%	18.1%
Health Science	17.8%	19.0%	17.9%
Education and Training	14.3%	10.9%	13.6%
Human Services	12.7%	5.1%	4.2%
Arts, Audio/Video Technology and Communications	9.0%	10.8%	9.1%
Transportation, Distribution, and Logistics	6.6%	12.3%	11.9%
Science, Technology, Engineering and Mathematics	6.1%	10.5%	8.9%
Agriculture, Food and Natural Resource	3.9%	2.8%	10.4%
Other	6.4%	7.1%	4.0%

Source: Econsult Solutions analysis of IPEDS Data (2015) ¹³




¹³ Career clusters are an aggregation of the Classification of Instructional Programs (CIP) codes available for each school within the IPEDS data. IPEDS data details the percentage of degrees (bachelor’s, associate’s, and certificates) awarded in each of the 54 CIP codes. A Perkins IV Crosswalk assigned each of the CIP codes to the Career Clusters.

Instructional pathways within the Business, Sales, Management and Administration, Finance cluster are: Management, Business Financial Management and Accounting, Human Resources, Business Analysis, Marketing, Administrative and Information Support. These pathways are themselves comprised of a number of sub-programs, as defined within the Classification of Instructional Programs (CIP). Instructional pathways within the Education and Training cluster are: Teaching/Training, Administrative and Administrative Support, Professional Support Services. These pathways are themselves comprised of a number of sub-programs, as defined within the Classification of Instructional Programs (CIP). Instructional pathways within the Human Services cluster are: Early Childhood Development and Services, Counseling and Mental Health Services, Family and Community Services, Personal Care Services, Consumer Services.



TRAINING SERVANT LEADERS


Spring Arbor
UNIVERSITY

Spring Arbor University is a regionally accredited university in Spring Arbor, Michigan. Spring Arbor has more than 45,000 active alumni, and 78% of alums reside within the state of Michigan. The most popular fields of study for graduates are education and health. These educators are nation builders, as the strength of every profession grows out of the knowledge and skills that teachers help instill in children. Similarly, health professionals play a central and critical role in providing essential services to individuals, families, and communities.

5.3 DIVERSITY AND INCLUSION

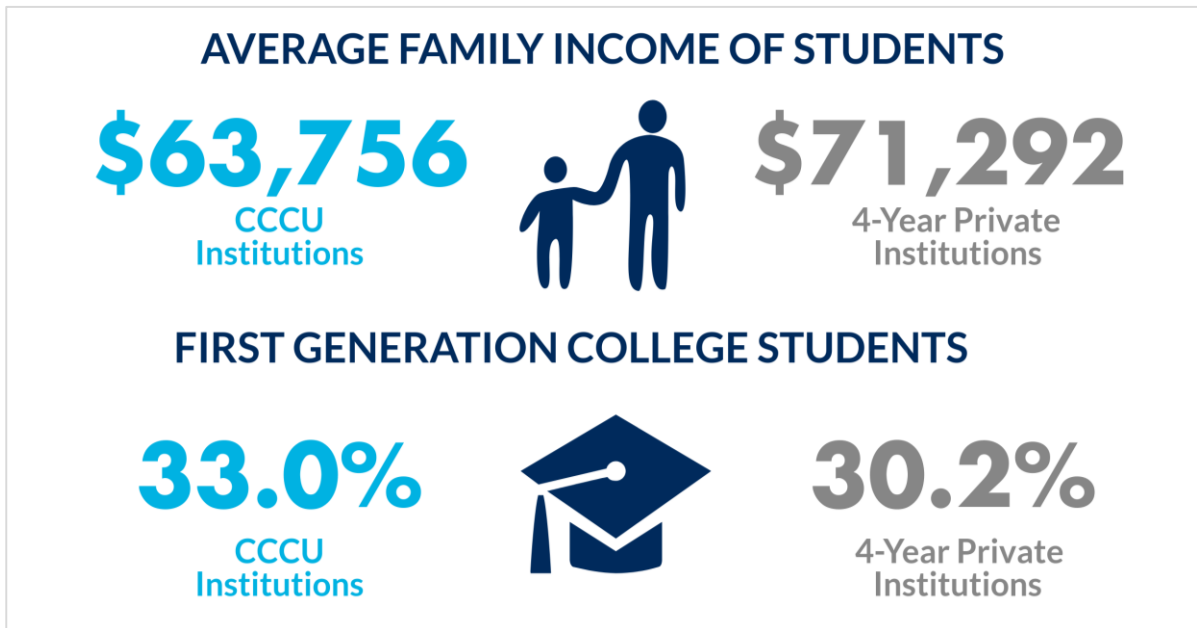
In today's increasingly pluralistic society, a **commitment to diversity and inclusion** is not simply a matter of "doing the right thing," but go to the core of whether educational institutions are successfully fulfilling their organizational missions and preparing their students for life beyond campus. CCCU institutions take these considerations seriously, and reflect them in the students that they attract and the communities that they cultivate.

The average annual cost at CCCU institutions is significantly lower than at other four-private institutions in the US (see Table 5.2). The average family income of CCCU institution students is lower than that of students from other four-private institutions in the US, and a smaller percentage of them hail from higher-income households (i.e. more than \$110,000 in annual income). A slightly higher proportion of CCCU institution students are female, and **students who are the first in their family to attend college** represent a higher percentage of CCCU institution student bodies than other four-year private institutions in the US.

TABLE 5.2 – ECONOMIC DIVERSITY METRICS

	CCCU Institutions	4-Year Private Institutions
Average Annual Cost ¹⁴	\$35,958	\$42,205
Average Family Income	\$63,756	\$71,292
Students from families > \$110,000 in family income (%)	16.0%	21.0%
Students who receive federal loans (%)	60.3%	54.5%
Students who receive Pell Grants (%)	39.3%	38.8%
First-Generation College Students (%)	33.0%	30.2%
Female Students (%)	60.1%	58.5%

Source: Econsult Solutions analysis of IPEDS Data (2015)



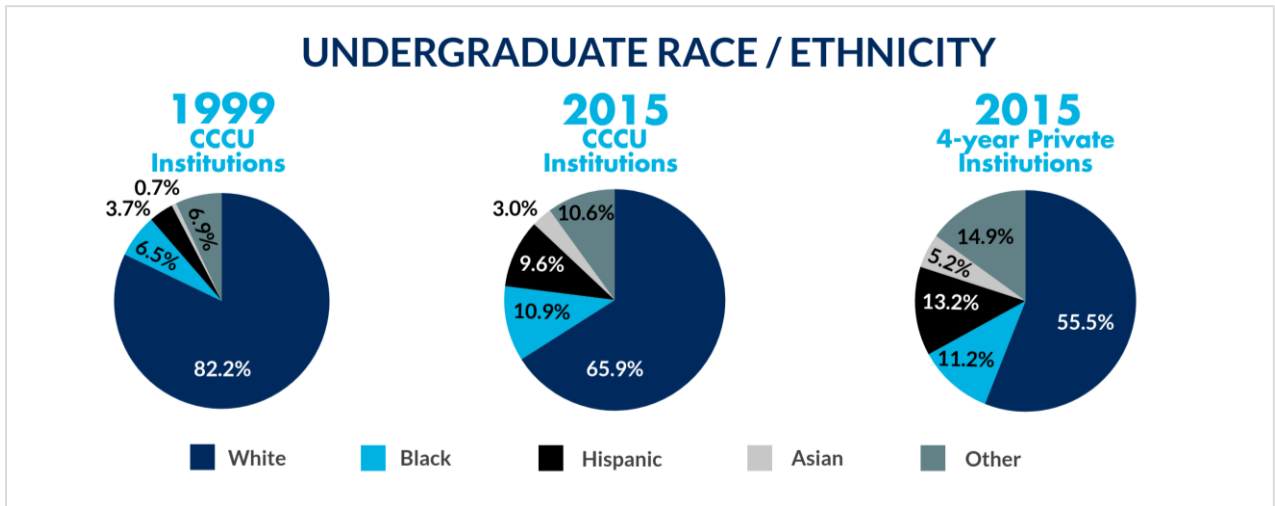
¹⁴ Average Annual Cost, as reported in IPEDS, includes tuition and fees, books and supplies, and living expenses for all full-time, first-time degree or certificate seeking undergraduates.

Since the turn of the century, the **racial and ethnic composition on CCCU campuses has become markedly more diverse**. More than one-third of the undergraduate student body at CCCU institutions was non-white in 2015, a proportion that has nearly doubled since 1999, and is approaching parity with the peer group of private four year institutions (see Table 5.3). These changes are borne of members’ understanding of the relevance of diversity and inclusion in their commitment to serve local communities and in their responsibility to properly prepare students to contribute to society.

TABLE 5.3 – ETHNIC DIVERSITY METRICS, 1999-2015

	CCCU Institutions: 1999	CCCU Institutions: 2015	4-Year Private Institutions: 2015
Undergraduate Student Race/Ethnicity			
White (%)	82.2%	65.9%	55.5%
Black (%)	6.5%	10.9%	11.2%
Hispanic (%)	3.7%	9.6%	13.2%
Asian (%)	0.7%	3.0%	5.2%

Source: Econsult Solutions analysis of IPEDS Data (1999, 2015)



Source: Econsult Solutions analysis of IPEDS Data (2015)

DIVERSITY LEADERS

Northwest University is a private liberal arts college in Kirkland, Washington, that is committed to support a diverse and inclusive community. University president Joseph Castleberry has been a leading voice seeking to bridge divides on the politically charged issue of immigration. In February 2017, the university hosted a symposium on the policy and political implications of the issue, including a keynote address by Dr. Castleberry. The ability of CCCU leaders to join the public dialogue on issues at the intersection of Christian-faith and public policy is crucial not only to issues of ethnic diversity but to protecting a diversity of thought and viewpoints in the public sphere.

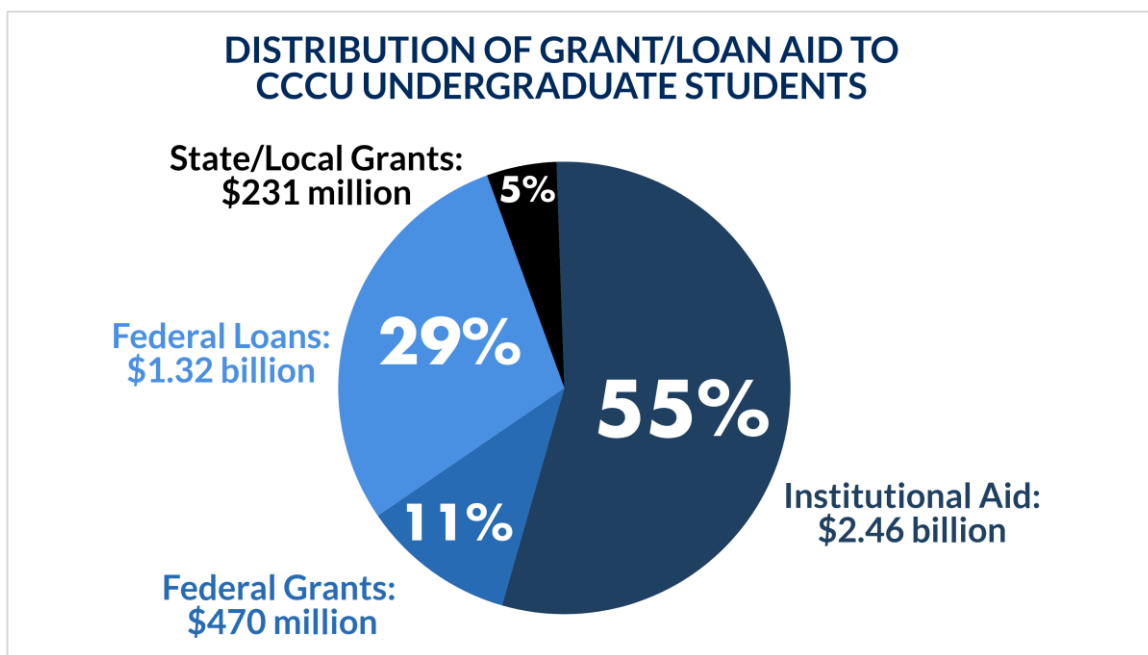
NIGHTTIME VIEW OF THE NORTHWEST UNIVERSITY CAMPUS

Source: Northwest University

5.4 RETURN ON INVESTMENT

The value proposition offered by higher education reflects not just the cost of education but also the return on that investment for students, governments, and society more broadly. Government investments in grant aid for CCCU students are heavily leveraged by institutional aid provided by the schools, improving the value proposition to both students and government.

National data from the IPEDS reporting system indicates that CCCU undergraduate students receive \$470 million in federal grant aid annually, as well as \$231 million in state and local grants. Meanwhile, these students receive nearly \$2.5 billion per year in institutional aid.¹⁵ This means that **CCCU institutions provide \$5 in institutional aid for every \$1 in federal grants** received by CCCU students.¹⁶



Source: Econsult Solutions analysis of IPEDS Data (2015)

¹⁵ This \$2.5 billion in institutional aid is a subset of a total of \$3.9 billion in total aid awarded by CCCU institutions to students of all types.

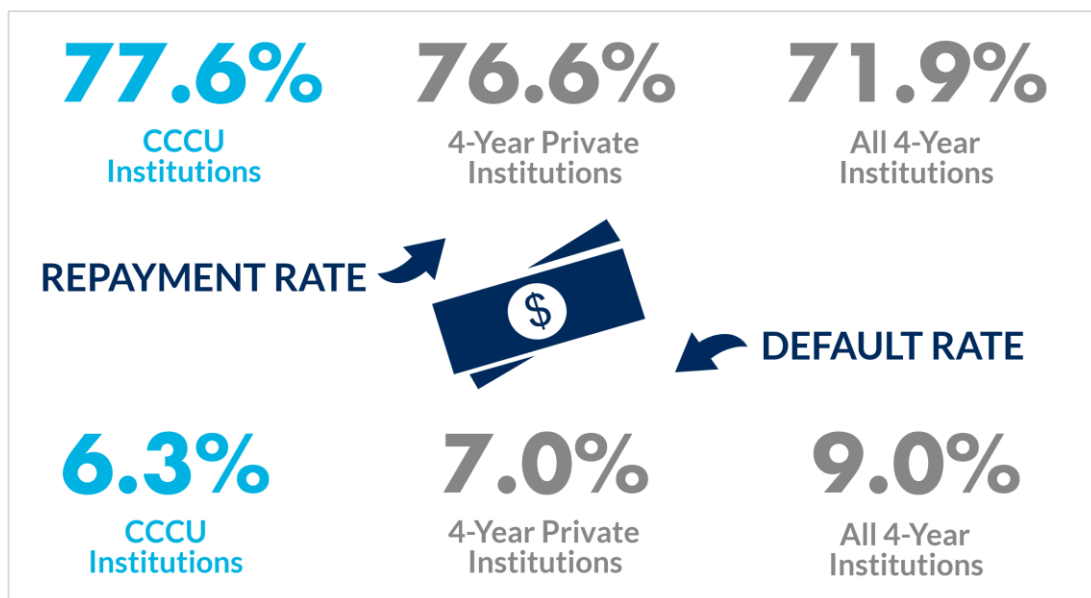
¹⁶ Note that this comparison focuses on federal grants rather than loans, because the federal investment in student loans is largely returned in the form of repayment by alumni. The net impact of these loans and repayment revenues can be viewed as either a net gain or a net loss to the federal government, depending on the accounting method used. (For more information, see the Congressional Budget's Office Baseline Projections for the Student Loan Program: <<https://www.cbo.gov/sites/default/files/recurringdata/51310-2017-06-studentloan.pdf>>)

The degree to which alumni are able to leverage their educational opportunities into stable careers and lifestyles which allow them to repay their student loans serves as an important indicator of the success of institutions in preparing their students for fulfilling lives and as contributors to their communities. Alumni of CCCU institutions outperform their peers on this front. As noted above, while CCCU alumni enjoy a wage premium compared to their pre-educated and pre-credentialed selves, they earn less on average than their counterparts at comparable four-year institutions due in large part to the career paths they choose. Despite this, **CCCU alums have higher student loan repayment rates and lower loan default rates compared to their (higher earning) peers at other four-year institutions** (see Table 5.4).

TABLE 5.4 – DEGREE COMPLETION, EARNINGS AND LOAN REPAYMENT METRICS

	CCCU Institutions	4-Year Private Institutions	All 4-Year Institutions
Average Completion Rate (6-year)	57.6%	60.7%	53.4%
Retention Rate (Full Time)	75.3%	79.2%	76.9%
Median Earnings 10 years after entering	\$39,656	\$46,688	\$43,338
Median Debt Accumulation	\$17,174	\$17,402	\$14,913
Repayment Rate (after 7 years)	77.6%	76.6%	71.9%
Default Rate	6.3%	7.0%	9.0%¹⁷

Source: Econsult Solutions analysis of IPEDS Data (2015), US Dpt of Education National Student Loan Default Rate Data (FY 2014 cohort)



¹⁷ Note that the industry average default rate for all students in the FY 2014 cohort (including non-4 year institutions) is 11.5%.

KEEPING EDUCATION AFFORDABLE

Trinity International University is a liberal arts university headquartered in Deerfield, Illinois. Efforts to maintain an affordable tuition structure and provide grants are essential to enabling students to access the opportunities afforded by the educational experience and are an important part of a vibrant, inclusive economy. Trinity International is committed to making higher education accessible for all and financially helping students manage their education expenses. The university provides more than 20 different scholarships and grants, with some covering the full cost of tuition.

KEEPING EDUCATION AFFORDABLE

Bluefield College is a liberal arts college in Bluefield, Virginia. To meet the national call to deliver a quality higher education that is more affordable to those at our country's lowest socio-economic level and in keeping with the school's mission to be a point of access to students of Central Appalachia, Bluefield introduced a Pathways half-price tuition plan for qualifying students from 19 counties in Virginia and West Virginia. Designed for those who can least afford the expense of a college education, the plan provides a "pathway" to higher education with little to no direct out-of-pocket impact.

AERIAL VIEW OF THE TRINITY INTERNATIONAL CAMPUS

Source: Trinity International University

5.5 THE VALUE OF RELIGIOUS EDUCATION IN A SECULAR SOCIETY

Beyond the societal gains delineated in this section, and the personal and professional contributions of individual alumni, CCCU institutions contribute positively to society by educating a generation of students who are committed to helping others in their communities thrive in all areas of life.

These students are not just learning how to succeed in their field; they are also learning to pursue their vocation in a way that follows in the footsteps of Jesus Christ, who sought justice for the marginalized and brought a message of hope, love, and redemption to the world. In other words, CCCU institutions provide an education that integrates, as David Brooks says, “faith, emotion, and intellect” in a way that produces graduates “who have a devoted heart, a courageous mind, and a purposeful soul.”

CCCU graduates pursue a type of success that is characterized by what is known in the business world as the “triple bottom line” – success that promotes not just financial gain, but added value in social and environmental areas of life as well. Because of this, CCCU graduates are the kinds of graduates that society needs in order to remain diverse, vibrant, and morally sound.



“You [Christian colleges and universities] are the avant-garde of 21st century culture. You have what everybody else is desperate to have: a way of talking about and educating the human person in a way that integrates faith, emotion and intellect. You have a recipe to nurture human beings who have a devoted heart, a courageous mind and a purposeful soul. Almost no other set of institutions in American society has that, and everyone wants it. From my point of view, you’re ahead of everybody else and have the potential to influence American culture in a way that could be magnificent.”

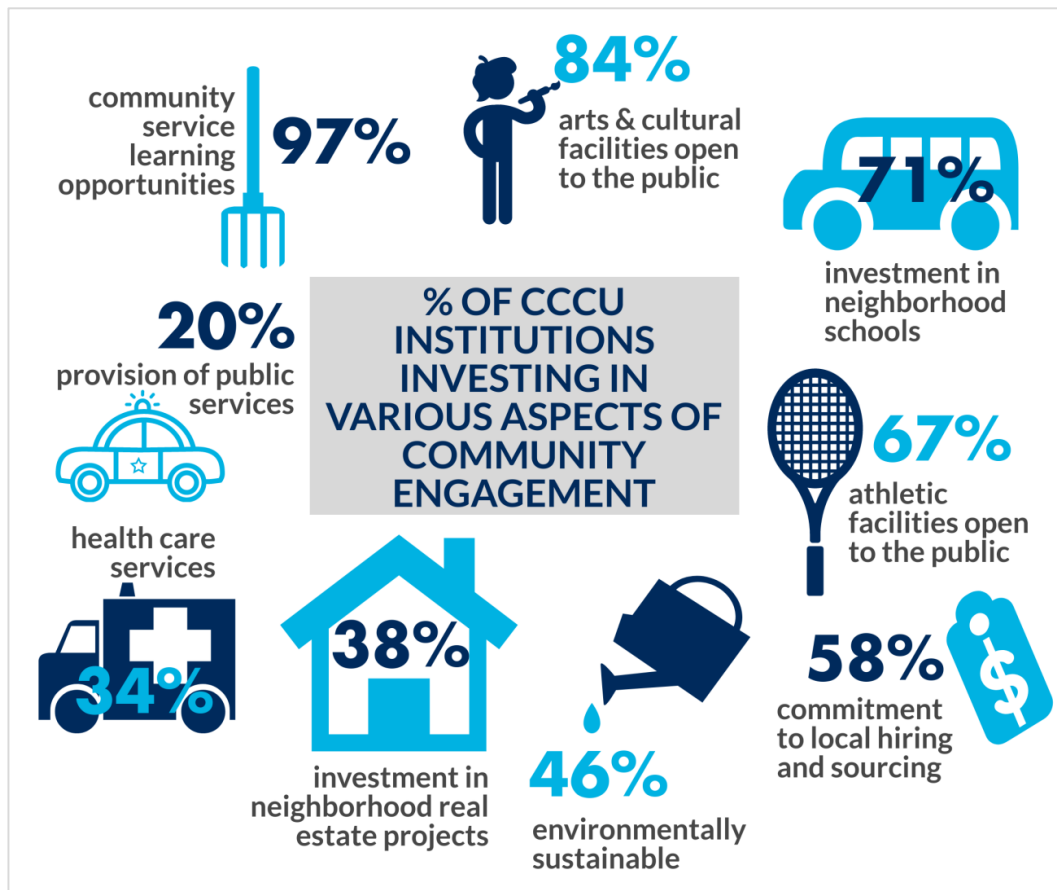
- David Brooks
Keynote Remarks at CCCU 40th
Anniversary Gala, 2016

6.0 COMMUNITY IMPACT

6.1 SECTION OVERVIEW

CCCU institutions drive broad economic and societal impacts through their graduates who literally span the globe, tangible benefits from the presence of CCCU institutions concentrate in their home communities and neighborhoods. CCCU institutions' core commitments to service to society orient them towards efforts that provide significant benefit to the cities, towns, and rural areas around them. This section articulates a number of distinct categories of community benefit that CCCU institutions produce in the course of doing their core work of educating students.

CCCU institutions report **broad and wide-ranging participation in programs that benefit their local communities**. These include traditional service efforts in local communities, institution services and programs open to the public, and other services that are coordinated with local partner entities. In addition, the existence of these institutions as anchors of employment and attractors of students and visitors has significant local economic implications, which are augmented by dedicated local hiring and sourcing efforts at many institutions.



6.2 COMMUNITY SERVICE AND SERVICE LEARNING

Nearly all CCCU institutions meld education and service, through various **community service and service learning initiatives**. The near universal participation in community service and service learning reflects the commitment of CCCU institutions to offering tangible opportunities for students to learn through service and community engagement. It also reflects the leadership of CCCU institutions in this area, which represents a natural extension of their faith-infused institutional values and missions.

This commitment translates to millions of hours of volunteer labor deployed on a wide range of community needs, including community service in public schools, service projects for nearby residents and businesses, and support through outreach ministries for youth, elderly, and homeless populations. Data reported by CCCU institutions indicates that each CCCU student devotes an average of 13 hours per year to community service or service learning. In the aggregate, this commitment totals **5.4 million hours of community service annually** across all CCCU institutions. This is equivalent to a full-time team of 2,700 people working year-round to improve communities across the country.



A SPIRIT OF VOLUNTEERISM



WARNER PACIFIC COLLEGE

Warner Pacific is an urban liberal arts college located in southeast Portland, Oregon. Since 2008, the college has been recognized nationally for its commitment to volunteerism, service-learning, and civic engagement. The annual Common Day of Service is an important day for the institution, as day classes are canceled to focus on serving the community. In the 2015-16 academic year, Warner Pacific students provided over 49,000 hours of community service to Portland, valued at nearly \$1 million. In participating in this tradition, students learn that community service and engagement are inextricably tied to their vocational calling, no matter their career path.

SERVICE AND LEARNING



GORDON COLLEGE

Gordon College is a non-denominational liberal arts college in Wenham, Massachusetts, rooted in Christian faith. Gordon has integrated service learning deeply into its academic curriculum and course outcomes. For example, Gordon's math department presents students with a wide variety of options to use their math skills in service to the community, including in-class projects like conducting analysis for the City of Lynn Police Department, in addition to volunteer opportunities like tutoring. This cutting-edge approach combines hands-on learning and holistic student development with direct benefits for nearby communities.

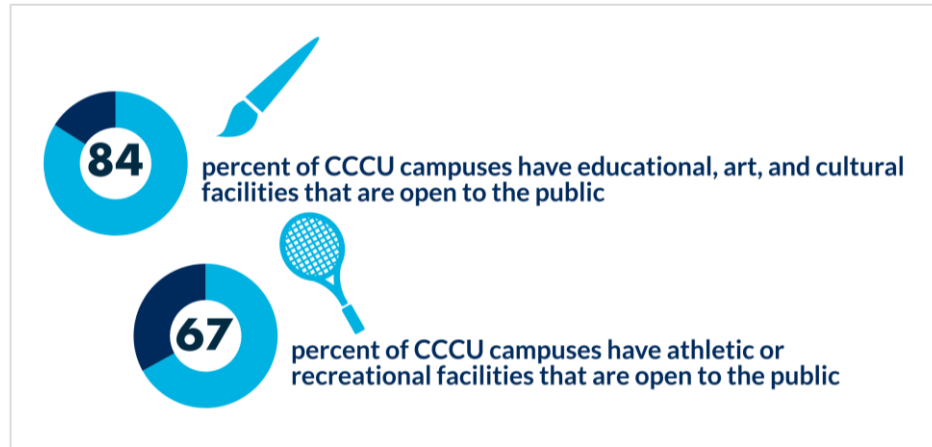
WARNER PACIFIC COMMON DAY OF SERVICE



Source: Warner Pacific College

6.3 CAMPUSES AS COMMUNITY AMENITIES

CCCU institutions invest tangible resources to make sure that their campuses are not only welcoming to students and employees but also accessible to neighboring communities. Eight-four percent of CCCU institutions make on-campus educational, art, or cultural facilities available to the general public, while two-thirds open their athletic and recreational facilities to outside use. This has turned CCCU campuses into **resources that are used by and directly benefit surrounding communities.**



A CULTURAL HUB



Asbury University is a liberal arts institution in Wilmore, Kentucky, that offers a variety of intellectual and cultural activities on its campus that are open to the public. The university's musical ensembles, theater, and film programs provide a full calendar of concerts and performances. Asbury also hosts an annual Engaging Culture Week, which features music, art, workshops, guest speakers, and a film festival. This week-long event showcases the talent and resources to the surrounding community.

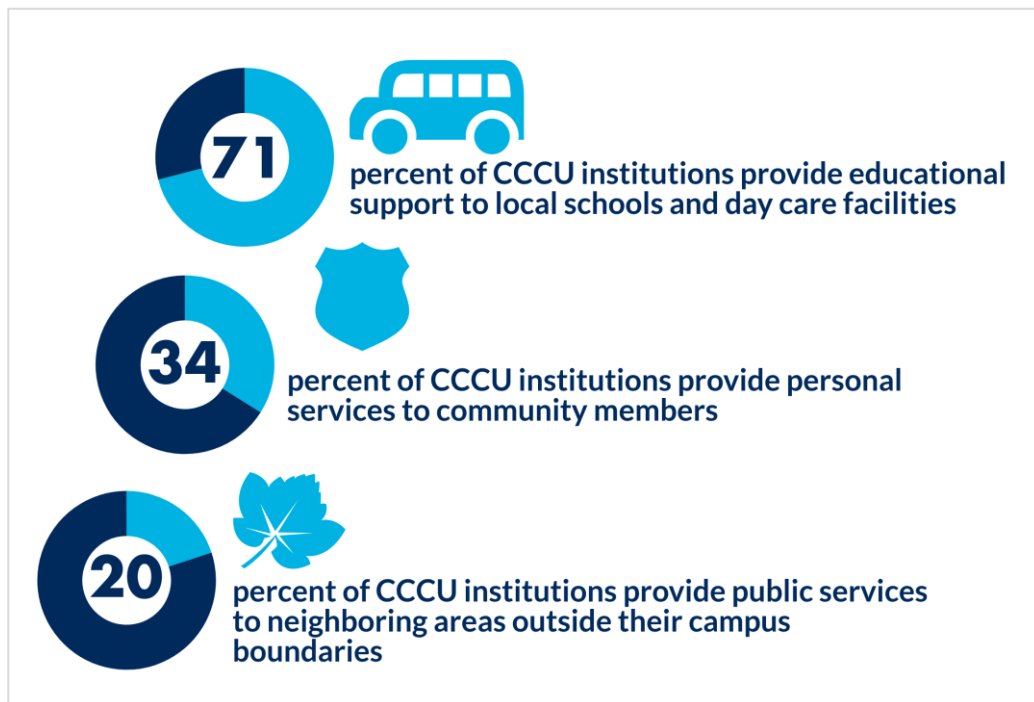
ACCESS TO OPEN SPACE



Houghton College is a liberal arts college located in Houghton, New York, and founded in 1883. Its campus is located in a mature hardwood forest, where Houghton maintains over seven miles of trails for cross-country skiing, hiking, or running as well as a ropes course. The college ensures both the preservation of these woods and public recreational access to the woods and trails. Active recreational amenities like these are highly coveted in communities across the U.S., especially as the gains they produce for physical and emotional health are better understood.

6.4 PROVIDING EDUCATION AND OTHER PUBLIC SERVICES

A majority of CCCU institutions also invest valuable resources outward to **provide services within their host communities**. A large proportion of schools collaborate with local education providers such as public schools, private schools, charter schools, pre-schools, and day care facilities, whether often by providing student teachers, volunteer helpers, or curricular support. About a third provide invaluable personal services to community members, such as medical, dental, legal, counseling, and human services. In addition, while all schools take care of their own public services such as public safety, sanitation, and snow removal, rather than solely relying on municipal governments to do so for them, one out of five extend their public service provision beyond campus boundaries to serve adjacent areas.



ROOM FOR COMMUNITY EVENTS

Lee University is a private university located in Cleveland, Tennessee. Lee University supports the surrounding community by providing conference accommodations on campus. University facilities include state-of-the-art computer labs and lecture halls, traditional classrooms, and residence halls. All are available to the general public for events. In addition, throughout the summer, Lee University hosts over 10,000 camp attendees from all across the country.

INVESTING IN K-12 EDUCATION

Biola University is a private university located in La Mirada, approximately 16 miles from downtown Los Angeles. In line with its mission for positive impact on public, private, and homeschools, Biola partners with over 50 school districts in the greater Los Angeles area and beyond, placing approximately 300 students in local and global schools weekly and providing undergraduate and graduate training for over 600 current and future educators.

BIOLA UNIVERSITY STUDENT IN A LOCAL SCHOOL

Source: Biola University

6.5 COORDINATED EFFORTS WITH LOCAL ENTITIES

Many schools are active stakeholders in **collaborative community-level efforts** on a wide range of topics. Almost half of CCCU institutions partner with their local communities on issues of environmental sustainability, while over a third cooperate with local entities on neighborhood-serving real estate development projects (such as community centers and commercial spaces). These efforts result in shared burdens and shared gains for institutions and communities alike, yielding natural resource conservation, cleaner air and water, cohesion on large-scale development projects, and a more aesthetically and commercially vibrant built form.



PARTNERS IN PRE-K LEARNING



Dordt College is a private liberal arts college founded in 1955 and located in Sioux Center, Iowa. Dordt partnered with local entities like the school district, city of Sioux Center, Sioux Center Health and local non-profits on the construction of the \$5 million Discovery Campus Preschool Learning Center, which opened in 2015. The Center includes Stepping Stones preschool, which was founded and is operated jointly by Dordt's Education Department and local pre-school operators and participates in the Statewide Voluntary Preschool Program. The initiative offers high quality pre-school to the Sioux Center community while serving as a learning center for Dordt's Education School.

6.6 LOCALIZED ECONOMIC IMPACT

While the economic impacts calculated in this analysis are national in scope, they are felt particularly within the communities where CCCU institutions are located. More than half of CCCU institutions have a stated commitment to **local hiring and sourcing**. This locally intensive circulation of economic activity, through local residents earning salaries and wages and through local vendors selling goods and services, increases the impact of CCCU institutions in their anchor communities in terms of local jobs supported and local tax revenues generated.



RESPONSIBLE SOURCING



BETHEL
UNIVERSITY

Located in Saint Paul, Minnesota, **Bethel University** is private institution that was founded in 1871. The university helps strengthen the local economy by contributing to local procurement practices. Bethel's dining services uses local and regional farmers and producers for in-season products, providing customers with sustainable goods. The commitment to local purchasing allows the university to support economic goals, including the enhancement of local economic health and civic vitality.

LOCAL AND SUSTAINABLE SOLUTIONS



Charleston Southern University is a comprehensive university located in North Charleston, South Carolina. The university works continually to develop and implement sustainable solutions. Charleston Southern University has a sustainability platform called Green Thread, which places special emphasis on responsible sourcing, waste minimization, efficient operations, and transportation management. These efforts have a profound economic, environmental, and educational effect on the local community.

6.7 ANCILLARY STUDENT AND VISITOR SPENDING

Another significant way institutions of higher education enrich their local economies is through **the spending by the students and visitors that they draw into their regions**. While student spending on tuition, on-campus living, and cafeteria food is already reflected in an institution's operating budget, student spending on off-campus living, off-campus food and entertainment, transportation, and personal supplies and services represent injections of purchasing power into a regional economy. In many cases, schools help funnel that spending to local merchants by allowing dining service plans to be used at nearby restaurants or by creating special cards that students can use at participating local establishments.¹⁸

Campuses also draw in a wide range of visitors, including family members helping with move-in and move-out, visitors at graduation, prospective students, and spectators at sporting and cultural events. These visitors bring with them spending in a wide range of categories, including accommodations, transportation, retail, and food, which support merchants through the region and thus help make for a more commercially vibrant community for local residents. Importantly, this additional spending often supports a level and mix of merchant activity than would otherwise be available, thus greatly enhancing quality of life in communities throughout the US.

SUPPORTING LOCAL BUSINESSES



Located in Nashville, Tennessee, **Lipscomb University** is private undergraduate and graduate university with a current enrollment of over 5,500 students. The university offers students, faculty, and staff the opportunity to purchase Bison Bucks. These Bison Bucks can be loaded onto an individual's university ID and used with merchants both on and off campus merchants, including locally operated coffee shops, delis and restaurants. By including off-campus retailers in the program, Lipscomb is encouraging students to support local businesses.

¹⁸ Since CCCU students do not represent a spending profile that would be notably different within the national economy (excepting international students) absent the existence of the CCCU institutions they are attending, this particular impact category is conservatively excluded from the national impact calculations. At a local level, however, these students and visitors do represent an influx of spending that makes sense to credit to the institution that draws them; even if at a national level, it does not seem appropriate to include those dollars in an aggregate impact analysis

7.0 CONCLUSION

This report describes and quantifies the national economic, societal, and community impacts of the 142 US institutions of the Council for Christian Colleges & Universities (CCCU). These diverse CCCU institutions share a common commitment to transforming lives by faithfully relating scholarship and service to biblical truth. Fulfilling this mission has a profound effect not only on individual students, but also on the communities in which they are located. This report demonstrates and quantifies the significant impact of these institutions on the national economy through their operations, capital investments, and the earning power conferred on their graduates.

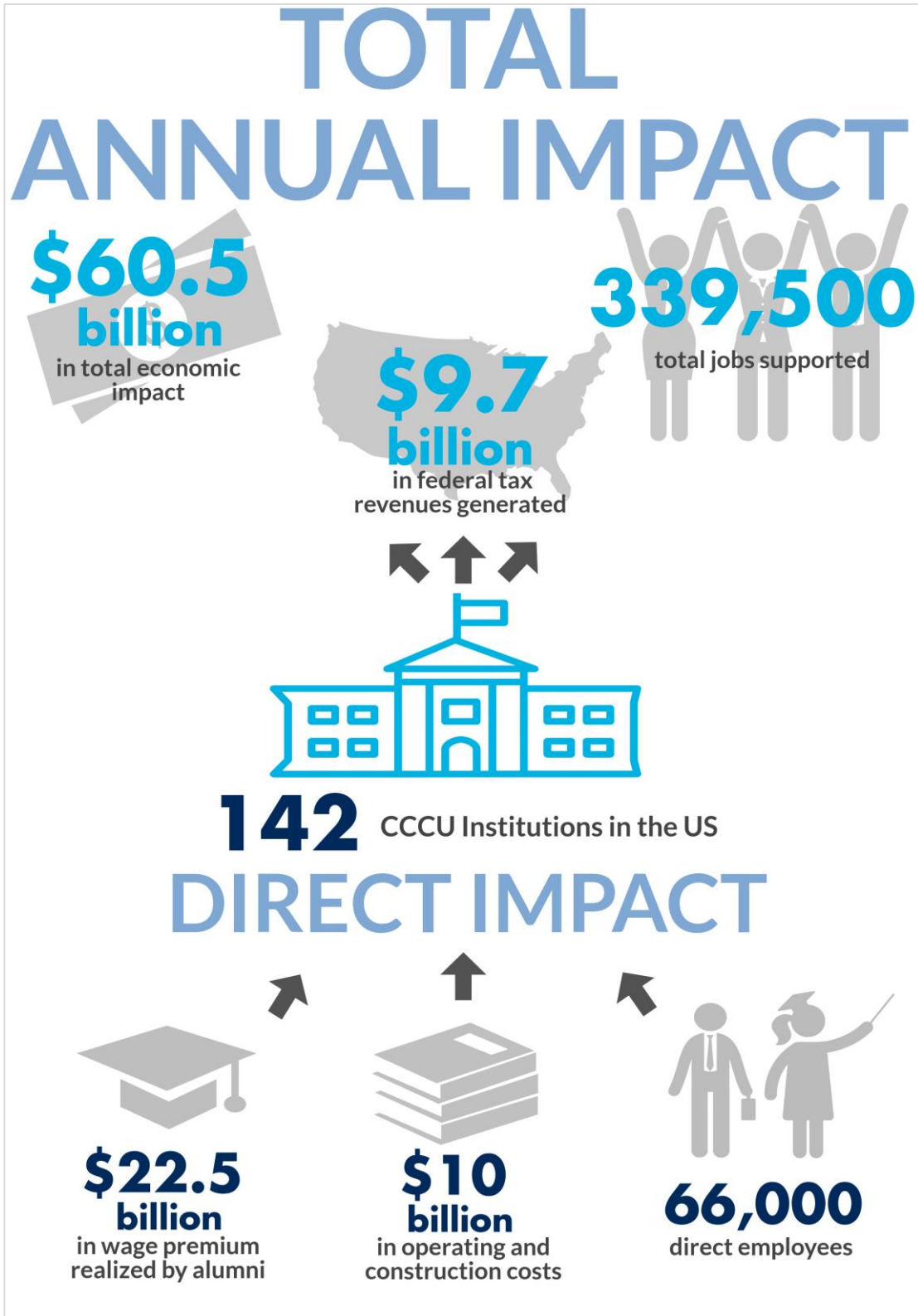
7.1 AGGREGATE ECONOMIC IMPACT

In pursuing their educational and religious purposes, CCCU institutions also produce large and meaningful economic gains. Collectively, CCCU institutions spend billions of dollars each year on operations and capital investments, and enable their alumni to earn billions more. These dollars circulate through the economy, catalyzing additional economic activity and generating considerable tax revenue to local, state, and federal governments. CCCU institutions generate more than **\$60 billion in total economic output** on an annual basis, supporting nearly **340,000 FTE jobs and \$18 billion in earnings** (see Table 7.1). This activity also produces nearly **\$10 billion in federal tax revenue** annually, meaning that CCCU institutions generate more than \$20 in federal tax revenue for every \$1 in federal grant money received by CCCU students.

TABLE 7.1 – AGGREGATE ECONOMIC IMPACT OF CCCU INSTITUTIONS

	Ongoing Operations	Capital Investments	Wage Premium	TOTAL
Economic Impact (\$B)	\$22.0	\$3.9	\$34.6	\$60.5 billion
Employment Impact (FTE)	134,400	19,100	186,000	339,500 FTE
Earnings Impact (\$B)	\$7.5	\$1.0	\$9.3	\$17.8 billion
Tax Revenue (\$B)	\$1.9	\$0.3	\$7.5	\$9.7 billion

Source: CCCU Institutions (2017), IMPLAN (2015), Econsult Solutions (2017)



This six-fold magnifier of total national impact (more than \$60 billion) relative to aggregate direct operating and capital budget amounts (approximately \$10 billion) reflects the value of educational institutions in the modern knowledge economy. While any large-scale economic activity has multiplier effects through the national economy, the “product” of educational institutions, is in a sense, the graduates they produce. The enhanced earnings potential of CCCU alumni is a major driver of economic value, both for the alumni themselves and for the national economy.

7.2 SOCIETAL IMPACT

Beyond straightforward economic gains, the values-driven experience offered by CCCU institutions transforms students and produces personal and societal benefits. CCCU institutions are living out their organizational values in ways that help their graduates not to simply maximize their earnings potential but also contribute to society. As reviewed in Section 5 of this report, this societal return takes many forms:

- CCCU students are more likely than their peers to be **first-generation college students** and to receive federal loans, and are **less likely to come from high earning families**. These inclusive admissions efforts, along with annual costs below that of other private institutions, underscore the vital role of CCCU institutions in providing access to higher educational opportunities to students of all backgrounds.
- CCCU alumni have a **higher loan repayment rate** and a **lower loan default rate** than graduates of peer institutions. These statistics reflect the stability of the career and life paths pursued by graduates and from a financial point of view, the soundness of the collective investment in these students via the student loan system.
- CCCU students are more likely than their peers **to pursue degrees in socially beneficial professions** such as education and human services like counseling and early childhood development. While these career paths may not maximize earnings, they provide both personal fulfillment and vital societal benefits.

At a time when higher education is under heavy scrutiny for its value proposition, CCCU institutions not only deliver value to their students and to society, but also a significant return on investment for government.

- CCCU undergraduate students receive \$470 million in federal grant aid annually, as well as \$231 million in state and local grants. Meanwhile, these students receive nearly \$2.5 billion per year in institutional aid. This means that **CCCU institutions provide \$5 in institutional aid for every \$1 in federal grants** received by CCCU students.

7.3 COMMUNITY IMPACTS

CCCU institutions are social, economic, and value anchors within their local communities, with the bulk of these additional benefits from the economic and mission-driven activities of the institutions occurring locally. While these categories defy simple aggregation, there are many tangible impacts at the community level borne of CCCU institutions' presence in and service to the communities that host them. As described in Section 6, institutions undertake a wide range of efforts to enrich their communities:

- **Community service and service leaning programs** give students and faculty the opportunity to integrate direct opportunities for service into their educational experiences. The near universal commitment by CCCU institutions in this area reflects clearly their mission-driven approach to education that on a more tangible level also contributes millions of hours of community service each year. In aggregate, CCCU students perform an estimated **5.4 million community service hours per year**, an average of 13 hours per student. This is equivalent to a team of 2,700 people working year-round to improve communities across the country.
- Many institutions provide **K-12 education and other public services** in their local communities, through frequent collaborations with local public, private, and charter schools. Others commit resources to valuable personal service programs within their communities such as medical/dental services or legal counseling. Such efforts are frequently coordinated with local entities and governments, which are also frequent partners on issues like environmental sustainability and local development. High participation by CCCU institutions in these efforts speaks to the importance they place on being a beneficial and collaborative partner in their communities.
- CCCU institutions are stewards within their local communities, knowing that their **campuses represent significant community amenities**, as centers of education, art and culture, and recreation areas that are accessible to the public.
- Positive economic impacts are felt most concretely in local communities, intensified by the **local hiring and sourcing programs** undertaken by the majority of institutions so that the economic opportunities represented by on-campus employment and institutional spending are made available to local households and vendors. Further, students and visitors attracted by these institutions bring significant spending power into host communities, supporting and sustaining local retail activity and jobs.

APPENDIX A – REPORT METHODOLOGY

A.1 OVERVIEW

The purpose of this appendix is to highlight the scope and methodology of this report and of the quantitative analysis tools used in it, so that its findings can be properly understood and interpreted. Additional detail on methodology and data sources can be found in the appendices that follow:

- Appendix B provides the text of the survey distributed to CCCU institutions, as well as the full list of institutions included in the study
- Appendix C provides detail on the methodology and calculations used to define the wage premium of CCCU alumni
- Appendix D provides additional detail on the theory and execution of the economic and fiscal modeling employed to calculate economic, employment and tax revenue impacts.

A.2 DATA COLLECTION

The majority of the data used for the economic impact analysis came directly from the CCCU institutions in the form of survey responses. Each of the 142 US CCCU institutions was asked to complete an online survey created by ESI. Through the survey, ESI collected important details related to the operations, faculty, and students at each school. Of the 142 US institutions, 126 completed the survey, a remarkable response rate of 88 percent.

The impressive responsive rate from the CCCU institutions allowed ESI to complete a more accurate analysis on the schools. On average, responding institutions reported nearly \$20,000 in annual operating expenditures per student. While the schools range significantly in size, CCCU institutions reported an average 5.66 students per employee (see Table A.1). These operating metrics and additional summary statistics about the schools were used to determine the aggregate operating and capital budgets for all CCCU institutions.

TABLE A.1 – SUMMARY STATISTICS FROM SURVEY RESPONSES

Summary Statistic	Average of Survey Respondents
Operating Budget per student	\$19,939
Annual Capital Investment as a percentage of Budget	22.5%
Students per employee	5.66
Employee Compensation per employee	\$55,507
Estimate of student body (in state)	66%
Estimate of student body (out of state)	29%
Estimate of student body (international)	4%
Alumni per student	8.79

For the 16 schools who were unable to complete the survey, ESI used the Integrated Postsecondary Education Data System (IPEDS) enrollment data combined with average operating metrics from the actual survey responses to extrapolate where necessary. For example, a school with 2,000 students was estimated to have an annual operating budget of approximately \$40 million. Additional metrics were estimated for these non-responders, relying heavily on the summary statistics shown above. Statistical analysis established relatively linear relationships between key inputs, allowing for this extrapolation approach to be reliably applied.

A.3 SCOPE OF ECONOMIC IMPACT ANALYSIS

This report aggregates quantifiable economic impacts from 142 CCCU institutions in the United States. Economic and fiscal impacts are estimated for these institutions based on three major categories of activity: ongoing operations, capital investments, and wage premium for alumni. These categories are all calculated on an annualized basis, and are undertaken in a non-overlapping fashion to ensure that they can be appropriately summed to an aggregate nationwide impact (as shown in the Executive Summary and Conclusion of this report).

The goal of this analysis is to quantify the current annual level of economic activity associated with CCCU institutions. To do so, the most appropriate and recent data available for each component of the calculation is utilized. Due to the range of participating institutions and categories of analysis, data points do not align precisely with a single fiscal or calendar year across the report. For capital investments, multiple years of data are intentionally utilized to smooth variation observed due to specific projects and obtain an appropriate annualized level of activity. Results should therefore be understood as the best estimate of “current” activity levels, rather than as an accounting exercise for any one specific period. Further, some assumptions and estimates are necessarily utilized within the analysis where precise data is not available,

anchored in research and available information. This report and the accompanying appendices present and explain these assumptions.

The direct economic activity estimated through this process is then translated into total economic activity, employment and tax revenue impacts using the economic and fiscal modeling approach described in Appendix D.

A.4 GROSS VS. NET IMPACT

Broadly, economic impact analyses can estimate the magnitude of either the net or the gross impact of its subject. A net impact analysis, which sometimes takes the form of a cost-benefit analysis, develops a “counterfactual” that overall impact amounts are netted against impact levels that might have occurred anyway in place of the subject’s existence and operations. This form of analyses, while appealing in its economic logic, is often highly speculative. In this case, such an analysis would require modeling an alternative development path for the national economy over decades absent CCCU institutions.

This report takes a gross rather than net approach to measuring the economic impact of CCCU institutions. With this approach, the direct, indirect, and induced activity associated with CCCU institutions is estimated without accounting for potential offsetting increases in activity in other institutions or sectors absent these schools. Therefore, economic impact figures implicitly represent a comparison of current CCCU activity levels to a scenario in which these institutions do not exist, and all other activity within the economy is held constant.

It should also be noted that impacts are only estimated in the categories of ongoing operations, capital investments, and wage premium. These categories are typical of impact studies of educational institutions, and data sources and methods to capture them are well-defined. However, these categories do not represent the only potential economic impacts of CCCU institutions. For example, these institutions also attract and retain student spending, support local real estate activity, and contribute to knowledge activity in ways that defy straightforward quantification. Thus, while aggregate results in this analysis are gross rather than net, they are conservative as to the categories of impact that can be reliably measured.

APPENDIX B – INSTITUTIONAL SURVEY

FIGURE B.1 – CCCU INSTITUTIONAL SURVEY

1. Please enter the name of your institution, and contact information for the staff member completing the survey (or an alternate contact that can address any potential questions regarding the submission):

Institution:

Contact Name:

Contact Title:

Contact Email:

Contact Phone Number:

2. Total annual operating budget for the most recent year available and the year it applies to.

Example

Annual Operating Budget (\$ millions): \$105.4

Year: FY 2016

Annual Operating Budget (\$ millions):

Year:

3. Total employee head count (including all faculty and staff) for the most recent year available.

Example

Total Headcount (#): 1,105

Year: FY 2016

Total Headcount (#):

Year:

4. Total employee compensation (i.e. salary and benefits) for the most recent year available.

Example

Total Employee Compensation (\$ millions): \$45.2

Year: FY 2016

Total Employee Compensation (\$ millions):

Year:

5. Total spending outside of the annual operating budget on capital investments (i.e. new buildings, major renovations, large-scale maintenance projects) over the past 3 years (or other readily available time frame).

Example

Total Multi-Year Capital Spending (\$ millions): \$28.3

Years: FY 2014 - FY 2016

Note: Alternative one year or multiyear time frames are fine if the most recent three years is not readily available.

Total Multi-Year Capital Spending (\$ millions):
Years:

6. Size of total student body (unduplicated headcount for 12 months) for the most recent year available.

Example

Unduplicated Student Count (#): 750

Year: FY 2016

Unduplicated Student Headcount (#)
Year:

7. Estimate of the distribution of total student body by where they are from.

Example

In State (%): 60%

Out of State - Domestic (%): 30%

International (%): 10%

In State (%):
Out of State - Domestic (%):
International (%):

8. Estimate of the distribution of student by residency while at school.

Example

On Campus (%): 35%

Off Campus (%): 45%

Commuter (%): 20%

On Campus (%):
Off Campus (%):
Commuter (%):

9. Estimate of the distribution of alumni by highest degree level completed at the institution:

Example

Advanced or Professional Degree (%): 25%

Bachelor's Degree (%): 60%

Associate's Degree or Certificate Program (%): 15%

Note: Numeric counts are fine if more readily available than percentages.

Advanced or Professional Degree (%):
Bachelor's Degree (%):
Associate's Degree or Certificate Program (%):
Other (%):

10. Number of Active (or living) Alumni and definition of how the institution defines "alumni".

Example

Total active alumni (#): 46,000

Alumni definition: All recipients of an advanced degree, bachelor's degree or associate's degree from the institution are included in the alumni database.

Total active alumni (#):

Alumni definition:

11. Estimate of the distribution of active alumni by current residential location.

Example

In-State (%): 75%

Out of State - Domestic (%): 20%

International (%): 5%

Note: Numeric counts are fine if more readily available than percentages.

In-State (%):

Out of State - Domestic (%):

International (%):

12. Number of students participating in community service or service learning and number of hours of total service performed for the most recent year available.

Example

Students participating in service (#): 1,050

Total hours of service performed (#): 14,200

Year: FY 2016

Students participating in service (#):

Total hours of service performed (#):

Year:

13. Total volume of financial aid awarded to students, and volume of financial aid awarded to in-state students for the most recent year available.

Example

Total Financial Aid Awarded (\$ millions): \$8.5

Financial Aid Awarded to in-state students (\$ millions): \$6.0

Year: FY 2016

Total Financial Aid Awarded (\$ millions):

Financial Aid Awarded to in-state students (\$ millions):

Year:

14. Which of the following categories of community and social impact apply to your institution?

Please check all that apply:

- On-campus recreational or athletic facilities available to the public
- On-campus educational/art/culture facilities available to the public
- Coordination with local community on environmental sustainability issues

- Coordination with local community on real estate development projects
- Investment in or partnership with neighborhood-serving public schools, private schools, charter schools, or day care or pre-school facilities
- Provision of public services (e.g. police patrol, street cleaning, snow removal) to off-campus areas
- Provision of medical, dental, legal, counseling, or other support services to community members
- Community service and service learning opportunities for students
- Commitment to local hiring and sourcing
- Other (please describe)

15. Please briefly describe any points of pride that distinguish your institution in its community outreach or social programming.

Example

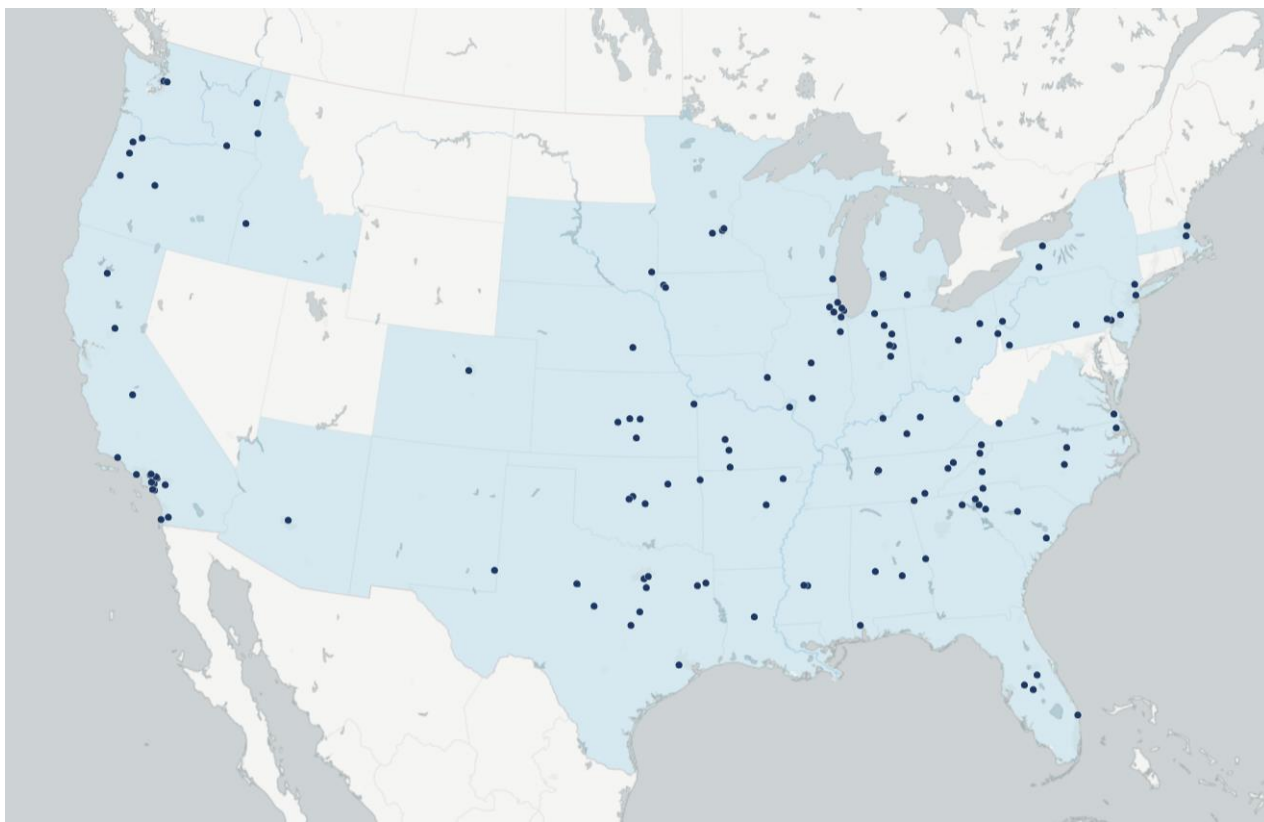
The Southwest Center for Autism Research reflects this institution's long-standing commitment to marry scholarly exploration with service to humanity.

TABLE B.1 – LIST OF CCCU INSTITUTIONS IN THE UNITED STATES

Institution	Institution
Abilene Christian University, Abilene, TX	Anderson University - IN, Anderson, IN
Anderson University - SC, Anderson, SC	Arizona Christian University, Phoenix, AZ
Asbury Theological Seminary, Wilmore, KY	Asbury University, Wilmore, KY
Azusa Pacific University, Azusa, CA	Baylor University, Waco, TX
Belhaven University, Jackson, MS	Bethel College--IN, Mishawaka, IN
Bethel University, St. Paul, MN	Biola University, La Mirada, CA
Bluefield College, Bluefield, VA	Cairn University, Langhorne, PA
California Baptist University, Riverside, CA	Calvin College, Grand Rapids, MI
Campbell University, Buies Creek, NC	Campbellsville University, Campbellsville, KY
Carson-Newman University, Jefferson City, TN	Central Christian College of Kansas, McPherson, KS
Charleston Southern University, Charleston, SC	College of the Ozarks, Point Lookout, MO
Colorado Christian University, Lakewood, CO	Columbia International University, Columbia, SC
Concordia University Irvine, Irvine, CA	Corban University, Salem, OR
Cornerstone University, Grand Rapids, MI	Covenant College, Lookout Mountain, GA
Crown College, Saint Bonifacius, MN	Dallas Baptist University, Dallas, TX
Dallas Theological Seminary, Dallas, TX	Dordt College, Sioux Center, IA
East Texas Baptist University, Marshall, TX	Eastern Nazarene College, Quincy, MA
Eastern University, St Davids, PA	Emmanuel College, Franklin Springs, GA
Erskine College, Due West, SC	Evangel University, Springfield, MO
Faulkner University, Montgomery, AL	Franciscan University of Steubenville, Steubenville, OH
Fresno Pacific University, Fresno, CA	Friends University, Wichita, KS
Fuller Theological Seminary, Pasadena, CA	Geneva College, Beaver Falls, PA
George Fox University, Newberg, OR	Gordon College, Wenham, MA
Gordon-Conwell Theological Seminary, South Hamilton, MA	Grace College & Seminary, Winona Lake, IN
Greenville College, Greenville, IL	Hannibal-LaGrange University, Hannibal, MO
Harding University, Searcy, AR	Hardin-Simmons University, Abilene, TX
Hope International University, Fullerton, CA	Houghton College, Houghton, NY
Houston Baptist University, Houston, TX	Howard Payne University, Brownwood, TX
Huntington University, Huntington, IN	Indiana Wesleyan University, Marion, IN
John Brown University, Siloam Springs, AR	Johnson University, Knoxville, TN
Judson College--AL, Marion, AL	Judson University, Elgin, IL
Kentucky Christian University, Grayson, KY	Kilns College, Bend, OR
King University, Bristol, TN	Kuyper College, Grand Rapids, MI
Lee University, Cleveland, TN	LeTourneau University, Longview, TX
Life Pacific College, San Dimas, CA	Lincoln Christian University, Lincoln, IL
Lipscomb University, Nashville, TN	Louisiana College, Pineville, LA

Institution	Institution
Malone University, Canton, OH	Messiah College, Mechanicsburg, PA
MidAmerica Nazarene University, Olathe, KS	Mid-Atlantic Christian University, Elizabeth City, NC
Milligan College, Milligan College, TN	Mississippi College, Clinton, MS
Missouri Baptist University, Saint Louis, MO	Montreat College, Montreat, NC
Moody Bible Institute, Chicago, IL	Mount Vernon Nazarene University, Mount Vernon, OH
Multnomah University, Portland, OR	New Saint Andrews College, Moscow, ID
North Central University, Minneapolis, MN	North Greenville University, Tigerville, SC
North Haiti Christian University-UCNH, Venice, FL	North Park University, Chicago, IL
Northwest Christian University, Eugene, OR	Northwest Nazarene University, Nampa, ID
Northwest University, Kirkland, WA	Northwestern College, Orange City, IA
Nyack College, Nyack, NY	Oklahoma Baptist University, Shawnee, OK
Oklahoma Christian University, Edmond, OK	Olivet Nazarene University, Bourbonnais, IL
Oral Roberts University, Tulsa, OK	Palm Beach Atlantic University, West Palm Beach, FL
Pepperdine University, Malibu, CA	Point Loma Nazarene University, San Diego, CA
Point University, West Point, GA	Providence Christian College, Pasadena, CA
Regent University, Virginia Beach, VA	Roberts Wesleyan College, Rochester, NY
Samford University, Birmingham, AL	San Diego Christian College, Santee, CA
Seattle Pacific University, Seattle, WA	Simpson University, Redding, CA
Southeastern Baptist Theological Seminary, Wake Forest, NC	Southeastern University, Lakeland, FL
Southern Nazarene University, Bethany, OK	Southern Wesleyan University, Central, SC
Southwest Baptist University, Bolivar, MO	Southwestern Assemblies of God University, Waxahachie, TX
Southwestern Christian University, Bethany, OK	Spring Arbor University, Spring Arbor, AA
Sterling College, Sterling, KS	Tabor College, Hillsboro, KS
Taylor University, Upland, IN	The King's College, New York, NY
Toccoa Falls College, Toccoa Falls, GA	Trevecca Nazarene University, Nashville, TN
Trinity Christian College, Palos Heights, IL	Trinity International University, Deerfield, IL
University of Mary Hardin-Baylor, Belton, TX	University of Mobile, Mobile, AL
University of Northwestern - St. Paul, Saint Paul, MN	University of Sioux Falls, Sioux Falls, SD
University of the Southwest, Hobbs, NM	University of Valley Forge, Phoenixville, PA
Vanguard University of Southern California, Costa Mesa, CA	Walla Walla University, College Place, WA
Warner Pacific College, Portland, OR	Warner University, Lake Wales, FL
Waynesburg University, Waynesburg, PA	Westmont College, Santa Barbara, CA
Wheaton College, Wheaton, IL	Whitworth University, Spokane, WA
William Jessup University, Rocklin, CA	Williams Baptist College, Walnut Ridge, AR
Wisconsin Lutheran College, Milwaukee, WI	York College, York, NE

FIGURE B.2 – MAP OF CCCU INSTITUTIONS IN THE UNITED STATES



APPENDIX C – DETAILED WAGE PREMIUM METHODOLOGY

C.1 OVERVIEW

While institutions of higher education have significant economic footprints through their direct expenditures and through students and visitors they draw into the local economy, it is important not to lose sight of the core mission of these institutions in educating students. This primary function, in addition to helping foster a more enlightened society, has a significant economic component as well, increasing the productivity and earning power of the US workforce.

The link between educational attainment and earnings power is well-established, and a “wage premium” associated with additional education is often conceptualized and calculated from the perspective of the student, who can compare the costs associated with various educational (or non-educational) options with the expected return. This analysis utilizes this framework to estimate the gain not to the student, but rather to the national economy. Additional earnings by alumni in the US workforce attributable to CCCU institutions are estimated and translated into additional household spending, which in turns supports further employment and earnings.

C.2 MODELING INCREASED EARNINGS ATTRIBUTABLE TO EDUCATION

The link between educational attainment and increased earnings is well-established. Academic research and government data indicate a clear return to educational attainment in the form of advanced earnings potential. Census Bureau data documents a linear relationship between median wages and educational attainment, with each additional level of schooling yielding increased average earnings. Returns to education are also impacted by the specific university that a student attends, due to variance in both institutional quality and fields of study offered.¹⁹ Institutions of higher education vary widely in selectivity, curricular rigor and reputation. These qualitative factors are also reflected in the earnings potential of graduates above and beyond the level of degree they attain.²⁰

The modeling approach undertaken in this calculation conforms to the gross impact approach set forth in Section 2 and utilized throughout the report. Since a gross analysis does not include a counterfactual in which impacts are replaced through market forces in the absence of the institution, the increases in education are additive to national earnings, reflecting a market-based valuation of enhanced productivity. However, within this framework, the national population and level of employment is considered to be fixed independent of the presence of CCCU institutions.

¹⁹ For a detailed overview of anticipated lifetime earnings by degree type, see Webber, D (2014). “The Lifetime Earnings Premia of Different Majors: Correcting for Selection Based on Cognitive, non-Cognitive, and Unobserved Factors.” *Labour Economics*, Volume 28, June 2014, 14-23.

²⁰ See for example: Hoxby, C. (2015). “Computing the Value-Added of American Postsecondary Institutions.” *Internal Revenue Service Statistics of Income Division Working Paper*, July 2015; and Monks, J. (2000). “The Returns of Individual and College Characteristics: Evidence from the National Longitudinal Survey of Youth.” *Economics of Education Review*, 19, 279-289.

Therefore, the benefit to the economy is not the full salary of CCCU-alumni in the workforce, but rather the incremental wages associated with their educational attainment and skills/knowledge premium from their CCCU degree. A portion of these additional earnings (after accounting for taxes, savings, etc.) results in additional household spending which circulates through the economy, generating indirect and induced impact and supporting employment and earnings.

Modeling is undertaken in a three-step approach in the sections that follow:

- Section C.3 estimates the volume of CCCU alumni in the workforce, by educational attainment level;
- Section C.4 estimates the annual wage premium associated with CCCU institutions for each of those attainment levels
- Section C.5 combines these two calculations, multiplying the volume of alumni at each attainment level by the wage premium for that level to yield an estimate of the aggregate annual wage premium associated with CCCU institutions.

This calculation relies primarily on data submitted by CCCU institutions as part of the survey collection process (described in Appendix B), as well as national government data where appropriate.

C.3 ESTIMATING CCCU ALUMNI WITHIN THE WORKFORCE

A four-step process is utilized to estimate the volume of CCCU alumni within the workforce:

- Total active alumni are aggregated from institutional survey responses. In total, it is estimated that there are more than 2.8 million active alumni of CCCU institutions.
- Degree levels for these alumni are apportioned based on survey responses.²¹ The majority of alumni (73 percent) are reported to be bachelor's degree holders, with 21 percent holding advanced degrees and 6 percent associates or other degrees.²²
- A deduction is made for alumni living outside of the United States, who will not impact the national workforce. Institutional survey data indicates that 97 percent of CCCU alumni reside within the US.²³

²¹ Question 9 of the survey asked institutions to "estimate the distribution of alumni by highest degree level completed at the institution."

²² The small proportion of "other" degree holder are grouped with associate's degree holders throughout the remainder of the calculation for the purpose of simplicity.

²³ Note that this figure applies only to CCCU institutions within the United States, which are the subject of this study. CCCU does have a significant volume of institutions outside the United States, for whom international residency among alumni is no doubt far higher.

- Finally, it is necessary to estimate the proportion of alumni within each geography that are actively employed (and therefore generate an annual wage premium). National data from the Bureau of Labor Statistics indicates that the national employment to population ratio for degree holders ages 25 and older is 72 percent as of March 2017.²⁴

Applying these proportions across degree levels yields an estimate of nearly 2 million employed CCCU alumni nationwide (see Table C.1).

TABLE C.1 – ESTIMATED CCCU ALUMNI WITHIN THE US WORKFORCE

Input	Value	Associates/ Other Degree	Bachelor's Degree	Advanced Degree
Active CCCU alumni	2,809,830			
(x) Proportion by Highest Degree		6%	73%	21%
(=) Active Alumni by Degree Type		175,600	2,039,200	590,300
(x) Proportion Living in US	97.0%			
(x) Employment Rate	72.0%			
(=) Est. Alumni in US Workforce	1,958,700	122,600	1,423,900	412,200

Source: CCCU Institutions (2017), Bureau of Labor Statistics (2017), Econsult Solutions (2017)

C.4 IMPACT OF CCCU INSTITUTIONS ON ALUMNI EARNINGS

Next, it is necessary to estimate the impact of this educational attainment on annual earnings for the CCCU alumni estimated to be within the workforce.

Median national earnings by education level can be derived from the American Community Survey, which illustrates the progression in median income by highest level of educational attainment from approximately \$28,000 per year for a high school graduate to approximately \$67,000 per year for an advanced degree holder. However, the calculation must account for potential differences in earnings between CCCU degree holders and the average degree holder nationwide. To do so, longitudinal data from the federal Department of Education is aggregated for CCCU institutions relative to all four year institutions. This data source, part of the “College Scorecard” released publicly by the Department of Education, report earnings by institution based unique tracking of tax filings of students who applied for student loans ten years after they entered school.²⁵ Median ten-year earnings for CCCU institutions are \$39,656, or 91.5 percent of

²⁴ This proportion is itself comprised of a labor force participation rate of approximately 74% and an unemployment rate of approximately 2.5%. Thus, the vast majority of non-working alumni are anticipated to be out of the labor force, rather than actively seeking employment but unable to find it.

²⁵ This comparison is an imperfect proxy for earnings differentials between alumni of CCCU and non-CCCU institutions. Notably, it tracks only those students who applied for federal loans, it includes earnings for graduates and non-graduates, and it tracks earnings only at a single point in time (10 years after graduation) rather than throughout a career cycle. However, it is a federal data source that is comprehensive in its coverage

the median ten-year earnings for all four year institutions of \$43,338. Therefore, within this analysis, median earnings for CCCU graduates at each educational attainment level are conservatively scaled to 91.5 percent of median national earnings for that degree level (see Table D.2).

As described in Section C.2 above, this analysis assumes that the national population and employment level would remain fixed absent CCCU institutions, and that the supply of graduates from alternative four-year higher education institutions would remain fixed as well. In this scenario, the absence of CCCU institutions would result in a substantial loss in the educational attainment level, and accordingly the productivity, of the US workforce. In order to absorb this loss, while maintaining a fixed employment level, jobs held by CCCU alumni are assumed to “filter down” to workers with a lower educational level. Specifically, jobs held by CCCU-alumni with associates degrees are assumed to be absorbed by workers with a high school education, jobs held by alumni with bachelor’s degrees are assumed to be absorbed by workers with associate’s degrees, and jobs held by alumni with advanced degrees are assumed to be absorbed by workers with bachelor’s degrees.²⁶

Combining estimated earnings by education level and the assumptions described above about the absorption of employment opportunities absent CCCU generates an estimated annual wage premium by degree level associated with CCCU institutions. This premium is calculated as the net difference between estimated earnings levels for CCCU graduates of a given degree level, and median national earnings for one lesser level of attainment.²⁷ This calculation results in an annual wage premium of \$2,903 for CCCU associates degree holders (relative to high school graduates), \$12,476 for CCCU bachelor’s degree holders (relative to associate’s degree holders) and \$10,581 for CCCU advanced degree holders (relative to bachelor’s degree holders) (see Table C.3).

of institutions, and its basis in IRS records is far sounder than data sources based on self-reported data. Further, this analysis does not use this source to define median earnings (which would be problematic due to the caveats listed above) but rather to estimate the proportional differences between CCCU and non-CCCU institutions. Since data weaknesses apply to both groups, the comparison is “apples to apples” and represents a reasonable proxy for this purpose.

²⁶ Note that the “filtering” process many in practice involve a long sequence of steps, where a highly skilled position held by an alumnus with an advanced degree is first replaced with a slightly less skilled advanced degree holder, whose position is then replaced by a slightly less skilled advanced degree holder, until a position currently held by a worker with an advanced degree is replaced by a worker with a bachelor’s degree. This sequential process is mathematically equivalent to, and more easily conceptualized as, the replacement of one advanced degree worker with one bachelor’s degree worker, and so on. This process is also made possible by the ready availability of workers with high school degrees (for whom the unemployment rate is significantly elevated) and the open enrollment practices of many community colleges or non-selective four year institutions, which suggest that the supply of these workers is likely relatively unconstrained.

²⁷ Note that this calculation is from the perspective of the national economy, not from the perspective of any individual alumnus. Absent the CCCU institutions, it is likely that the majority of CCCU alums would have attained the same level of degree from an alternate institution. However, in so doing they would have replaced a different student currently at that institution. Ultimately, given a fixed supply at alternative institutions, the reduction of educational attainment applies to the economy (and society) broadly, rather than for any particular student.

TABLE C.2 – ESTIMATED EARNINGS BY EDUCATIONAL ATTAINMENT LEVEL

Highest Education Level	National Median	CCCU Est (91.5%)
High School	\$28,043	
Associates Degree / Some College	\$33,820	\$30,946
Bachelor's Degree	\$50,595	\$46,296
Advanced Degree	\$66,857	\$61,176

Source: American Community Survey Five-Year Estimates (2011-2015), College Scorecard Database (2016), Econsult Solutions (2017)

TABLE C.3 – ANNUAL WAGE PREMIUM FROM INCREASED EDUCATIONAL ATTAINMENT ASSOCIATED WITH CCCU

Alumni Degree Level	Without CCCU	CCCU	Annual Wage Premium
Associates Degree	High School \$28,043	Associates \$30,946	\$2,903
Bachelor's Degree	Associates \$33,820	Bachelor's \$46,296	\$12,476
Advanced Degree	Bachelor's \$50,595	Advanced \$61,176	\$10,581

Source: Econsult Solutions (2017)

C.5 AGGREGATE EARNINGS IMPACT FROM CCCU WAGE PREMIUM

The aggregate annual earnings impact from this wage premium can be derived by multiplying the number of alumni in the workforce at each degree level (as estimated in Section C.3) by the annual wage premium associated with that degree level (as estimated in Section C.4). In aggregate, the educational attainment increase for the nearly 2 million CCCU alumni in the workforce results in an aggregate annual wage premium of \$22.5 billion nationwide each year, with the bulk of that premium (\$17.7 billion) attributable to bachelor's degree holders (see Table C.4).

TABLE C.4 – AGGREGATE ANNUAL WAGE PREMIUM ASSOCIATED WITH CCCU

Alumni Attainment Level	Est. CCCU Alumni in Workforce	Est. Annual Premium per Alum	Aggregate Annual Wage Premium
Associates Degree	122,600	\$2,900	\$0.4 billion
Bachelor's Degree	1,423,900	\$12,480	\$17.8 billion
Advanced Degree	412,200	\$10,580	\$4.4 billion
Total	1,958,700	\$11,480	\$22.5 billion

Source: Econsult Solutions (2017)

This increase in household earnings is then translated into household spending in order to model its impact on the national economy. As described in Section 5, this process deducts a portion of earnings that do not result in additional spending (such as taxes, savings, etc.) and then estimates the total impacts of the remaining incremental household spending on economic output, employment, and wages.



APPENDIX D – DETAILED ECONOMIC IMPACT METHODOLOGY

D.1 OVERVIEW

Economic impact estimates are generated by utilizing **input-output models** to translate an initial amount of direct economic activity into the total amount of economic activity that it supports, which includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. This section summarizes the methodologies and tools used to construct, use, and interpret the input-output models needed to estimate this project's economic impact.

D.2 INPUT-OUTPUT MODEL 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 is the sum of its own direct economic footprint plus the indirect and induced effects generated by that direct footprint.

D.3 INPUT-OUTPUT MODEL MECHANICS

To model the impacts resulting from the direct expenditures Econsult Solutions, Inc. developed a customized economic impact model using the **IMPLAN** input/output modeling system. IMPLAN represents an industry standard approach to assess the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes within a county its surrounding area

IMPLAN has developed a social accounting matrix (SAM) that accounts for the flow of commodities through economics. From this matrix, IMPLAN also determines the regional



purchase coefficient (RPC), the proportion of local supply that satisfies local demand. These values not only establish the types of goods and services supported by an industry or institution, but also the level in which they are acquired locally. This assessment determines the multiplier basis for the local and regional models created in the IMPLAN modeling system. IMPLAN takes the multipliers and divides them into 536 industry categories in accordance to the North American Industrial Classification System (NAICS) codes.

The IMPLAN modeling system also allows for customization of its inputs which alters multiplier outputs. Where necessary, certain institutions may have different levels of demand for commodities. When this occurs, an “analysis-by-parts” (ABP) approach is taken. This allows the user to model the impacts of direct economic activity related to and institution or industry with greater accuracy. Where inputs are unknown, IMPLAN is able to estimate other inputs based on the level of employment, earnings, or output by an industry or institution.

D.4 EMPLOYMENT AND WAGES SUPPORTED

IMPLAN generates job estimates based on the term “job-years”, or how many jobs will be supported each year. For instance, if a construction project takes two years, and IMPLAN estimates there are 100 employees, or more correctly “job-years” supported, over two years, that represents 50 annual jobs. Additionally, these can be a mix of a full and part-time employment. Consequently, job creation could feature more part-time jobs than fulltime jobs. To account for this, IMPLAN has a multiplier to covert annual jobs to full-time equivalent jobs.

Income to direct, indirect, and induced jobs is calculated as employee compensation. This includes wage and salary, all benefits (e.g., health, retirement) and payroll taxes (both sides of social security, unemployment taxes, etc.). Therefore, IMPLAN’s measure of income estimates gross pay opposed to just strictly wages.