

South
Carolina
Job
Skills
Gap
Update

2015

An Update of the Job
Skills Gap Analysis



The 2015 South Carolina Job Skills Gap Update is published by the Business Intelligence Department (BID) of the South Carolina Department of Employment and Workforce (SCDEW). The information and analyses provided in this publication are based on data collected from sources throughout South Carolina and the United States.

About SCDEW and BID:

The Business Intelligence Department compiles and publishes employment statistics, job forecasts, wage data, demographics, and other labor market information to help public and private organizations, researchers, and others better understand today's complex workforce.

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Executive Summary

This report is an update of the skills gap analysis outlined within the *2015 Economic Analysis Report*. These analyses utilized 2014 data, whereas the previous work used 2013 information. The overall conclusions remain the same—there appears to be an oversupply of labor at the top half of the educational spectrum, although specific gaps are evident.

An extensive analysis of the job skills gap shows that the question may be more of quality than quantity. Employers are finding the soft skills of many potential candidates to be lacking. Many students and graduates have career desires or awards in professions that either have an oversupply of recent potential workers or low employer demand, while projected job openings in several career clusters/geographic combinations are bereft of potential graduates. Other findings generally show an oversupply of labor force compared to job demand on the upper half of the educational spectrum.

Job Skills Gap

There has recently been much discussion in the workforce community and media about the existence of a “job skills gap.” Discussions have presented wide-ranging conclusions from lack of a skills gap to specifying gaps of various degrees, depending on information used. Some of the research that has taken place to quantify and study the issue is detailed by the U.S. Department of Labor.¹

This analysis for South Carolina will cover the topic from a broad perspective as well as in detail using numerous data sources from a supply versus demand perspective where possible. The data-driven approach is meant to yield a greater understanding and clarity of the topic.

Data Sources

Labor market data for this project is drawn from a variety of government sources responsible for producing employment and educational statistics as well as one private source of labor demand. Several data sets from these sources are utilized and categorized as labor supply and labor demand.

On the job demand side of the analysis, one of the best sources of information is the Occupational Employment Projections (OEP) program, produced by SCDEW in partnership with the U. S. Bureau of Labor Statistics (BLS). An important aspect of the OEP is the expectation of a full-employment economy in the projected year. The data output from the program’s models, the annual job openings and projected year employment, should be viewed as if the economy reaches full production capacity in the projection year. From this source, the average annual job openings and the projected year employment by detailed occupation are used for comparison. The job openings metric includes openings due to growth in the economy as well as due to replacements from retirements or others permanently leaving the occupation. Another demand source utilized is the Help Wanted Online[®] (HWOL) data series, produced by The Conference Board. A final source of job demand is the Total Hires data from the U.S. Census Bureau’s Quarterly Workforce Indicators (QWI) program.

The sources used for labor supply analyses are the OEP base year employment of the latest employment projections (2012), QWI Beginning of Quarter Employment, the Occupational Employment Statistics (OES), U.S. Census Bureau’s American Community Survey (ACS) and Current Population Survey (CPS), the South Carolina Commission on Higher Education (CHE), and the South Carolina Department of Education.

¹ Labor Market Information (LMI) Win-Win Network Community of Practice
(<https://winwin.workforce3one.org/page/about>)



Labor Supply

Figure 1 highlights the sources of labor supply used for statewide analysis. The information is identified by four general categories of educational attainment—Less than high school, High school diploma or equivalent, Some college or associate’s degree, and Bachelor’s degree or higher. This categorization was used because each data element can be classified in this manner, and it makes for a like comparison across the data sources. Defining and quantifying actual job skills would not yield as unifying a metric as educational attainment does as the information does not exist in all data series.

Figure 1

South Carolina Measures of Labor Supply by Education Level

Education Level	OEP 2012 Estimated Employ	Percent	2014 OES	Percent	QWI Avg Ann Employ	Percent
Less than high school	559,324	29%	543,760	29%	223,770	14%
High school or equivalent	792,736	41%	760,370	41%	505,612	31%
Some college or Associate's degree	222,246	11%	219,640	12%	524,172	32%
Bachelor's degree or higher	364,675	19%	337,530	18%	361,783	22%
Total	1,938,981	100%	1,861,300	100%	1,615,337	100%

Education Level	CPS 2014 LF	Percent	CPS 2014 Employ	Percent	CPS 2014 Unemploy	Percent	ACS 2014 Employed Ages 25-64	Percent
Less than high school	161,000	8%	147,000	8%	14,000	15%	134,147	8%
High school or equivalent	556,000	29%	521,000	29%	36,000	38%	481,332	28%
Some college or Associate's degree	554,000	29%	524,000	29%	30,000	31%	563,746	33%
Bachelor's degree or higher	638,000	33%	622,000	34%	16,000	17%	547,097	32%
Total	1,909,000	100%	1,814,000	100%	96,000	100%	1,726,322	100%

SOURCES: US Census Bureau, Current Population Survey (CPS), Quarterly Workforce Indicators (QWI), American Community Survey (ACS); US Bureau of Labor Statistics (BLS) & SCDEW Occupational Employment Projections (OEP) Program and Occupational Employment Statistics (OES) Program.

Note: QWI Employment is 2014 Annual Average of Beginning of Qtr Employment. ACS is from Table B23006, 2014 1-Year Estimate. CPS is 2014 annual average for civilian noninstitutional population aged 25 and older.

The figure includes seven separate measures of labor supply. The analysis includes the estimated base year employment (2012) from the latest set of occupational employment projections, the OES for 2014, the 2014 average annual beginning-of-quarter employment from the QWI, the 2014 annual averages from the CPS, and the 2014 one-year estimate of employment from the ACS.

The employment projections and occupation employment data include an occupation code that is matched to worker characteristics defined by the BLS and include the typical educational requirements for entry into the occupations. These data are measures of jobs. The QWI data are also a measure of jobs. The ACS and CPS data are the result of interviews of respondents as to their level of education. These two elements are measures of people. The differences in what is being measured and the method by which the data are collected and disseminated produce numeric and percentage differences in the educational breakdown of the labor supply

information. The jobs data (OES and OEP) align much more closely with each other in percentage terms than with the person-survey (CPS and ACS) information. The QWI jobs or employment measure uses ACS data in its processing and is somewhat of a hybrid between the other jobs data and person surveys, and its results generally fall between them.

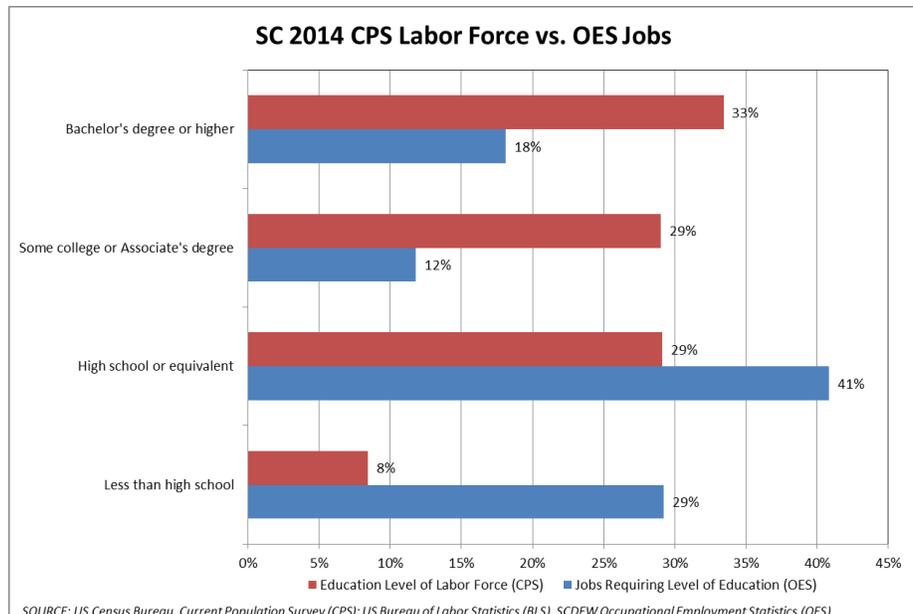
The CPS and ACS data show higher percentages on the upper two levels of education and lower percentages on the lower two levels as compared to the BLS data (except for the unemployed, which measures a much smaller segment of the population).

Labor Force and Jobs

A common labor supply comparison that is made is shown in **Figure 2**. The chart highlights the composition of the labor force (employed plus unemployed) and the number of jobs in percentage terms by educational level. In the Bachelor’s degree or higher category, 33 percent of the workforce says they are educated to that level, while only 18 percent of the jobs require that level of training. In the Some college or associate’s degree category, 29 percent of the workforce is trained to that level to fill the 12 percent of the jobs requiring that education level.

In the lower two categories of education combined, the chart shows that 70 percent of the jobs require a high school diploma or lower, while 37 percent of the persons in the labor force have only those levels of education. The chart shows that, in general terms, there is an oversupply of labor at the highest two educational levels.

Figure 2





The percentage composition for the employed portion of the labor force is nearly identical to that of the labor force as a whole. Examination of that employment more directly shows that many are overeducated for their current positions as illustrated in **Figure 3**.

The table shows a selection of top occupations, which have the highest employment and requiring only a high school education or less, but the positions are filled by employees with at least some college education.

Figure 3

SC Selected Top Occupations Requiring High School Education or Less Filled by Higher-Educated Employees, 2014

Occupation	Percent Holding Bachelor's Degree or Higher	Percent Having Some College or Associate's Degree
Retail salespersons	21%	38%
Cashiers	10%	37%
Secretaries and administrative assistants	24%	44%
Driver/sales workers and truck drivers	3%	33%
Customer service representatives	23%	38%
Production workers	4%	25%
Janitors and building cleaners	2%	16%
Grounds maintenance workers	8%	21%
Waiters and waitresses	7%	27%
Miscellaneous assemblers and fabricators	5%	32%
Child care workers	24%	26%

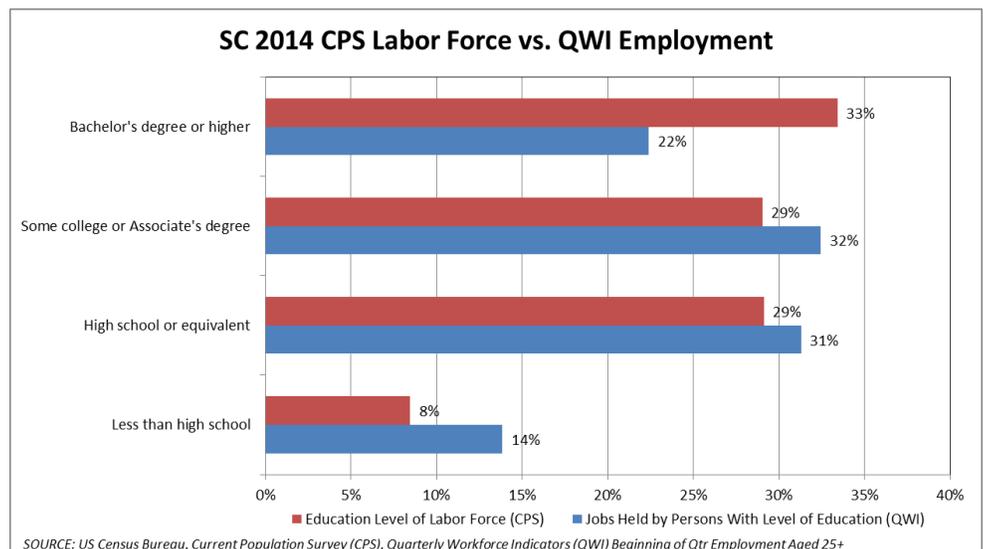
SOURCE: U.S. Census Bureau, Current Population Survey (CPS), 2014 Annual Average

It should be noted that the BLS assignment of the typical educational requirements for entry into an occupation do not include all paths of entry. Many positions require higher levels of education than the typical level stated by BLS. Also, changing entry requirements for some occupations may lead to higher educated individuals entering jobs than those who already hold a similar position. However, BLS notes an increase of education for workers over time.

For these and other reasons, the above contrast between data sets may not be as stark in actuality as the chart displays. This simplification of the actual workforce through representative data illustrates the difficulty in quantifying a potential skills gap when countervailing trends are present in the data.

Another comparison of data sources of labor supply is illustrated in **Figure 4**. As in the chart of Figure 2, the 2014 annual average of the labor force is displayed. In addition, the 2014 annual average of QWI measure of Beginning of Quarter Employment is presented. This data

Figure 4



element shows the percentage of jobs held by persons trained to each of the four education levels.

The chart presents a much closer comparison of labor force to jobs for each category, especially at the lower three levels of education, than did Figure 2. The message here is that, for example, in the top category, though 22 percent of the jobs are held by someone with a Bachelor’s degree or higher, fully 33 percent of the labor force holds at least a four-year degree and is educated for a high-skill position. For the lower three levels, the percentages of jobs outpace the labor force to fill them at each level. This means that the deficits are presumably filled by those from a higher level of education than is needed for the positions.

The analyses in this section illustrate the difficulty in quantifying a job skills gap. Separate data sources provide differing results when measuring jobs. Each is accurate for the data presented, but do not support the prevailing story of a skills gap as clearly as may be claimed by some.

Labor Demand

Figure 5 highlights the sources of labor demand used for statewide analysis. The information is identified by the same four general categories of educational attainment as for labor supply—Less than high school, High school diploma or equivalent, Some college or associate’s degree, and Bachelor’s degree or higher.

Figure 5

South Carolina Measures of Labor Demand by Education Level

Education Level	OEP 2022 Projected Employ	Percent	OEP Avg Ann Job Openings, 2012-2022	Percent	HWOL 2014 Avg Ann Job Postings	Percent	QWI Avg Ann Hires	Percent
Less than high school	620,118	29%	23,480	34%	9,468	15%	44,003	19%
High school or equivalent	871,676	40%	25,273	36%	23,649	37%	76,758	33%
Some college or Associate's degree	261,125	12%	8,354	12%	12,794	20%	72,298	31%
Bachelor's degree or higher	415,804	19%	12,850	18%	17,176	27%	40,762	17%
Total	2,168,723	100%	69,957	100%	63,087	100%	233,820	100%

SOURCES: US Census Bureau, Quarterly Workforce Indicators (QWI); US Bureau of Labor Statistics (BLS) & SCDEW Occupational Employment Projections (OEP) Program; and The Conference Board's Help Wanted Online® (HWOL) data series.

Note: HWOL is 2014 Annual Average Job Postings. QWI Hires is 2014 Annual Average of Total Hires.

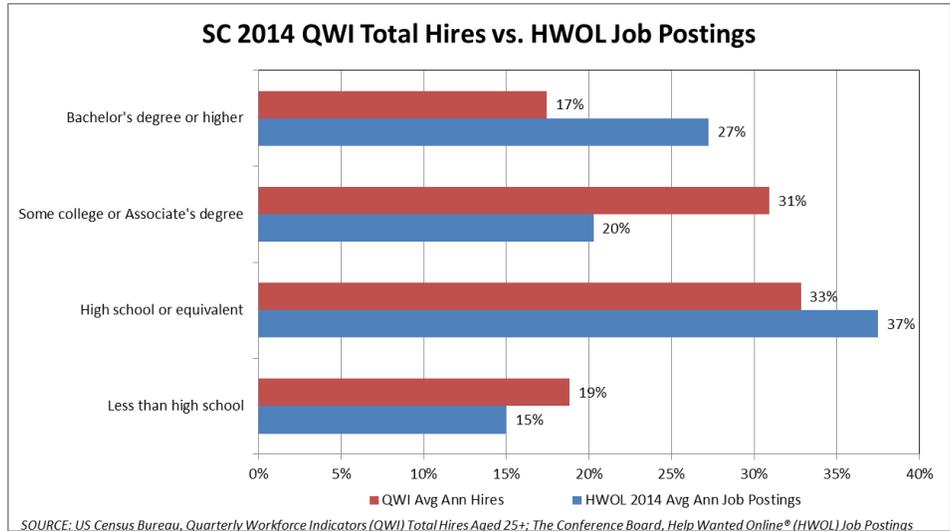
The future year employment and the annual openings data are from the latest occupational employment projections analyses. Each employment element can be thought of as future demand and the average annual openings information can be both current and future because its figures would apply for each year of the projection period. For all of the projections information, in the upper two categories of education, the percentages compare closely, varying by only one percentage point. For the lower two levels of education, the range is wider.



The Help Wanted Online® data series shown is the annual average for 2014 and includes an occupational code that is matched to worker characteristics of required education for entry into an occupation. The findings are compiled from over 16,000 internet job boards monthly. The HWOL percentage summary varies widely for the two upper levels of education compared to the projections data. There is about an eight percent difference in each of the two levels in the desired demand (HWOL)

versus the projected demand (OEP). The gap is even wider at the lowest education level. The QWI Total Hires actual demand data compares much more closely for the lower two categories to the HWOL desired employer demand in percentage terms as shown in **Figure 6**. There is much variation in the upper two categories.

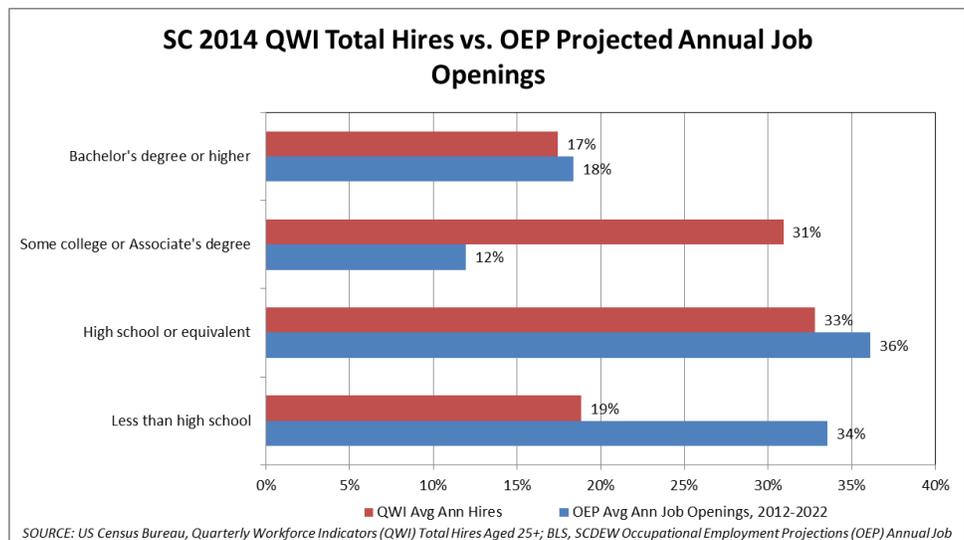
Figure 6



This presents a comparison of unfilled jobs (HWOL) to filled jobs (QWI). There appears to be unmet demand at the Bachelor's degree level.

The chart in **Figure 7** highlights the comparison of the latest annual average projected openings to the QWI Total Hires by percent. This graphic compares projected demand to actual demand. For the Bachelor's degree or higher level, the demand matches well at about 17 to 18 percent for each source. The High School level also compares well. However, 31 percent of the actual hirings occurred at the Some College category, while only 12 percent of total openings were projected to be available at that

Figure 7



level. However, 31 percent of the actual hirings occurred at the Some College category, while only 12 percent of total openings were projected to be available at that

level. Just over one-third of openings were projected to be available at the lowest education level, while only 19 percent of jobs filled took place there.

Labor Supply Versus Labor Demand

Comparing various measures of labor supply and demand yields an understanding of whether or not supply can or will meet demand. One such comparison is the available labor force to the projected job openings as shown in **Figure 8**.

For the top two educational categories, the graphic shows that 62 percent of the labor force is trained with at least some college, while only 30 percent of the job openings are available at those same levels.

Generally, the opposite situation is true for the lower two levels. That is, more job openings are available (70 percent) for a smaller share of the labor force (37 percent). This means that persons not able to find positions at their higher level of training must search for jobs requiring less education.

Another useful comparison is the labor force and the HWOL job postings information. **Figure 9** shows a close agreement between the data sets for the Bachelor's degree or higher category with just a six percent

Figure 8

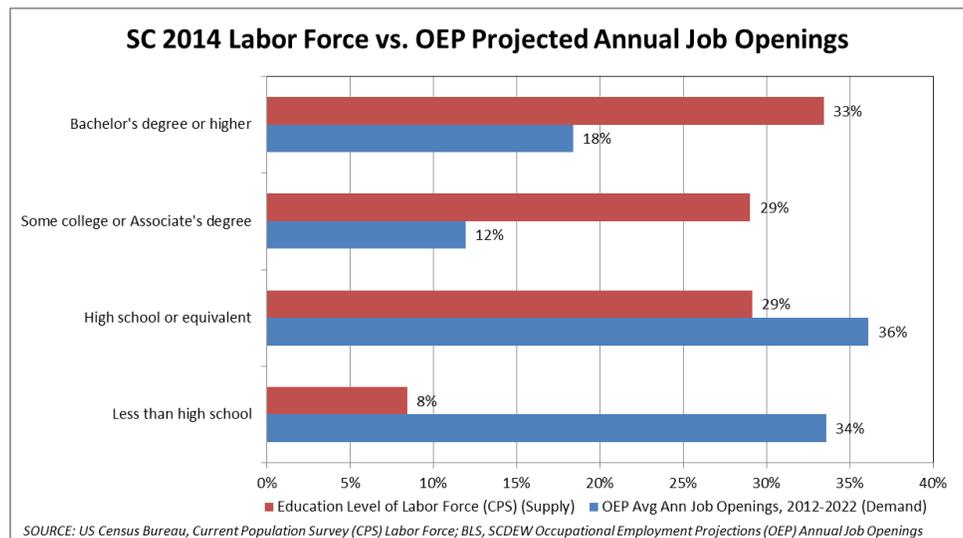
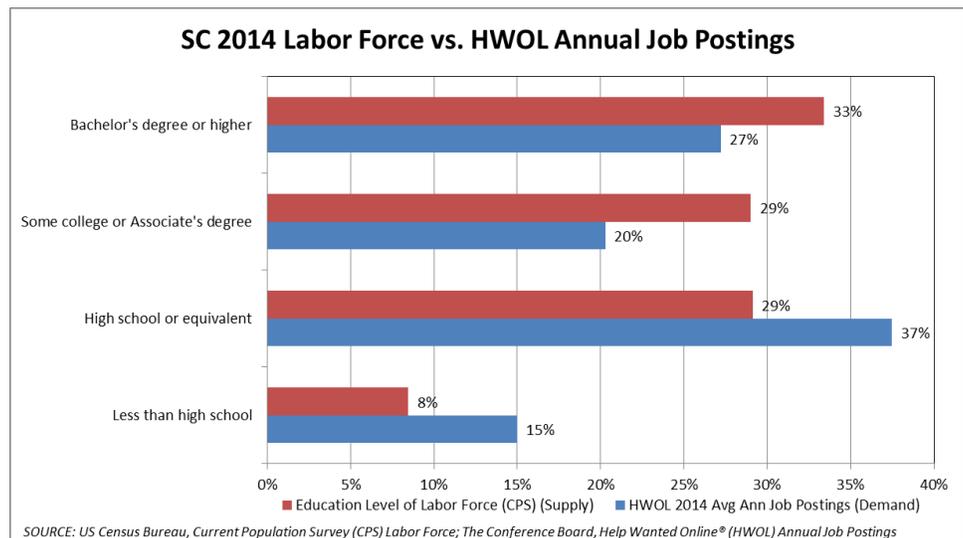


Figure 9



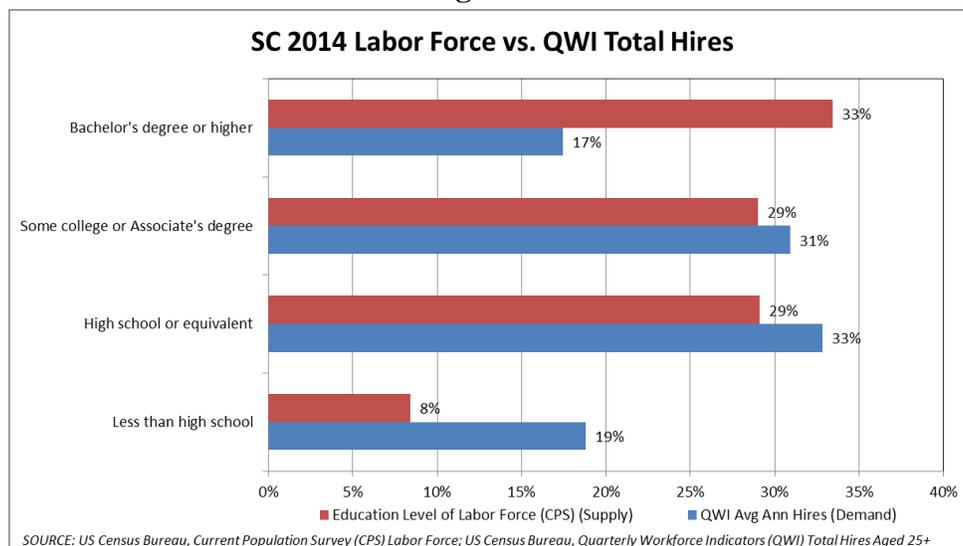
difference. In fact, the greatest difference for any category is nine percent.

Overall, this is a close match between labor supply and demand. Taking the top three categories together shows that supply outpaces demand by 91 percent to 84 percent.

Another labor supply versus demand analysis is shown in **Figure 10**. The graphic presents the labor force compared to

the actual hires for persons aged 25 and older. For the Bachelor’s degree or higher category, nearly twice the percentage of the labor force was available for the actual hires that were made (33 percent to 17 percent). For the two middle categories, there is a close match with the Total Hires demand measure exceeding the supply by six percent overall.

Figure 10



The comparison supports the point made earlier that labor oversupply on the upper end of the educational spectrum leads to many in the workforce taking positions for which they are over trained.

Recent Postsecondary Completers Versus Projected Annual Job Openings

A more detailed analysis of supply and demand gap statewide is shown by comparing the number of completions from public and independent postsecondary schools with projected annual job openings. This analysis uses data from the CHE for the state and compares it to the latest available statewide analysis on the average annual job openings from SCDEW’s OEP Program, 2012-2022, which shows the openings for an average year over the 10-year period. The listed openings are projected to be available for each of the ten years.

The CHE completer database covers the most recently available school year 2013-2014 (July 1 to June 30 for the term) and includes the Classification of Instructional Programs (CIP) code, the institution name, and number of graduates in each of 10 degree classifications. Each CIP code is matched to one of 16 career clusters for comparison to the OEP data. The OEP data details the expected job openings for an average year over the period 2012 to 2022 and includes the occupational code, which is matched to a career cluster, to the educational job requirements to



enter the occupation, to the typical work experience needed for the job, and to the on-the-job training needed for the position.

The CHE databases were summarized by career cluster and by degree awarded. The employment projections were summarized by career cluster and by education level required for the job for those categories matching the CHE degree program summaries. A comparison was made for the two primary data sets in terms of the number of graduates to the number of projected job openings for each of the two variables. **Figures 11, 12, and 13** present tables highlighting the entire analysis.

Figure 11

South Carolina Postsecondary Completers by Career Cluster, 2013-2014

Career Cluster	Postsecondary Non Degree Award	Associate's	Bachelor's	Master's	Doctorate	Total
Agriculture, Food & Natural Resources	40	102	355	72	10	579
Architecture & Construction	547	167	135	59	6	914
Arts, Audio/Video Technology & Communications	145	122	2,103	178	27	2,575
Business Management & Administration	486	1,090	3,080	1,067	13	5,736
Education & Training	594	4,075	4,414	1,982	134	11,199
Finance	200	217	1,004	148	0	1,569
Government & Public Administration	0		766	89	6	861
Health Science	2,794	2,079	1,713	639	870	8,095
Hospitality & Tourism	270	170	492	28	7	967
Human Services	575	534	2,222	818	40	4,189
Information Technology	377	434	546	116	20	1,493
Law, Public Safety, Corrections & Security	91	626	639	46	206	1,608
Manufacturing	1,161	493	32	0	0	1,686
Marketing	89	76	904	33	0	1,102
Science, Technology, Engineering & Mathematics	57	23	5,515	798	326	6,719
Transportation, Distribution & Logistics	628	117	4	3	0	752
Grand Total	8,054	10,325	23,924	6,076	1,665	50,044

SOURCE: SC Commission on Higher Education (CHE)

Note: For CHE, all awards above Bachelor's degree and below Doctorate level were included in Master's.

Figure 12

South Carolina Projected Average Annual Job Openings by Career Cluster, 2012-2022

Career Cluster	Postsecondary Non Degree Award	Associate's	Bachelor's	Master's	Doctorate	Total
Agriculture, Food & Natural Resources		45	86		0	131
Architecture & Construction	211	34	463			708
Arts, Audio/Video Technology & Communications	126	16	274			416
Business, Management & Administration			2,008	7		2,015
Education & Training	94	178	2,373	574	370	3,589
Finance			1,179			1,179
Government & Public Administration			158	24		182
Health Science	2,395	2,438	494	305	905	6,537
Hospitality & Tourism			120			120
Human Services	270	21	334	161		786
Information Technology		86	886			972
Law, Public Safety, Corrections & Security	214	159	15		214	602
Manufacturing	224	293				517
Marketing			629			629
Science, Technology, Engineering & Mathematics			1,160	19	10	1,189
Transportation, Distribution & Logistics	857	18	82			957
Grand Total	4,391	3,288	10,261	1,090	1,499	20,529

SOURCE: US Bureau of Labor Statistics (BLS), SCDEW, Occupational Employment Projections (OEP), Annual Job Openings 2012-2022



Figure 13

South Carolina Postsecondary Completers/Job Openings Gap by Career Cluster, 2013-2014

Career Cluster	Postsecondary Non Degree Award	Associate's	Bachelor's	Master's	Doctorate	Total
Agriculture, Food & Natural Resources	40	57	269	72	10	448
Architecture & Construction	336	133	-328	59	6	206
Arts, Audio/Video Technology & Communications	19	106	1,829	178	27	2,159
Business Management & Administration	486	1,090	1,072	1,060	13	3,721
Education & Training	500	3,897	2,041	1,408	-236	7,610
Finance	200	217	-175	148	0	390
Government & Public Administration	0	0	608	65	6	679
Health Science	399	-359	1,219	334	-35	1,558
Hospitality & Tourism	270	170	372	28	7	847
Human Services	305	513	1,888	657	40	3,403
Information Technology	377	348	-340	116	20	521
Law, Public Safety, Corrections & Security	-123	467	624	46	-8	1,006
Manufacturing	937	200	32	0	0	1,169
Marketing	89	76	275	33	0	473
Science, Technology, Engineering & Mathematics	57	23	4,355	779	316	5,530
Transportation, Distribution & Logistics	-229	99	-78	3	0	-205
Grand Total	3,663	7,037	13,663	4,986	166	29,515

SOURCE: US Bureau of Labor Statistics (BLS), SCDEW, Occupational Employment Projections (OEP), SC Commission on Higher Education (CHE)

Several observations can be made concerning the results. One is that there are over 29,500 more total graduates than job openings for the year. In the overwhelming number of cases, the number of graduates is greater than the number of openings for each of the cluster/degree combinations. A few notable exceptions are:

- More graduates with Bachelor’s degrees are required in Architecture and Construction;
- More graduates with Doctorate degrees are required in Education and Training;
- More graduates with Bachelor’s degrees are required in Finance;
- Health Science is short of graduates at the Associate’s and Doctorate levels;
- Information Technology is short of Bachelor’s degree-holders by 340 graduates;
- More graduates with postsecondary certificates and doctorates are required in Law, Public Safety, Corrections and Security; and
- More graduates with Bachelor’s degrees and non-degree awards are required in Transportation, Distribution, and Logistics.

Of course, more than just recent graduates would be able to fill the projected openings. The oversupply of graduates overall may partially explain why many occupations are filled with overqualified candidates as highlighted in Figure 3. Analysis of the three previous school-year completers, not shown, revealed similar numbers of graduates as well as distributions across degrees and career clusters.

Twelfth Grade Student Career Cluster Choices Versus Projected Annual Openings

A final examination of potential labor supply and projected demand is with South Carolina twelfth grade students and projected job openings. Many high schools seniors are on the cusp of entering the workforce within one year. High school students in the state must choose one of 16 career clusters in order to focus their educational efforts. For the school year 2014-2015, their choices were summarized by career cluster and Local Workforce Development Area (LWDA) on a percentage basis. The average annual job openings from the 2012-2022 OEP program, the latest available at the LWDA level, were summarized in a similar manner. Again, the OEP data details the expected job openings for each year over the period 2012 to 2022. The differences between the two data sets show whether or not a gap exists between potential labor supply and demand. Obviously, there is no certainty that the students will actually join the workforce in an occupation within their chosen cluster or in the geographic area in which they attended school. The tables below in **Figure 14** highlight this analysis.



Figure 14

South Carolina Twelfth Grade Student Career Cluster Choices by Local Workforce Development Area for 2014-2015 (Supply)

Cluster	Catawba	Greenville	Lowcountry	Lower Savannah	Midlands	Pee Dee	Santee-Lynches	Trident	Upper Savannah	Upstate	Waccamaw	Worklink
Agriculture, Food & Natural Resources	2.9%	3.2%	1.7%	2.7%	2.4%	3.0%	2.6%	1.1%	4.8%	2.2%	3.3%	6.6%
Architecture & Construction	3.6%	2.8%	3.7%	3.3%	3.0%	3.2%	3.1%	2.0%	4.6%	3.9%	2.4%	3.4%
Arts, Audio/Video Technology & Communications	20.9%	10.2%	23.2%	9.6%	21.7%	8.8%	9.2%	17.4%	11.6%	13.2%	14.0%	14.4%
Business, Management & Administration	5.8%	10.4%	13.3%	9.2%	5.7%	6.7%	7.3%	6.1%	9.5%	6.0%	10.5%	6.2%
Education & Training	8.4%	6.9%	9.6%	5.6%	4.9%	6.6%	10.4%	5.3%	5.5%	8.8%	6.8%	8.0%
Finance	0.8%	2.3%	1.7%	0.7%	1.3%	1.2%	0.7%	1.1%	0.6%	1.0%	0.2%	0.5%
Government & Public Administration	4.5%	2.8%	5.4%	6.0%	4.7%	6.8%	6.8%	6.0%	3.5%	2.7%	4.4%	2.6%
Health Science	20.7%	25.9%	16.0%	28.0%	20.2%	29.7%	21.6%	23.3%	25.6%	25.5%	15.0%	23.5%
Hospitality & Tourism	2.1%	1.9%	3.1%	3.6%	3.0%	2.8%	2.3%	3.7%	0.7%	2.1%	1.8%	2.9%
Human Service	3.6%	4.5%	2.9%	5.9%	5.8%	5.9%	6.3%	3.3%	5.2%	5.8%	5.2%	4.7%
Information Technology	2.8%	1.8%	3.3%	1.8%	2.7%	2.5%	4.7%	3.6%	1.7%	3.9%	2.9%	2.5%
Law, Public Safety, Corrections & Security	6.8%	6.4%	2.3%	5.6%	5.1%	5.3%	9.8%	7.9%	3.9%	7.4%	7.6%	6.2%
Manufacturing	1.4%	2.6%	1.4%	2.6%	1.0%	1.7%	2.9%	2.3%	4.1%	4.6%	1.2%	2.7%
Marketing	1.8%	2.0%	1.2%	0.8%	2.1%	0.9%	0.5%	1.5%	1.2%	0.5%	0.8%	1.0%
Science, Technology, Engineering & Mathematics	9.7%	12.8%	9.8%	11.5%	14.0%	9.1%	6.8%	13.2%	12.0%	9.0%	21.7%	11.4%
Transportation, Distribution & Logistics	4.1%	3.5%	1.5%	3.2%	2.4%	4.5%	4.8%	2.1%	5.6%	3.4%	2.0%	3.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

SOURCE: South Carolina Department of Education, Office of Intervention Services

South Carolina Projected Average Annual Job Openings by Career Cluster and Local Workforce Development Area Over the Period 2012-2022 (Demand)

Cluster	Catawba	Greenville	Lowcountry	Lower Savannah	Midlands	Pee Dee	Santee-Lynches	Trident	Upper Savannah	Upstate	Waccamaw	Worklink
Agriculture, Food & Natural Resources	0.6%	0.4%	0.9%	3.6%	0.9%	2.3%	3.1%	0.7%	3.7%	0.9%	0.9%	1.2%
Architecture & Construction	5.9%	6.2%	9.6%	9.1%	5.7%	4.8%	7.6%	7.6%	6.0%	6.5%	8.0%	7.6%
Arts, Audio/Video Technology & Communications	0.9%	1.3%	0.3%	0.4%	0.9%	0.3%	0.2%	0.9%	0.2%	0.5%	0.9%	0.5%
Business, Management & Administration	15.1%	15.6%	12.3%	14.8%	18.0%	12.9%	12.6%	15.3%	12.5%	13.4%	11.8%	12.5%
Education & Training	6.6%	4.4%	5.2%	5.7%	6.5%	6.1%	6.9%	4.6%	6.6%	5.6%	5.0%	6.9%
Finance	5.2%	3.7%	3.0%	3.1%	4.5%	3.5%	2.7%	3.6%	1.8%	2.9%	2.8%	2.6%
Government & Public Administration	0.5%	0.5%	0.3%	0.5%	0.6%	0.6%	0.7%	0.5%	0.6%	0.2%	0.3%	0.5%
Health Science	9.1%	10.4%	9.4%	8.8%	12.2%	14.1%	13.4%	12.4%	8.6%	10.3%	7.2%	10.6%
Hospitality & Tourism	14.5%	14.1%	25.7%	15.7%	12.7%	14.1%	14.1%	15.7%	12.3%	15.3%	28.5%	15.1%
Human Service	4.6%	3.9%	4.1%	1.7%	3.9%	4.8%	4.1%	3.6%	3.7%	3.3%	3.4%	3.2%
Information Technology	1.8%	2.2%	0.5%	0.5%	2.2%	1.3%	0.4%	2.3%	0.7%	0.8%	0.6%	0.9%
Law, Public Safety, Corrections & Security	2.2%	1.9%	3.0%	3.9%	4.5%	3.9%	3.6%	3.2%	3.3%	2.4%	3.0%	3.1%
Manufacturing	10.2%	10.9%	3.3%	9.9%	6.2%	9.5%	9.2%	6.2%	21.5%	14.7%	3.8%	12.8%
Marketing	14.8%	12.8%	16.7%	11.2%	13.1%	12.8%	12.8%	13.7%	9.7%	13.3%	18.6%	14.1%
Science, Technology, Engineering & Mathematics	1.2%	2.4%	0.1%	1.0%	1.1%	0.6%	0.5%	1.5%	1.0%	0.9%	0.2%	1.3%
Transportation, Distribution & Logistics	6.8%	9.0%	5.5%	10.1%	6.9%	8.6%	8.1%	8.1%	7.7%	8.8%	4.9%	7.1%
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

SOURCE: BLS, SCDEW- Occupational Employment Projections (OEP), 2012-2022

South Carolina Difference in Student Career Cluster Choices and Projected Job Openings by Local Workforce Development Area (Supply-Demand)

Cluster	Catawba	Greenville	Lowcountry	Lower Savannah	Midlands	Pee Dee	Santee-Lynches	Trident	Upper Savannah	Upstate	Waccamaw	Worklink
Agriculture, Food & Natural Resources	2.3%	2.8%	0.7%	-0.9%	1.5%	0.7%	-0.5%	0.4%	1.1%	1.4%	2.4%	5.3%
Architecture & Construction	-2.3%	-3.4%	-5.9%	-5.8%	-2.7%	-1.6%	-4.4%	-5.6%	-1.5%	-2.6%	-5.6%	-4.2%
Arts, Audio/Video Technology & Communications	20.0%	8.9%	22.9%	9.2%	20.8%	8.6%	8.9%	16.6%	11.5%	12.6%	13.1%	13.9%
Business, Management & Administration	-9.3%	-5.2%	1.1%	-5.6%	-12.2%	-6.3%	-5.2%	-9.3%	-3.1%	-7.4%	-1.2%	-6.3%
Education & Training	1.9%	2.4%	4.4%	-0.1%	-1.6%	0.6%	3.5%	0.7%	-1.2%	3.2%	1.8%	1.1%
Finance	-4.4%	-1.5%	-1.3%	-2.4%	-3.2%	-2.2%	-2.0%	-2.5%	-1.2%	-1.9%	-2.6%	-2.1%
Government & Public Administration	4.0%	2.3%	5.0%	5.5%	4.1%	7.6%	6.1%	5.4%	2.8%	2.5%	4.0%	2.2%
Health Science	11.5%	15.5%	6.6%	19.1%	8.0%	15.7%	8.2%	10.9%	17.0%	15.1%	7.8%	12.9%
Hospitality & Tourism	-12.4%	-12.2%	-22.6%	-12.1%	-9.8%	-11.3%	-11.9%	-12.0%	-11.6%	-13.2%	-26.7%	-12.2%
Human Service	-1.0%	0.6%	-1.2%	4.2%	1.9%	1.1%	2.3%	-0.3%	1.5%	2.5%	1.8%	1.5%
Information Technology	1.1%	-0.5%	2.7%	1.4%	0.5%	1.2%	4.4%	1.3%	1.0%	3.1%	2.2%	1.7%
Law, Public Safety, Corrections & Security	4.6%	4.5%	-0.8%	1.7%	0.6%	1.4%	6.2%	4.7%	0.6%	5.0%	4.6%	3.2%
Manufacturing	-8.8%	-8.3%	-1.9%	-7.3%	-5.2%	-7.8%	-6.3%	-3.9%	-17.4%	-10.1%	-2.6%	-10.1%
Marketing	-13.0%	-10.8%	-15.5%	-10.5%	-11.1%	-12.0%	-12.3%	-12.2%	-8.5%	-12.8%	-17.7%	-13.1%
Science, Technology, Engineering & Mathematics	8.5%	10.4%	9.7%	10.5%	12.9%	8.5%	6.3%	11.7%	11.0%	8.1%	21.6%	10.2%
Transportation, Distribution & Logistics	-2.7%	-5.5%	-3.9%	-6.9%	-4.5%	-4.2%	-3.3%	-5.9%	-2.1%	-5.3%	-2.9%	-4.1%
Grand Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

SOURCES: BLS, SCDEW- Occupational Employment Projections (OEP), 2012-2022; South Carolina Department of Education, Office of Intervention Services

Arts, Audio-Video Technology, and Communications; Health Sciences; and Science, Technology, Engineering, and Mathematics (STEM) were the top three student choices in most of the LWDAs, while Business Management and Administration; Marketing; and Hospitality and Tourism were, generally, the top three clusters with the largest projected openings. These six clusters were where most of the gaps occurred between the supply and demand for the LWDAs. There were additional clusters with other mismatches for a few of the LWDAs as well. Occupations such as Customer Service Representatives, Retail Salesperson, Waiters and Waitresses, Food Preparation and Serving Workers, seen in the Marketing and Hospitality and Tourism clusters, are among the most demanded by South Carolina employers but not what students are choosing. These occupations require less education than many occupations that students desire.

This analysis gives an indication as to the skills gap that has been in the news over the past several years. Students' choices for a career do not match up with the needs of employers in many situations. The previous analysis of recent college completers produced similar results in that there were severe supply/demand mismatches in several key comparisons. Though overall supply seems to meet employer demand, examining the data at a deeper level reveals supply gaps in certain clusters/degrees and geographies in the state, at least as far as new potential workers are concerned. Of course, not all the students and graduates would find work in-state, and also many out-of-state graduates would come to South Carolina to work. The analysis does not imply a closed system but presents the available information to better understand the dynamics of the workforce.

Soft Skills

Soft skills are those attributes not defined by technical accomplishments or certifications attained. They are interpersonal skills or character traits that define an individual. Job advertisements from the HWOL database identify hard and soft skills that employers seek. Analysis of data over the past three years indicates that many soft skills are listed as a part of the job postings, such as communication skills, integrity, team-orientation, detail-orientation, problem solving skills, and self-motivation. For example, oral and written communication skills appeared in 109,000 job postings in the state or 15 percent of the total ads over the calendar year 2014. Almost 52,000 ads for the same time frame listed the soft skill "integrity."

Many of these requisite soft skills appear in ads across the workforce spectrum, including most occupations, experience levels desired, or education required. These skills can be learned or improved upon through proper training. They should be a part of the basic educational package that high school and postsecondary students should be expected to have mastered before entering the workforce, but those skills are missing in many individuals. The fact that advertisements list these requirements indicates that there is a soft skills gap being experienced by employers.

Job Skills Gap Conclusion

This examination utilized 16 separate data series in a comprehensive analysis but may not be the final answer on this complex subject as other sources or specific employer surveys may highlight differing aspects of the skills gap topic.

Perhaps, the question is of quality of the workforce not so much as quantity. Many students and graduates have career desires or awards in professions that have either an oversupply of recent potential workers or a low employer demand. Employers require improved soft skills of their potential employees across the workforce.

In terms of supply versus demand, the findings generally show that there is an oversupply of the labor force on the upper half of the educational spectrum when compared to job demand.

Required Language

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