EARLY CAREER OUTCOMES AMONG CONNECTICUT HIGH SCHOOL GRADUATES WHO DID NOT ATTEND COLLEGE

Sarah Caro and Jan Kiehne, Connecticut State Colleges & Universities

This report reviews early employment outcomes, specifically wages and industry of employment, among Connecticut high school graduates who did not attend college within their first two years of graduating high school. In addition to exploring these work-related outcomes, we investigated the relationship between college-readiness metrics, specifically high school GPA (HSGPA) and SAT scores, to early post-high-school wages. Data for the analysis came from P20-WIN request 0018b, *College and Career Readiness & Placement Analysis*.

The initial dataset contained 70,826 young adults who graduated from a public high school in Connecticut in 2016 or 2017. Of these, there were 14,972 individuals who did not attend any college, according to the records of the National Student Clearinghouse (NSC). The NSC is a comprehensive resource for postsecondary enrollment data, which collects enrollment data from public and private postsecondary institutions in the United States, with a coverage of 97% of all students enrolled.[1] Therefore, 14,972 is a reliable figure representing high school graduates who did not attend college from our initial sample.

Of the 14,972 newly graduated students who did not attend college, 4,448 (29.7%) had Connecticut wage data available for each quarter of the immediate two year[a] period after high school graduation. Wage data showing any earnings in a particular quarter means an individual worked in Connecticut in that quarter. All wages were converted to 2022 dollars and represent gross, pre-tax earnings.

We limited the following analyses to the 4,448 young adults who worked during each available quarter in the two year period following high school. We reasoned that it was more likely that they had entered the workforce in earnest, as opposed to, for example, those working seasonally while enrolled in a trade school, or those working in Connecticut for several months before moving to work out of state. As such, comparisons among the individuals in the final sample, who worked consistently, should be more valid than attempting to compare individuals who worked in Connecticut intermittently for unknown reasons.

We derived the industry of work for each individual by using the North American Industry Classification System (NAICS) codes furnished by the Connecticut Department of Labor (CT DOL). If an individual worked in multiple industries, we assigned them to the industry in which they worked the most quarters.

CAVEATS

The employment data available from DOL is limited. It includes only the total amount of wages earned in a quarter per employer and no occupational information. Without weeks or hours worked, it is difficult to assess whether individuals worked full-time, part-time, or intermittently. Without occupational data such as Standard Occupational Codes, we do not

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[a]For the class of 2017, only seven quarters of wage records were available at the time of data collection. This entailed Q3 and Q4 of 2017, all four quarters of 2018, and Q1 of 2019. For the class of 2016, we had access to all eight quarters of the first two years after graduation (Q3 and Q4 of 2016, all four quarters of 2017, and Q1 and Q2 of 2018). Therefore, to be included, the class of 2017 had to work in all seven available post-high-school quarters, while the class of 2016 had to work in all eight quarters after graduation.

know how a student was employed or whether the occupation aligned with high school coursework. Given the limitations of the current data, please keep in mind the following caveats for interpretation:

Hourly versus Quarterly Wages: A major caveat when considering wage data is that data regarding the number of hours worked are not available from CT DOL. As such, we cannot make any comparisons in terms of wages *per hour*. In the current analyses, all wages are in terms of total dollars earned during the specific time period outlined above. So, while we cannot say whether a given demographic group earned more *hourly* wages than another, we can make reasonable comparisons between groups in terms of overall quarterly pay. Calculations for quarterly average wages in this analysis take the overall wages earned and divide by the number of quarters for which wages were available.

Full- or Part-Time Employment: It is also important to keep in mind that wage differences may be due not only to differences in hourly wages, but also by differences among industries in whether full- or part-time work is more commonly offered. We have no way of knowing which individuals in the sample were working part- versus full-time. That said, it can be argued that an inability to achieve full-time work (underemployment) is a negative outcome, similar to a low wage. Therefore, lower quarterly wages are regarded in this analysis as a negative outcome; however, whether they are due to a low hourly wage or relatively fewer hours of work available, cannot be determined for any individual or group in the sample.

College Attendance: The current dataset is limited to individuals who graduated high school in the state of Connecticut and did not attend college within two years of high school graduation. To determine whether an individual attended college, we used records furnished by the National Student Clearinghouse (NSC). While the NSC collects data from 3,600 of colleges and universities in the United States, some schools do not report their enrollment. As such, we cannot be 100% certain that each individual in our dataset was not concurrently enrolled in a college or university. A related consideration is that trade school enrollment is not collected by the NSC, so we do not know whether some of the individuals included in the sample were concurrently enrolled in a trade school.

Missing from the dataset: The employment and wage data from CT DOL only include employees who work for employers in CT that are covered by Unemployment Insurance (UI) law. Major exclusions from these data are individuals who are self-employed, all members of the Armed Forces, elected officials, most agricultural workers on small farms, most employees of railroads, some domestic workers, student workers at schools and employees of some types of non-profit organizations.[2] It is likely that a proportion of Connecticut's high school graduates who did not continue into postsecondary education are self-employed, serving in the military or working for one of these employers not covered by UI.

Small cell sizes: In the current report, it was possible to break down wage information by several parameters, such as by gender and industry. As such, we were able to provide information on several diverse segments of young workers in Connecticut. However, we wish to caution readers about drawing conclusions based on small cell sizes. For the sake of transparency, we suppressed data only when cell sizes were small enough for privacy concerns, and not for reasons related to statistical power. While we have observed clear trends that are present in large groups as well as many smaller ones, it is important to keep cell sizes in mind when drawing conclusions from the data presented.

FINDINGS

The 4,448 public high school graduates who were in the Connecticut workforce during consecutive quarters for approximately two years after graduation have the characteristics identified in Table 1. Of note, the majority of this group is male and white. In addition, a majority of individuals received Free-or-Reduced Price Lunch (FRPL) which can be interpreted to mean that the majority of these students came from households with a lower socio-economic status.

Table 1: Demographics

Demographic Group	N	Approx. Pct of Sample
Men	2709	61%
Women	1739	39%
Received Free-or-Reduced Price Lunch	2582	58%
Did not receive Free-or-Reduced Price Lunch	1866	42%
Asian	43	1%
Black or African American	610	14%
Hispanic or Latino	1226	28%
Other Ethnicity*	136	3%
White	2433	55%
Graduated in 2016	2126	48%
Graduated in 2017	2322	52%
Total	**4448**	**100%**

*Other Ethnicity individuals were comprised of 74% Two or More Races, 16% Unknown Ethnicity, American Indian or Alaska Native (percent suppressed), and Native Hawaiian or Other Pacific Islander (percent suppressed).

In table 2, we reviewed wages by Industry of employment. More than half of individuals (55%) were employed in either Retail Trade or Accommodation and Food Services. Four other industries, Manufacturing, Healthcare and Social Assistance, Construction, and Administrative and Support and Waste Management and Remediation Services, employed 6-7% of the sample each, representing about a quarter (26%) of the sample. The rest of the individuals were employed in a smattering of other industries.

Table 2: Median and Average Wages by Industry

Industry	N	Percent of Sample	Median Quarterly Wage	Average Quarterly Wage	Percent of Industry Earning a Living Wage	Percent Male
Manufacturing	326	7%	$8,765	$8,714	40%	87%
Construction	288	6%	$8,691	$9,000	41%	98%
Real Estate and Rental and Leasing	17	0%	$7,387	$7,395	*	82%
Wholesale Trade	78	2%	$6,976	$7,175	26%	85%
Finance and Insurance	21	0%	$6,352	$6,580	*	19%
Agriculture, Forestry, Fishing and Hunting	21-27	*	$6,178	$6,172	*	*
Professional, Scientific, and Technical Svcs	30	1%	$6,005	$6,588	*	63%
Administrative and Support and Waste Management and Remediation Services	280	6%	$5,778	$5,865	12%	80%
Transportation and Warehousing	115	3%	$5,051	$5,451	7%	86%
Other Services (except Public Admin)	188	4%	$4,846	$5,527	11%	53%
Public Administration	31	1%	$4,813	$5,566	*	74%
Unknown NAICS Industry	106	2%	$4,712	$5,204	9%	61%
Health Care and Social Assistance	298	7%	$4,481	$4,529	*	30%
Retail Trade	1198	27%	$4,264	$4,595	3%	58%
Accommodation and Food Services	1242	28%	$4,176	$4,441	2%	49%
Arts, Entertainment, and Recreation	131	3%	$4,031	$4,012	*	63%
Information	20	0%	$3,513	$3,904	*	40%
Educational Services	49	1%	$3,135	$3,699	*	53%
Management of Companies and Enterprises	*	*	*	*	*	*
Utilities	*	*	*	*	*	*
Total	**4448**	**100%**	**$4,742**	**$5,357**	**10%**	**61%**

The five highest-earning industries for high school graduates were Manufacturing, Construction, Real Estate and Rental and Leasing, Wholesale Trade, and Finance and Insurance. The five lowest earning industries were Educational Services, Information, Arts, Entertainment, and Recreation and Accommodation and Food Services, and Retail Trade.

Retail Trade, along with Accommodation and Food Services, employed the greatest number of recent high school graduates, with 28% and 27% of the population, respectively. In other words, just over half of the high school graduate population who worked consistently after graduation is employed in two industries with a relatively low level of earnings.

In addition to analyzing average and median quarterly wages earned by industry, it is useful to compare wages to a recognized cost of living benchmark. The MIT Living Wage Calculator[3] provides cost of living estimates for individuals with different family configurations in counties and states across the nation. In Connecticut, the living wage for one individual without children is approximately $9,234 per quarter. The estimates from the MIT Living Wage Calculator are in 2022 dollars, as are all wages reported in this document. As seen in table 2, only 10% of the individuals in the sample are earning a living wage based on this benchmark. By industry, the highest rates are for individuals working in Construction (41%) and those working in Manufacturing (40%). The percentages drop off sharply from there.

Reviewing wages by demographic group helps us better understand the employment patterns of these recent high school graduates. First, we examined gender. Table 3 shows that, compared to women, men earned considerably more over their first two years post-high school, and this difference at the Grand Total level is statistically significant at the p < .0001 level. Furthermore, when broken down by industry, men earned more on average than women in 13 of the 15 fields with available wage data available. Women had higher average earnings in Health Care and Social Assistance as well as in Information; however, these differences were not statistically significant.

Table 3. Quarterly Wage Statistics by Gender

Industry	Women					Men					Gender Difference		
	Count	Percent of Industry who are Women	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median	Count	Percent of Industry who are Men	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median	Difference btwn Men and Womens' Average Wage	Difference btwn Men and Womens' Median Wage	T-test Sig.
Accommodation and Food Services	636	51%	$4,262	$4,078	-$98	606	49%	$4,629	$4,343	$166	$367	$264	**0.001**
Administrative and Support and Waste Management and Remediation Svcs	56	20%	$4,874	$4,638	-$1,140	224	80%	$6,113	$5,998	$220	$1,239	$1,360	**0.000**
Agriculture, Forestry, Fishing & Hunting	3-6	*	$3,651	$2,507	-$3,672	18-21	*	$6,802	$7,176	$998	$3,151	$4,670	**0.035**
Arts, Entertainment, and Recreation	48	37%	$3,612	$3,627	-$404	83	63%	$4,243	$4,126	$96	$631	$499	**0.034**
Construction	7	2%	$7,516	$7,821	-$870	281	98%	$9,037	$8,693	$2	$1,521	$872	0.230
Educational Services	23	47%	$2,837	$2,791	-$344	26	53%	$4,462	$4,264	$1,129	$1,625	$1,473	**0.007**
Finance and Insurance	*	*	*	*	*	*	*	*	*	*	*	*	0.109
Health Care and Social Assistance	209	70%	$4,537	$4,521	$40	89	30%	$4,510	$4,261	-$220	-$27	-$260	0.903
Information	12	60%	$3,983	$3,961	$448	8	40%	$3,785	$3,308	-$205	-$198	-$652	0.855
Mgmt of Companies and Enterprises	*	*	*	*	*	*	*	*	*	*	*	*	--
Manufacturing	44	13%	$7,871	$6,656	-$2,109	282	87%	$8,846	$8,862	$97	$975	$2,206	0.144
Other Services (except Public Admin)	89	47%	$4,268	$4,191	-$656	99	53%	$6,659	$6,350	$1,504	$2,391	$2,159	**<.0001**
Professional, Scientific, & Technical Svcs	11	37%	$4,903	$4,944	-$1,061	19	63%	$7,564	$6,728	$723	$2,661	$1,784	0.055
Public Administration	8	26%	$3,191	$3,322	-$1,491	23	74%	$6,392	$5,365	$552	$3,201	$2,042	**0.001**
Real Estate and Rental and Leasing	*	*	*	*	*	*	*	*	*	*	*	*	--
Retail Trade	499	42%	$3,913	$3,758	-$505	699	58%	$5,082	$4,700	$436	$1,169	$941	**<.0001**
Transportation and Warehousing	16	14%	$5,305	$5,521	$470	99	86%	$5,475	$4,949	-$102	$169	-$572	0.789
Utilities	*	*	*	*	*	*	*	*	*	*	*	*	--
Wholesale Trade	12	15%	$5,340	$5,742	-$1,234	66	85%	$7,509	$7,535	$560	$2,169	$1,794	**0.002**
Grand Total	**1739**	**39%**	**$4,306**	**$4,092**	**-$651**	**2709**	**61%**	**$6,032**	**$5,369**	**$626**	**$1,726**	**$1,277**	**<.0001**

Note: Table excludes 106 individuals whose NAICS Industry was unavailable. T-test results significant at the p < .05 level are indicated in bold.

Industries with the greatest wage differences between men and women were Agriculture, Forestry, Fishing & Hunting, Public Administration, and Professional, Scientific, and Technical Services. In those industries, men earned on average $2,661 - $3,151 per quarter more than women ($10,644 to $12,604 more per year). In the sample overall, men earned $1,726 per quarter more on average than women, or a hefty $6,904 more per year.

Turning to gender distribution within industries, Construction (98% male), Manufacturing (87% male), Transportation and Warehousing (86% male), and Wholesale Trade (85% male) were the most male-dominated industries. Relatedly, Construction and Manufacturing were the two highest-paying industries for these new graduates, with average annualized wages of $35,060 and $34,764, respectively. It is noteworthy that the highest-paying industries had the lowest female representation; indeed, of the 288 individuals who entered the industry of Construction after graduation, only 7 of them (2%) were female. The current sample's population overall was 61% male and 39% female, so an industry with a representative gender distribution in the current study would be approximately 61% male and 39% female.

Next, we examined wages by the race and ethnicity categories provided by the Connecticut State Department of Education (CT SDE).

Table 4a. Quarterly Wage Statistics by Race/Ethnicity (Part I)

Industry	Asian					Black				
	Count	Pct of Industry who are Asian	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median	Count	Pct of Industry who are Black	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median
Accommodation and Food Services	*	*	*	*	*	222	18%	$3,860	$3,762	-$414
Administrative and Support & Waste Mgmt & Remediation Svcs	*	*	*	*	*	32	11%	$4,421	$3,855	-$1,922
Agriculture, Forestry, Fishing & Hunting	*	*	*	*	*	*	*	*	*	*
Arts, Entertainment, and Recreation	*	*	*	*	*	16	12%	$3,864	$3,791	-$240
Construction	0	0%	*	*	*	6	2%	$7,770	$8,424	-$267
Educational Services	*	*	*	*	*	*	*	*	*	*
Finance and Insurance	*	*	*	*	*	*	*	*	*	*
Health Care and Social Assistance	6	2%	$3,687	$3,966	-$516	61	20%	$4,404	$4,235	-$246
Information	*	*	*	*	*	*	*	*	*	*
Mgmt of Companies and Enterprises	*	*	*	*	*	*	*	*	*	*
Manufacturing	6	2%	$7,278	$7,785	-$980	12	4%	$7,523	$7,140	-$1,625
Other Svcs (except Public Admin)	*	*	*	*	*	18	10%	$4,246	$3,773	-$1,073
Prof., Scientific, & Technical Svcs	0	0%	*	*	*	*	*	*	*	*
Public Administration	0	0%	*	*	*	*	*	*	*	*
Real Estate and Rental and Leasing	0	0%	*	*	*	*	*	*	*	*
Retail Trade	13	1%	$3,888	$4,224	-$40	172	14%	$4,143	$3,915	-$348
Transportation and Warehousing	*	*	*	*	*	37	32%	$4,778	$4,688	-$363
Utilities	*	*	*	*	*	*	*	*	*	*
Wholesale Trade	*	*	*	*	*	*	*	*	*	*
Grand Total	**43**	**1%**	**$4,723**	**$4,840**	**$98**	**610**	**14%**	**$3,962**	**$4,260**	**-$482**

Table 4b. Quarterly Wage Statistics by Race/Ethnicity (Part II)

Industry	Hispanic					White					Other Race/Ethnicity				
	Count	Pct of Industry who are Hispanic	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median	Count	Pct of Industry who are White	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median	Count	Pct of Industry who are Other	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median
Accommodation and Food Services	404	33%	$4,692	$4,406	$230	567	46%	$4,496	$4,261	$84	*	*	*	*	*
Administrative and Support & Waste Mgmt & Remediation Svcs	118	42%	$5,481	$5,344	-$434	116	41%	$6,547	$6,564	$786	*	*	*	*	*
Agriculture, Forestry, Fishing & Hunting	*	*	*	*	*	16	*	$5,852	$6,143	-$35	0	0%	*	*	*
Arts, Entertainment, and Recreation	29	22%	$4,827	$4,584	$553	78	60%	$3,737	$3,600	-$431	*	*	*	*	*
Construction	25	9%	$8,438	$8,442	-$249	251	87%	$9,088	$8,693	$2	6	2%	$8,887	$8,962	$271
Educational Services	6	12%	$3,725	$3,463	$327	36	73%	$3,677	$3,060	-$75	*	*	*	*	*
Finance and Insurance	*	*	*	*	*	13	62%	$6,522	$6,404	$52	0	0%	*	*	*
Health Care and Social Assistance	84	28%	$4,451	$4,488	$7	137	46%	$4,703	$4,772	$290	10	3%	$4,060	$4,172	-$309
Information	*	*	*	*	*	11	55%	$4,344	$4,060	$547	*	*	*	*	*
Mgmt of Companies and Enterprises	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Manufacturing	65	20%	$7,834	$7,590	-$1,176	233	71%	$9,020	$8,998	$232	10	3%	$9,604	$9,609	$843
Other Svcs (except Public Admin)	41	22%	$5,389	$5,009	$163	120	64%	$5,684	$5,127	$280	*	*	*	*	*
Prof., Scientific, & Technical Svcs	*	*	*	*	*	18	60%	$7,496	$6,669	$664	*	*	*	*	*
Public Administration	*	*	*	*	*	21	68%	$5,246	$4,718	-$95	*	*	*	*	*
Real Estate and Rental and Leasing	*	*	*	*	*	*	*	*	*	*	0	0%	*	*	*
Retail Trade	345	29%	$4,585	$4,346	$82	639	53%	$4,710	$4,300	$36.84	29	2%	$5,160	$5,172	$908
Transportation and Warehousing	32	28%	$5,077	$4,818	-$233	41	36%	$6,273	$5,083	$32	*	*	*	*	*
Utilities	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Wholesale Trade	21	27%	$6,751	$6,505	-$471	54	69%	$7,364	$7,596	$620	0	0%	*	*	*
Grand Total	**1226**	**28%**	**$4,672**	**$5,083**	**$341**	**2433**	**55%**	**$5,078**	**$5,777**	**$1,035**	**136**	**3%**	**$4,780**	**$5,405**	**$663**

On average, White individuals earned the most, with an average quarterly wage of $5,078 ($20,312 yearly). Black or African American individuals had the lowest average quarterly wage of $3,962 ($15,848 yearly). Despite being 55% of the full sample, White individuals made up 87% of the industry of Construction, 76% of the industry of Real Estate and Rental and Leasing, 73% of Educational Services, and 71% of Manufacturing. White high school graduates are proportionately overrepresented in these industries, three of which provide the highest median quarterly earnings.

Black individuals comprised 14% of the sample and had the greatest representation in Transportation and Warehousing (32% of the field), Healthcare and Social Assistance (20% of the field) and Accommodation and Food Services (18% of the field). These three industries are on the lower end of the earning spectrum.

Hispanic individuals made up 28% of the sample, and relative to other groups, had the highest representation[b] in Administrative and Support and Waste Management and Remediation Services (42% of the field), Professional, Scientific, and Technical Services (33% of the field), and Accommodation and Food Services (33% of the field). Within these three industries, earnings were higher in Professional, Scientific and Technical Services and Administrative and Support and Waste Management and Remediation Services than in Accommodation and Food Service. See table 2 for mean and median wages by Industry.

Tables 5a and 5b show that when broken down by gender and FRPL status, non-FRPL men earn the most, about $6,561 on average per quarter ($26,244). Non-FRPL women earn the least, about $4257 per quarter ($17,028 per year), although FRPL women earn a similar wage ($4,333 per quarter, or $17,332 per year). It is interesting to note that both FRPL and non-FRPL men earn more than either FRPL or non-FRPL women.

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[b]The highest level of representation of Hispanic individuals by percentage was within Management of Companies and Enterprises. However, the entire sample size for this industry consisted of only four individuals, which is below the minimum threshold for release of the aggregate wage data and is therefore not listed above.

Table 5a. Quarterly Wage Statistics by Free-or-Reduced-Price Lunch Status (part I: Women)

Industry	FRPL Women					Not FRPL Women				
	Count	Percent of Industry who are FRPL Women	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median	Count	Percent of Industry who are non-FRPL Women	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median
Accommodation and Food Services	442	36%	$4,213	$4,034	-$142	194	16%	$4,372	$4,290	$113
Administrative and Support & Waste Mgmt & Remediation Svcs	44	16%	$4,884	$4,830	-$948	12	4%	$4,835	$4,201	-$1,576
Agriculture, Forestry, Fishing & Hunting	*	*	*	*	*	*	*	*	*	*
Arts, Entertainment, and Recreation	27	21%	$3,768	$3,919	-$112	21	16%	$3,412	$3,569	-$461
Construction	*	*	*	*	*	*	*	*	*	*
Educational Services	9	18%	$2,746	$2,791	-$344	14	29%	$2,895	$2,887	-$248
Finance and Insurance	*	*	*	*	*	11	52%	$6,353	$6,332	-$20
Health Care and Social Assistance	141	47%	$4,682	$4,632	$151	68	23%	$4,236	$4,240	-$242
Information	6	30%	$3,352	$3,178	-$335	*	*	*	*	*
Mgmt of Companies and Enterprises	*	*	*	*	*	*	*	*	*	*
Manufacturing	23	7%	$7,123	$6,435	-$2,330	21	6%	$8,690	$6,925	-$1,840
Other Svcs (except Public Admin)	43	23%	$4,588	$4,662	-$184	46	24%	$3,968	$3,873	-$974
Prof., Scientific, & Technical Svcs	7	23%	*	*	*	*	*	*	*	*
Public Administration	*	*	*	*	*	7	23%	$3,281	$3,645	-$1,168
Real Estate and Rental and Leasing	0	0%	*	*	*	*	*	*	*	*
Retail Trade	327	27%	$4,023	$3,883	-$381	172	14%	$3,703	$3,505	-$758.28
Transportation and Warehousing	8	7%	$5,826	$5,830	$780	8	7%	$4,785	$5,136	$85
Utilities	*	*	*	*	*	*	*	*	*	*
Wholesale Trade	7	9%	$5,179	$5,675	-$1,300	*	*	*	*	*
Grand Total	1121	25%	$4,333	$4,144	-$598	618	14%	$4,257	$3,949	-$794

Table 5b. Quarterly Wage Statistics by Free-or-Reduced-Price Lunch Status (part II: Men)

Industry	FRPL Men					Not FRPL Men				
	Count	Percent of Industry who are FRPL Men	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median	Count	Percent of Industry who are non-FRPL Men	Average Quarterly Wage	Median Quarterly Wage	Difference from Industry Median
Accommodation and Food Services	403	32%	$4,685	$4,375	$199	203	16%	$4,519	$4,249	$73
Administrative and Support & Waste Mgmt & Remediation Svcs	146	52%	$5,830	$5,683	-$94	78	28%	$6,641	$6,761	$983
Agriculture, Forestry, Fishing & Hunting	7-9	*	$6,948	$6,363	$185	10-12	*	$6,705	$7,330	$1,151
Arts, Entertainment, and Recreation	45	34%	$4,468	$4,374	$343	38	29%	$3,976	$3,638	-$393
Construction	80	28%	$8,627	$8,116	-$575	201	70%	$9,200	$8,941	$250
Educational Services	13	27%	$4,589	$4,487	$1,351	13	27%	$4,336	$3,557	$422
Finance and Insurance	*	*	*	*	*	*	*	*	*	*
Health Care and Social Assistance	59	20%	$4,616	$4,349	-$133	30	10%	$4,302	$3,775	-$707
Information	*	*	*	*	*	6	30%	$4,000	$3,491	-$23
Mgmt of Companies and Enterprises	*	*	*	*	*	*	*	*	*	*
Manufacturing	113	35%	$8,622	$8,616	-$149	169	52%	$8,995	$8,989	$224
Other Svcs (except Public Admin)	50	27%	$5,811	$5,726	$880	49	26%	$7,524	$7,146	$2,299
Prof., Scientific, & Technical Svcs	11	37%	$7,134	$5,968	-$37	8	27%	$8,155	$8,756	$2,751
Public Administration	*	*	*	*	*	15	48%	$5,885	$5,365	$552
Real Estate and Rental and Leasing	*	*	*	*	*	10	59%	$9,100	$7,893	$506
Retail Trade	385	32%	$4,971	$4,658	$395	314	26%	$5,217	$4,733	$469.31
Transportation and Warehousing	65	57%	$5,245	$4,791	-$260	34	30%	$5,914	$4,980	-$71
Utilities	*	*	*	*	*	*	*	*	*	*
Wholesale Trade	32	41%	$7,635	$7,303	$328	34	44%	$7,390	$7,707	$731
Grand Total	**1461**	**33%**	**$5,581**	**$4,991**	**$249**	**1248**	**28%**	**$6,561**	**$6,081**	**$1,338**

Combining gender with race/ethnicity and FRPL-status provides additional insight. Table 6 presents wage data converted to an estimated yearly wage and broken down by gender within demographic groups. Here, it is shown that women earn considerably less than men within all ethnicity and FRPL groups, and Black or African American women have the lowest level of earnings. In fact, the difference in the estimated annual median wages between black women and white men in this sample is over $9,000 per year. A stark wage gap for women of color has been widely reported in the country[4] as a whole[5], and the current findings present evidence that the large wage disparity for women of color in our nation is also present among young workers in our local communities.

Table 6 also shows that men, particularly White and non-FRPL men, were the most likely to earn a living wage. While 20% of White men earned a living wage, only 3% of White women earned a living wage. Of men whose ethnicity was listed as "Other," 21% earned a living wage. The next-highest group in terms of earning a living wage was Hispanic men (8%). Only 1% of Nonwhite women earned a living wage.

Table 6. Annual Wages by Demographic Group

Demographic Group	N	Percent of Sample	Average Yearly Wage	Median Yearly Wage	Percent Earning a Living Wage	Difference from Sample Median
Men	2709	61%	$24,129	$21,475	14%	$2,506
FRPL Men	1461	33%	$22,323	$19,964	9%	$995
Non-FRPL Men	1248	28%	$26,244	$24,323	21%	$5,354
Women	1739	39%	$17,224	$16,367	2%	-$2,603
FRPL Women	1121	25%	$17,331	$16,576	2%	-$2,394
Non-FRPL Women	618	14%	$17,029	$15,795	3%	-$3,175
Asian	43	1%	$18,891	$19,361	*	$392
Asian Women	20	0%	$16,334	$16,506	*	-$2,463
Asian Men	23	1%	$21,994	$21,973	*	$3,004
Black or African American	610	14%	$17,042	$15,849	2%	-$3,120
Black or African American Women	264	6%	$15,329	$14,827	*	-$4,142
Black or African American Men	346	8%	$18,349	$16,808	3%	-$2,161
Hispanic or Latino	1226	28%	$18,687	$20,332	5%	$1,362
Hispanic or Latino Women	523	12%	$17,779	$17,059	*	-$1,911
Hispanic or Latino Men	703	16%	$22,231	$20,523	8%	$1,554
Other Ethnicity	136	3%	$19,120	$21,621	*	$2,651
Other Ethnicity Women	60	1%	$17,384	$16,510	*	-$2,460
Other Ethnicity Men	76	2%	$24,965	$21,615	*	$2,645
Nonwhite Ethnicity*	2015	45%	$19,402	$17,773	5%	-$1,197
NonWhite Women	867	19%	$16,972	$16,313	1%	-$2,657
NonWhite Men	1148	26%	$21,237	$19,289	7%	$319
White	2433	55%	$20,312	$23,109	14%	$4,139
White Women	872	20%	$17,474	$16,457	3%	-$2,513
White Men	1561	35%	$26,256	$24,150	20%	$5,180
Graduated in 2016	2126	48%	$21,546	$19,086	10%	$117
Graduated in 2017	2322	52%	$20,680	$18,837	9%	-$133
Total	4448	100%	$21,430	$18,970	10%	$0.00

The Nonwhite category includes all ethnicity categories other than White.

Table 7 displays the degree to which Quarterly Wage in the first two years post-high-school graduation correlates with common academic quality metrics of HSGPA and SAT scores. HSGPA was the only academic quality metric that was reliably correlated with wages, among the sample overall as well as separately within gender. There was a weak but significant correlation between SAT Math scores (SAT-M) and wages for men, but no correlation between SAT scores and wages for women. These results are an interesting complement to other current work showing that HSGPA predicts college outcomes better than SAT scores do.[5]

Table 7. Correlations with Quarterly Wage

Correlations shown are between Quarterly Wage and each of the other Factors (HSGPA, SAT-M, and SAT-ERW)

	Sample Overall			Men			Women		
	HSGPA	SAT-M	SAT-ERW	HSGPA	SAT-M	SAT-ERW	HSGPA	SAT-M	SAT-ERW
Correlation with Wage	**0.120**	0.039	-0.017	**0.228**	**0.058**	0.012	**0.071**	-0.027	-0.032
P-value	<.0001	0.073	0.438	<.001	0.036	0.677	0.003	0.431	0.362
N	4448	4448	4448		2709	2709	1739	1739	1739

Note. *Significance at the p<.05 level is denoted by bold text.*

CONCLUSIONS

Before drawing conclusions, it is necessary to again bring to the forefront some limitations of these data. Although we have access to quarterly wages, we are missing some pieces of the puzzle, that if known, would certainly paint a clearer picture. In addition to lacking the number of hours worked, we also don't know the degree to which individuals were engaged in other endeavors, such as a trade school, online trainings, caring for family members, or work that was paid off the books. Furthermore, personal circumstances, such as personal travel, illness, or disability could also contribute to underemployment, and therefore comparably lower wages.

While we don't know the number of hours worked, and we assume that some of the highest paying industries (e.g., Construction and Manufacturing) had high wages in part because of a greater availability of full-time positions or even overtime work, we found the comparisons *within* industry to be telling. For example, if we assume that individuals within a given industry have similar access to full-time work, then the gender or ethnicity differences in wages within industry may reflect true differences in hourly wages paid to different groups, and not simply group differences in number of hours worked or differences in choice of industry.

From a higher education perspective, this analysis provides a relatively uncommon, and perhaps gloomy, glimpse into early work outcomes for students not attending college. The median annualized wage for high school graduates who were consistently employed after graduation was $18,968. Per month, this would amount to $1,581, much less than the $3,078 required monthly for an adult residing in Connecticut with no children, according to the MIT Living Wage Calculator. Indeed, only 425 individuals (9.55% of the population) in the current study earned a living wage, and of those 425, only 8% were women. Although men make up 61% of the current population, they made up 92% of the individuals who earned a living wage.[c]

Bearing in mind the stark demographic differences in wages, particularly for women and Black individuals, monthly wages for many are considerably less than the aforementioned $1,581 per month, making the situation is especially dire for these underrepresented groups. For example, black women in this sample of consistently employed high school graduates had a median monthly wage of only $1,236.

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[c]The MIT Living Wage Calculator gives different estimates for different household sizes. The estimate cited here is intended for single individuals with zero children. However, our data lacks information on household size. As such, it is possible that some individuals in the current study live at home with one or more parents, live with a partner, or have children. Therefore, the Living Wage estimate may overestimate or underestimate the actual living wage needed, depending on true household size.

We are aware that pay rates over the lifespan can change significantly from those immediately after high school. However, given the importance of a living wage to an individual's health, safety, and mental wellbeing, it is worth striving for wage equity among workers regardless of age, gender, or ethnicity. There are many pathways for society to make improvements in pay equity which are beyond the scope of this report. However, the authors suggest that education leaders should expand the availability, accessibility, and quality of academic pathways to the labor market. Such pathways should begin in high school, and support the attainment of short term, stackable credentials that are tied to local labor market needs, enabling our state's young workers to progress into positions that provide a living wage.

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