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Career Preparation Expansion Act Report

***Annual Report to the Governor and General
Assembly on the Workforce Outcomes of
Maryland Public High School Graduates***

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REPORT REQUIREMENTS

This Report is submitted in fulfillment of the requirement in *The Career Preparation Expansion Act* (CPEA), Chapter 695 of 2018 (see Education Article § 21-206, Annotated Code of Maryland). The Maryland Longitudinal Data System (MLDS) Center and the Governor’s Workforce Development Board (GWDB) are required to produce a report on high school graduates for the five-year period after graduation on:

1. Wages earned;
2. Hours worked per week; and
3. The industry of employment.

See the **Technical Appendix** (Appendix 2) for information on the MLDS Center, the GWDB, and the data and methods used for this report.

REPORT POPULATION

The population of interest for this report was high school students who graduated from a Maryland public high school with a diploma between January and October of 2019 and are between the ages of 16 and 24 at the time of graduation.¹ This is the latest year that high school graduates had five years of available wage data post-high school graduation.

Table A. Maryland Public High School Graduates, 2019, Distribution by Demographic and Economic Characteristics

2019 High School Graduates			
All High School Graduates		57,373	
		#	%
Gender	Female	28,934	50%
	Male	28,439	50%
Ethnicity	Hispanic, Any Race	8,239	14%
Race	African-American/ Black Alone	19,750	34%
	Asian Alone	4,245	7%
	White Alone	27,845	49%
Economic Status ²	FARMS	19,096	33%
	Non-FARMS	38,277	67%

Note: Race is reported independent of ethnicity therefore values do not equal the total. Some races are omitted to protect small populations.

Almost 60,000 students graduated from Maryland public high schools in 2019 under the high school graduate definition used for this report. See **Table A**.

High school graduates were disaggregated into educational attainment groups.² See **Table B**. Definitions used to determine assignment to each group can be found in the **Technical Appendix** at the end of this report.

Table B. Maryland Public High School Graduates, 2019, Distribution by Educational Attainment, Five Years after Graduation

Educational Attainment Level	2019 High School Graduates	
All High School Graduates	57,373	
	#	%
No College	14,983	26%
Some College	17,861	31%
Still in College	11,379	20%
Lower Division Degree	1,898	3%
Certificate	198	<1%
Associate’s	1,700	3%
Bachelor’s Degree or Higher	11,252	20%
Bachelor’s	11,147	19%
Other Degree	105	<1%

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RESULTS

Question 1. Wages Earned Five Years After High School Graduation

Wage Visibility by Educational Attainment

There were 25,818 high school graduates, or 45% of all graduates, who had wages for three consecutive fiscal quarters (“full-quarter wages”³) five years after high school graduation (fiscal quarter 2 of 2024⁴) and were therefore included in the wage analysis. See **Table 1**.

Conversely, 31,555 high school graduates, or 55%, did not have wage data for the three consecutive fiscal quarters five years after high school graduation. High school graduates excluded from this calculation include individuals who may have had wage data for some, but not all three quarters required to meet the full-quarter definition, had wages from a source not reported to the MLDS,⁵ or were unemployed, including those enrolled in college and unavailable for the labor market.

Wage visibility, or the rate at which high school graduates meet the definition of full-quarter wages, has been consistently around 45% since this report was first produced examining the 2012 cohort of high school graduates. Wage visibility consistently ranges between the mid-30% for those who earned a Bachelor’s degree to the mid-50% for those who earned an Associate’s degree. The only cohort with notable variation in wage visibility is the 2015 cohort of high school graduates. For this cohort, the five-year wage period was at the start of the COVID-19 pandemic. The resulting economic shut down decreased the overall wage visibility for this cohort to 17%.

The 2019 cohort (2024 wages) have a wage visibility that is consistent with pre-COVID cohorts but slightly lower than pre-COVID

cohorts. The visibility patterns by educational attainment also remain similar. As with prior reports, for the high school graduates included in this wage analysis, those with *Lower Division Degrees* are most visible in the wage data, while those with *Bachelor’s Degrees or Higher* are the least visible. This pattern does not suggest that there are not jobs in the Maryland economy for those with *Bachelor’s Degrees or Higher*. Rather, it reflects that most high school graduates in the *Bachelor’s Degrees or Higher* group have not yet had sufficient time since degree attainment to accrue nine consecutive months of post-degree employment. High school graduates in this group spent the majority of the five-year period after high school completing their four-year Bachelor’s degree. Comparatively, all other groups were available to pursue career-track employment for at least the last two years of the five-year period.

Table 1. Maryland Public High School Graduates, 2019, Wage Visibility, Five Years after High School Graduation, Fiscal Quarter 2 of 2024

Educational Attainment	Total	Q2 2024 Full-Quarter Wages	
		#	%
All High School Graduates	57,373	25,818	45%
No College	14,983	6,785	45%
Some College	17,861	8,649	48%
Still in College	11,379	5,095	45%
Lower Division Degree	1,898	1,068	56%
Bachelor’s Degree or Higher	11,252	4,221	38%

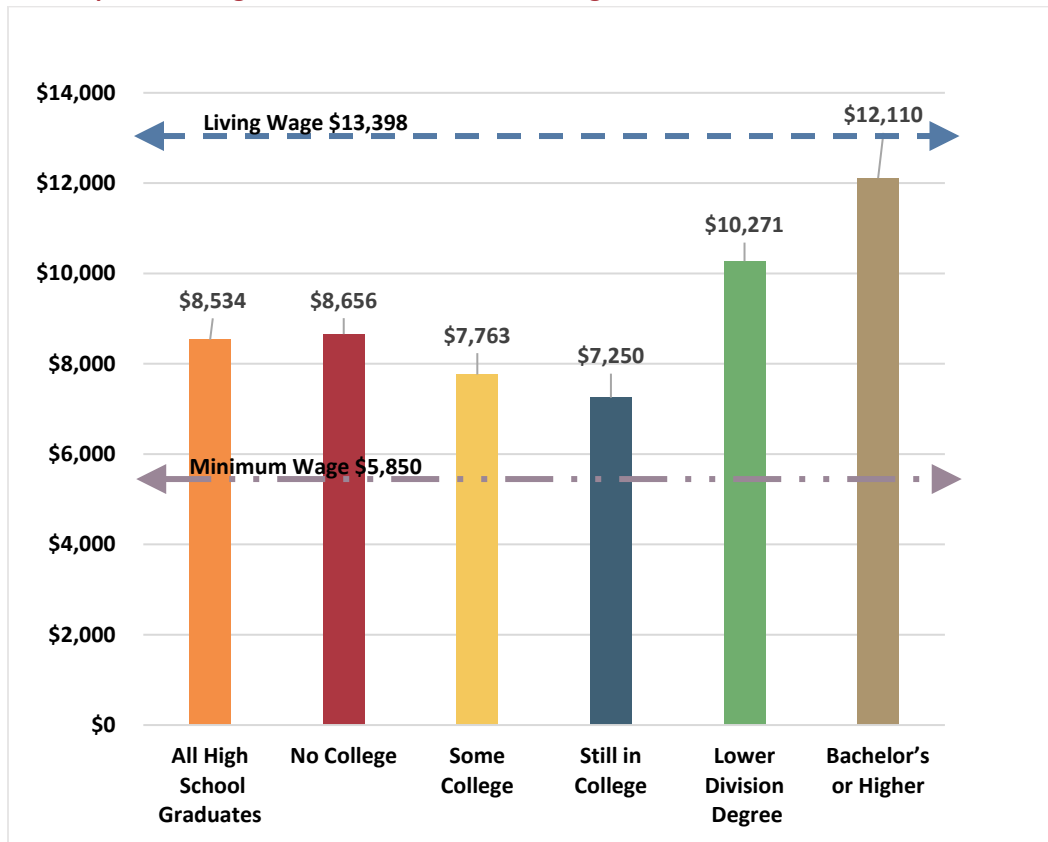
Median Quarterly Wages by Educational Attainment

Overall, the median quarterly wage for all high school graduates with full-quarter wages was \$8,534 in the 20th quarter – fiscal quarter 2 of 2024. This is \$4,864 (or 36%) below the quarterly living wage⁶ in Maryland. This result suggests that, overall, despite being engaged in the labor market for nine months, high school graduates had an earnings shortfall of around \$20,000 for the year.

The gap between the median quarterly wage and the living wage was not uniform across all

educational attainment groups. High school graduates who did not continue to college, those with some college, and those still in college had a median quarterly wage that fell \$5,000 to \$6,000 below the quarterly living wage. Those with a college degree also had median quarterly wages below the living wage; however, the gap was smaller, around \$3,000 per quarter for *Lower Division Degree* or \$1,200 per quarter for *Bachelor's Degree or Higher*. See **Chart 1**.

Chart 1. Maryland Public High School Graduates, 2019, Median Quarterly Wages by Educational Attainment Compared to Wage Indicators, Five Years after High School Graduation, Fiscal Quarter 2 of 2024



The *No College* group, which presumably went directly into the workforce, had a higher median quarterly wage than that of the *Some College* and *Still in College* groups. This may be due to the fact that high school graduates in the *No College* group had five years to

incrementally build higher wages while progressing through career-track employment.

The fact that students in the *Still in College* group had the lowest median quarterly wage may be the result of working in a part-time

capacity to prioritize education. These students may have had a portion of their living expenses covered by their parents or received federal, state, or institutional financial aid to cover their living expenses.

The *Some College* group, who attempted college but did not earn a degree, had a median quarterly wage \$5,635 below the quarterly living wage and \$893 below that for high school graduates who did not continue on to college. In fact, the median quarterly wage for those with *Some College* is only \$500 more than those *Still in College*. This lower wage may reflect two concepts. First, as compared to the *No College* high school graduates, the *Some College* high school graduates delayed entry into career track employment and are just now receiving the entry level wages their *No College* peers received five years prior. Second, the *Some College* high school graduates intermittently pursued postsecondary education, splitting their time and focus between college and the workforce, rather than concentrating on either earning a degree or building career-track employment.

High school graduates who completed a *Bachelor's Degree or Higher* had a median quarterly wage about \$1,200 below the quarterly living wage. This higher wage is present even though this group of high school graduates had only been in the workforce for approximately six to nine months since completing their college degrees. As such, this wage represents entry-level earnings rather than five years of progressively building wages.

Those with an Associate's degree or postsecondary Certificate (*Lower Division Degree*) had a median quarterly wage about \$2,000 higher high school graduates with *No College* but were still \$3,100 below the quarterly living wage. Notably, those with a *Lower Division Degree* had a median quarterly wage almost \$2,500 more than those with *Some College*, demonstrating the economic value of finishing even short-term credentials like a postsecondary Certificate or Associate's Degree. And, at the point of wage observation, *Lower Division Degree* graduates may have been in the workforce post-college graduation for only two or three years, making this wage an early career wage rather than one that results from five years of continuous employment.

Currently, the *No College*, *Some College*, and *Still in College* groups are on pace to earn \$1 million in their lifetime, while individuals with some level of college degree are on pace to earn \$1.5 to \$2 million in their lifetime.⁷ The results for both groups aligns to research⁸ on the financial returns to education.

Variation to Living Wage by Educational Attainment

Another way to analyze wages five years after high school graduation is to determine the number of graduates with full-quarter wages that had wages above the living wage. Identifying the number of high school graduates with wages above the living wage helps to

quantify the number of graduates that were engaged in the workforce at a level that provides for or exceeds the basic cost of living in Maryland and the number who may be engaged in the workforce but unable to meet these basic expenses. See **Table 2**.

Table 2. Maryland Public High School Graduates, 2019, Wage Visibility and Median Quarterly Wages, Five Years after High School Graduation, Fiscal Quarter 2 of 2024

Educational Attainment	2019 High School Graduates						
	Total	Full-Quarter Wages Q2 2024			Variation to Living Wage (\$13,398)	Above Living Wage	
		#	%	Median Quarterly Wage		#	%
All High School Graduates	57,373	25,818	45%	\$ 8,534	\$ (4,864) ↓	20%	5,164
No College	14,983	6,785	45%	\$ 8,656	\$ (4,742) ↓	17%	1,153
Some College	17,861	8,649	48%	\$ 7,763	\$ (5,635) ↓	11%	951
Still in College	11,379	5,095	45%	\$ 7,250	\$ (6,148) ↓	17%	866
Lower Division Degree	1,898	1,068	56%	\$ 10,271	\$ (3,127) ↓	31%	331
Bachelor's Degree or Higher	11,252	4,221	38%	\$ 12,110	\$ (1,288) ↓	43%	1,815

↑value is above the living wage, ↓ value is below the living wage.

Overall, 20% of high school graduates with full-quarter wages had a quarterly wage above the quarterly living wage. The rate was lowest for those with *Some College* where only 11% of high school graduates in this group, despite having some level of additional postsecondary education, had wages above the living wage. This low rate may again confirm the split focus of this group, trying to both work and go to college without being able to focus exclusively on either pursuit.

The number of *No College* high school graduates with wages above the living wage was 17%. This is despite being available to

engage in the labor market for the full five-year period after graduation.

The low rate of attaining wages above this living wage is particularly important when one considers that the *No College* and *Some College* graduates make up approximately 60% of high school graduates with full quarter wages, yet between the two groups, only 14% of them have a living wage sufficient to meet the basic cost of living in Maryland. In comparison, 43% of those with *Bachelor's Degree or Higher* and 31% of those with a *Lower Division Degree* had wages above the living wage.

Question 2. Hours Worked Per Week

The MLDS Center does not contain data on hours worked therefore this section of the reporting requirement cannot be fulfilled. This section is left intentionally blank.

Question 3. High School Graduates and Labor Sector

There were 19,834 high school graduates, or 35% of all high school graduates, who had wages with the same employer⁹ for three consecutive fiscal quarters five years after high school graduation that can be analyzed for wages by labor sector. See **Table 3**.

This means that 77% of 25,818 high school graduates with full-quarter wages (wages for three quarters) remained with the same-employer for all three fiscal quarters; 23% of high school graduates with full-quarter wages changed employers at least once during this

period and are therefore removed from analysis in this section.

Table 3. Maryland Public High School Graduates, 2019, Full-Quarter and Same-Employer Wages, Five Years after High School Graduation, Fiscal Quarter 2 of 2024

2019 High School Graduates	Total	%
All High School Graduates	57,373	
High School Graduates with Full-Quarter Wages	25,818	45%
Same-Employer Wages	19,834	35%

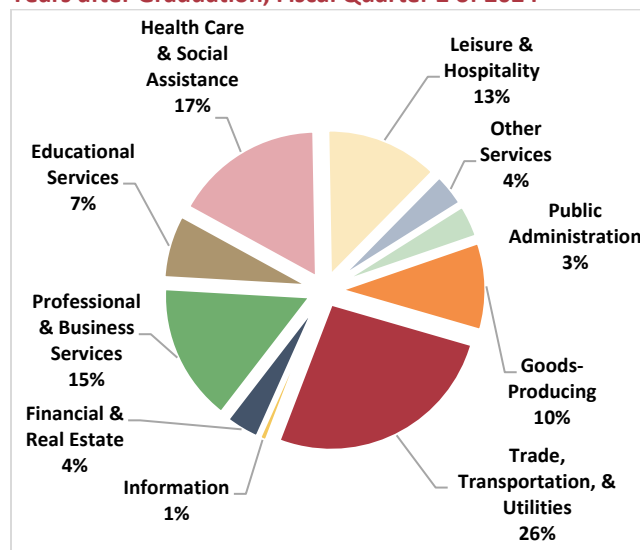
Labor Sector and Median Quarterly Wages by Educational Attainment

Five years after high school graduation, the labor sector¹⁰ with the largest share of high school graduates with same-employer wages was *Trade, Transportation, & Utilities* (26%). *Health Care & Social Assistance* and *Professional & Business Services* were the next two largest sectors with 17% and 15% of same-employer graduates respectively. See **Chart 2**.

In 2024, collectively, these three sectors employed over 1.35 million Marylanders (around half of all wage earners) through more than 106,000 businesses and paid \$32 billion in wages (half of all wages paid).¹¹ These three sectors represented \$153 billion of the \$433 billion private sector gross domestic product in Maryland in 2024¹² and included industries important to Maryland's infrastructure, business administration, and health, including freight and air transportation, retail trades,

power distribution, accounting, law, nursing, and home health care.

Chart 2. Maryland Public High School Graduates, 2019, Same-Employer Wages, Sector of Wages, Five Years after Graduation, Fiscal Quarter 2 of 2024



High school graduates with same-employer wages had median quarterly wages close to the living wage in two of the ten labor sectors: *Goods Producing* and *Financial & Real Estate*. Collectively, these two sectors included 14% of high school graduates with same-employer wages. See **Chart 3** and **Table 4**.

Two additional sectors, *Public Administration* and *Professional & Business Services*, had median quarterly wages around \$2,000 below the living wage. These two sectors include 18% of same-employer graduates.

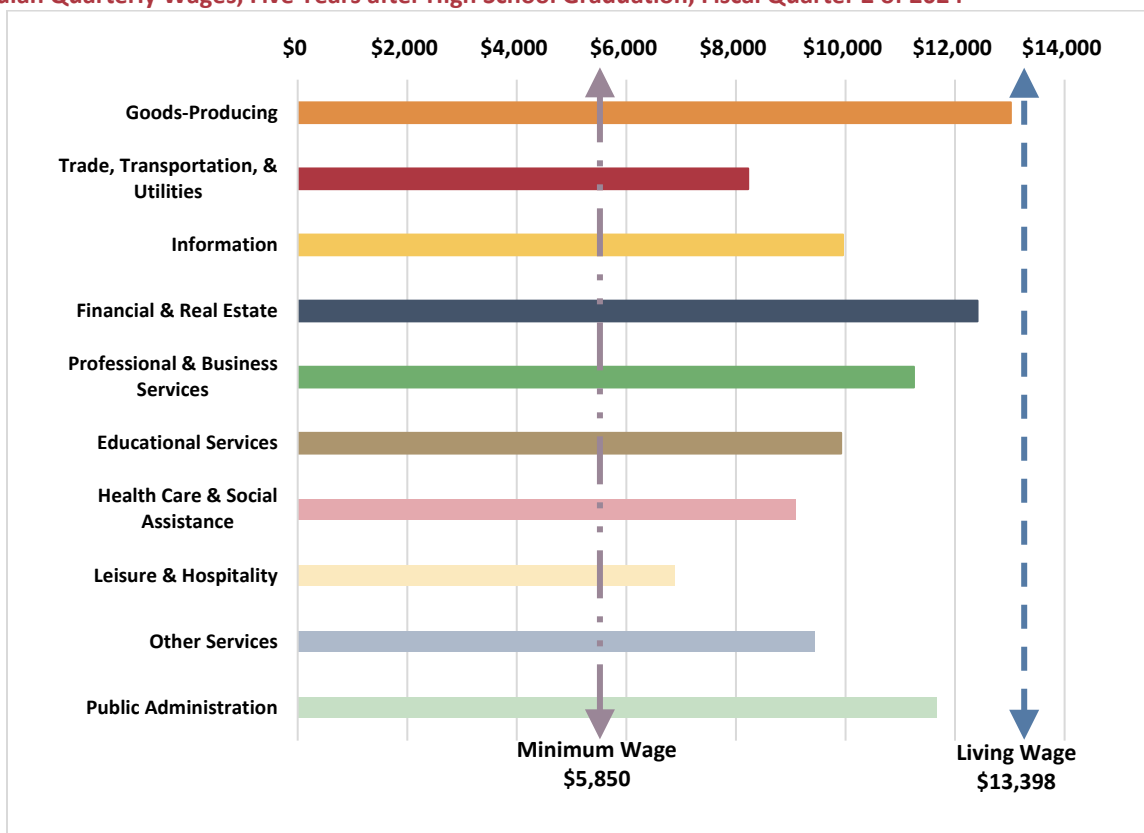
The largest labor sector, *Trade, Transportation, & Utilities*, with 26% of all high school graduates

with same-employer wages, had a median quarterly wage \$5,100 below the living wage.

The remaining 42% of same-employer high school graduates were in labor sectors with median quarterly wages \$3,400 to \$6,500 below the quarterly living wage.

Considered another way, the majority of high school graduates who remained with the same employer and were engaged in the labor market for nine consecutive months had an annual short fall between \$13,000 and \$26,000 between wages and the cost of living in Maryland.

Chart 3. Maryland Public High School Graduates, 2019, with Same-Employer Wages, Sector of Employment and Median Quarterly Wages, Five Years after High School Graduation, Fiscal Quarter 2 of 2024



Equally important to the median quarterly wage, is the percentage of high school graduates within each sector with wages above the living wage. See **Table 4**.

Overall, only 24% of high school graduates with same-employer wages had a wage above the living wage. See **Table 4**. Five of the ten sectors had between 30% and 47% of the same-

employer high school graduates with wages above the quarterly living wage. This includes one sector, *Goods-Producing*, with 47% of high school graduates with wages above the quarterly living wage. In the other five sectors, the rate at which high school graduates with same-employer wages have wages above the living wage ranges between 28% (*Educational Services*) and 7% (*Leisure & Hospitality*).

Table 4. Maryland Public High School Graduates, 2019, Same-Employer Wages and Median Quarterly Wages, Five Years after High School Graduation, Fiscal Quarter 2 of 2024

2019 High School Graduates					
Sector	Total	%	Median Quarterly Wage		% Above Living Wage (\$13,398)
Goods-Producing	1,935	10%	\$ 13,019	↑	47%
Trade, Transportation, & Utilities	5,227	26%	\$ 8,224	↓	15%
Information	169	1%	\$ 9,955	↓	31%
Financial & Real Estate	748	4%	\$ 12,411	↓	43%
Professional & Business Services	3,064	15%	\$ 11,250	↓	35%
Educational Services	1,404	7%	\$ 9,921	↓	28%
Health Care & Social Assistance	3,317	17%	\$ 9,094	↓	19%
Leisure & Hospitality	2,514	13%	\$ 6,885	↓	7%
Other Services	730	4%	\$ 9,440	↓	20%
Public Administration	726	4%	\$ 11,669	↓	39%
Total	19,834		\$9,488	↓	24% \$9,488

↑value is above living wage, ↓ value is below living wage

Median quarterly wages within each sector can also be considered by educational attainment. See **Chart 4** for the four labor sectors with the largest shares of same-employer graduates.

The *Trade, Transportation & Utilities*, with 26% of all graduates, showed minor variation in median quarterly wages by education. High school graduates without a college degree have a median quarterly wage that is either equal to or within \$1,200 of those with a college degree. Additionally, the median quarterly wage for those with *No College* is around \$1,000 higher than those with *Some College* but no degree.

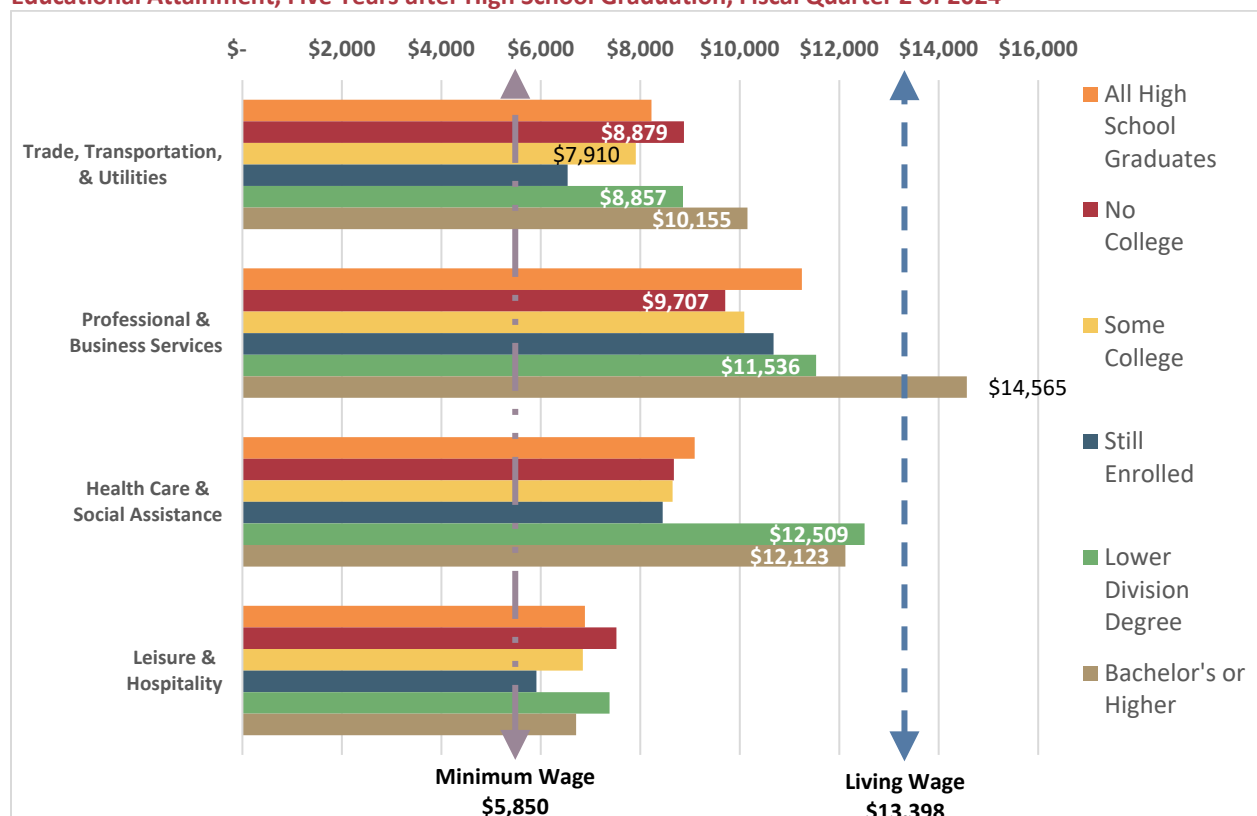
The *Professional & Business Services* sectors show large variation in median quarterly wages. Those with a *Bachelor's Degree or Higher* have a median quarterly wage approximately \$5,000

higher than those with *No College*. While *Lower Division Degree* high school graduates have a median quarterly wage approximately \$2,000 above *No College* high school graduates.

The *Leisure & Hospitality* sector, with 13% of all same-employer graduates, has little variation in median quarterly wages between educational attainment groups. Notable for this group is that those with *No College* or a *Lower Division Degree* have higher medians than those with a *Bachelor's Degree or Higher*.

Health Care & Social Assistance, with 17% of all same-employer graduates, exhibits another unique pattern. Those with a *Lower Division Degree* have a higher median quarterly wage than those with a *Bachelor's Degree or Higher*.

Chart 4. Maryland Public High School Graduates, 2019, Sector of Employment and Median Quarterly Wages by Educational Attainment, Five Years after High School Graduation, Fiscal Quarter 2 of 2024



The higher wages at lower degree levels or with no degree in *Leisure & Hospitality* and *Health Care & Social Assistance* may be driven by two inter-related factors: overtime and shift work as

it is too soon (five years after high school graduation) for professional experience or promotion to play a substantial role in wage variation. Rather, it may be that those with

lower-levels of education or no college degree are working evenings, weekends, and holidays, which may pay a premium over traditional day shifts. Second, it may be likely that, at lower levels of education or with no college education, individuals are employed in positions that pay hourly wages and accrue overtime earnings whereas those with a *Bachelor's or Higher* are likely engaged in salaried positions such that wages earned by those with *Lower Division Degrees* or with *No College* do not reflect a conventional 40 hour work week.¹³

An additional factor tied to the wage patterns in *Health Care & Social Assistance* is that entry-level employment as a nurse in Maryland requires only an Associate's degree, allowing high school graduates to quickly enter career employment (2 years after high school graduation) and build progressively higher wages over the next 3-year period. In Maryland, graduates with a Nursing Associate's degree have an average annualized wage of \$80,919 (or \$20,230 quarterly) three years after *college* graduation (or five years after high school graduation).¹⁴ For those who elect the Bachelor's degree pathway to Nursing, five years after high school graduation, they will have had one year in the labor market. In

Maryland, graduates with a Nursing Bachelor's degree have an average annualized wage of \$75,938 (or \$18,985 quarterly wage) one year after *college* graduation.¹⁵

Overall, those with a college degree have higher median quarterly wages in all sectors and had more sectors with wages near or above the quarterly living wage (\$13,398). **See Table 5.** For example, seven of ten sectors for those with a *Bachelor's Degree or Higher* and four of ten sectors for those with a *Lower Division Degree* had median quarterly wages near or above the quarterly living wage (\$13,398). Comparatively only one or two sectors for those with *No College* or *Still in College* have a median quarterly wage near the quarterly living wage while the *Some College* group did not have a median quarterly wage above the quarterly living wage for any sector.

One labor sector had a median quarterly wage near or above the quarterly living wage for every educational attainment group. The *Goods-Producing* sector had median quarterly wages near the quarterly living wage for all educational attainment groups, although wages varied from a low of \$11,598 (*Some College*) to a high of \$17,833 (*Bachelor's Degree or Higher*).

Table 5. Maryland Public High School Graduates, 2019, Same-Employer Wages and Median Quarterly Wages, Five Years after High School Graduation, Fiscal Quarter 2 of 2024

Sector	All High School Graduates	No College	Some College	Still in College	Lower Division Degree	Bachelor's Degree or Higher
Goods-Producing	↔ \$13,019	↔ \$12,804	\$11,598	↔ \$12,851	↑ \$13,417	↑ \$17,833
Trade, Transportation, & Utilities	\$8,224	\$8,879	\$7,910	\$6,539	\$8,857	\$10,155
Information	\$9,955	\$9,286	\$8,583	\$7,067	↑ \$14,389	↔ \$12,646
Financial & Real Estate	↔ \$12,411	\$11,019	\$10,398	\$10,808	\$11,597	↑ \$16,016
Professional & Business Services	\$11,250	\$9,707	\$10,091	\$10,679	\$11,536	↑ \$14,565
Educational Services	\$9,921	\$8,340	\$7,823	\$9,595	\$9,091	↔ \$13,241
Health Care & Social Assistance	\$9,094	\$8,676	\$8,649	\$8,449	↔ \$12,509	↔ \$12,123
Leisure & Hospitality	\$6,885	\$7,521	\$6,843	\$5,913	\$7,383	\$6,711
Other Services	\$9,440	\$10,529	\$8,406	\$7,212	\$8,710	\$11,000
Public Administration	\$11,669	↔ \$12,651	\$10,760	\$9,960	↑ \$15,880	↔ \$12,139
Total	\$9,488	\$9,508	\$8,550	\$8,412	\$10,854	\$13,250

↑ value is above living wage, ↔ value is close to living wage.

Also consistent with prior reporting years, two sectors *Leisure & Hospitality* and *Trade, Transportation, & Utilities* do not have median quarterly wages near or above the quarterly living wage for any educational attainment groups.

One interesting pattern that persists each year is for those *Still in College*. High school graduates in this group are still engaged in postsecondary education and would be presumed to be working at a reduced capacity to prioritize education and yet they fared as

well or better in several labor sectors than those who would be expected to be engaged in the labor market full-time (*No College* and *Some College*). This may result from the fact that many high school graduates in the *Still in College* group have already attained a degree (either an Associate's or Bachelor's) and have entered the labor market while pursuing an additional credential.

See **Appendix 1** for additional labor sector and educational attainment data tables by race, ethnicity, gender, and economic status.

CONCLUSIONS

The analysis in this report, like prior reports, demonstrates that outcomes, five years after high school graduation, vary greatly by educational attainment and labor sector. Wages are higher for high school graduates who finish college than those who 1) do not pursue postsecondary education, 2) are still in college, or 3) do pursue postsecondary education but disengage without earning a degree. These results are also consistent with national data available on earnings by level of educational attainment.¹⁶

Applied to this report, this means that as many as 30,000 high school graduates from the 2019 cohort or half of the graduating class (*No College* + *Some College*) included in this report may be more likely to experience lower wages for at least early periods of their career, something that can have long term implications for lifetime earnings and career growth.

The *No College* group, the only group with five full years to pursue career track employment and experience wage progressions, had a median quarterly wage that was \$1,615 lower than those with a *Lower Division Degree* and \$3,454 below those with a *Bachelor's Degree* or *Higher*. It is possible that some high school graduates who do not continue to college may be exploring career options and training programs, including completing licensure requirements or apprenticeships, which may depress wages during the first two or three years of employment after high school. While that gap between *No College* and *Lower Division Degree* may seem minor, when annualized, the \$6,400 gap would contribute to the annual cost of internet/cell service (\$1,929) or medical expenses (\$3,643) in Maryland.¹⁷ This result suggests that the return on the \$10,000¹⁸ investment in earning an Associate's degree from a Maryland community college provides

wage premiums, at least the beginning of a career.

Determining the percentage of each educational attainment group with wages above the living wage also identified patterns that were not apparent when comparing median quarterly wages alone. When considered from this perspective, 31% of those with a *Lower Division Degree* had wages above the living, which is fourteen percentage points higher than those with *No College*.

High school graduates with *Some College* had a lower median quarterly wage than those without any exposure to college, suggesting that trying college and not finishing may be a worse career decision than not going to college at all. And only 11% of this group had wages above the living wage. Comparatively, larger shares of those with *No College* and those *Still in College* had wages above the living wage (17% for each group). Returning to college to complete short-term credentials like a Certificate or Associate's degree may help the lifelong earning potential for those with *Some College*.

What is also clear from this analysis is that some labor sectors, no matter the level of education, do not provide sufficient early career wages to meet the cost of living in Maryland. The *Leisure & Hospitality* labor sector had median quarterly wages between \$5,913 and \$7,521 for all educational attainment groups, even those with college degrees. Or stated another way, high school graduates in this labor sector had median quarterly wages that were only half the required quarterly living wage (\$13,398). This pattern exists in all prior cohorts analyzed over the seven years of this reporting series. This labor sector continues to have one of the largest shares of high school graduates

(13% of all with same-employer wages) and only 7% of those in this sector, regardless of educational attainment, had wages above the living wage. Further, none of the sectors had a majority of high school graduates with wages above the living wage. Only five of the ten labor sectors had between 31% and 47% of high school graduates with wages above the living wage, suggesting that most high school graduates, despite remaining with the same employer for nine consecutive months will experience significant shortfalls in earnings as they transition from youth to early adulthood.

It is also worth noting that the 2019 cohort of high school graduates with wages in 2024, like last year's cohort, has almost rebounded to pre-COVID rates of wage visibility. The road to economic recovery and the return to traditional labor market patterns for high school graduates, five years after graduation, continues to lag. See **Table 6**.

Table 6. Maryland Public High School Graduates, Wage Visibility, Five Years after High School Graduation

Cohort Year	Total Graduates	Rate of Wage Visibility	
2012 Cohort (2017 wages)	59,510	27,535	46%
2013 Cohort (2018 wages)	59,560	27,822	47%
2014 Cohort (2019 wages)	58,136	27,330	47%
2015 Cohort (2020 wages)	57,509	9,706	17%
2016 Cohort (2021 wages)	57,502	23,179	40%
2017 Cohort (2022 wages)	57,170	22,797	40%
2018 Cohort (2023 wages)	58,006	26,013	45%
2019 Cohort (2024 Wages)	57,373	25,818	45%

The 2019 cohort graduated high school one year prior to COVID and may have experienced disruptions in employment and education that

could have a long-term impact on lifelong earnings. They also entered the labor market during a period of rapidly increasing inflation. When adjusting for inflation, the 2019 cohort, with 2024 wages, realized a \$120 increase in the median quarterly wage over the 2018 (2023 wages) cohort and \$1,331 increase in median quarterly wages over the first cohort (2017 wages) in the reporting series. See **Table 7**.

Table 7. Maryland Public High School Graduates, Median Quarterly Wages, Five Years after High School Graduation

Cohort Year	Graduates Visible in Labor Market	Median Quarterly Wages	
		Nominal Wage	Inflation Adjusted to Q2 2024
2012 Cohort (2017 wages)	27,535	\$5,916	\$7,203
2013 Cohort (2018 wages)	27,822	\$6,160	\$7,680
2014 Cohort (2019 wages)	27,330	\$6,160	\$7,556
2015 Cohort (2020 wages)	9,706	\$5,792	\$7,059
2016 Cohort (2021 wages)	23,179	\$7,138	\$8,254
2017 Cohort (2022 wages)	22,797	\$7,500	\$7,952
2018 Cohort (2023 wages)	26,013	\$8,171	\$8,414
2019 Cohort (2024 Wages)	25,818	\$8,534	-

Finally, it is important to note that the analysis presented here was conducted at the early stages in this population's career and represents entry level wages. Many individuals in this population have only been in the workforce for a short period of time. The wage outcomes reported here may increase rapidly. It is difficult to predict if the wage gaps present in early-career, entry-level wages between educational, demographic, or economic groups will widen or narrow as this cohort progresses through their careers.

APPENDICES

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				No College			
			Female		Male		Female		Male	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	420	\$11,516	1,515	\$13,495	78	\$9,675	749	\$13,171
Trade, Transportation and Utilities	5,227	\$8,224	2,123	\$7,578	3,104	\$8,653	573	\$7,890	1,193	\$9,501
Information Technology	169	\$9,955	84	\$8,684	85	\$11,067	7	^	14	\$10,340
Financial and Real Estate	748	\$12,411	391	\$11,544	357	\$13,305	70	\$10,300	60	\$12,987
Professional and Business Services	3,064	\$11,250	1,468	\$10,449	1,596	\$12,068	250	\$8,602	422	\$10,295
Education	1,404	\$9,921	988	\$10,377	416	\$8,915	68	\$8,183	58	\$8,613
Health Services	3,317	\$9,094	2,726	\$9,226	591	\$8,467	454	\$8,759	114	\$8,414
Leisure and Hospitality	2,514	\$6,885	1,347	\$6,814	1,167	\$6,945	319	\$7,417	356	\$7,616
Other Services/Unclassified	730	\$9,440	407	\$8,311	323	\$10,650	98	\$9,157	145	\$11,918
Public Administration	726	\$11,669	303	\$11,102	423	\$12,663	32	\$10,273	138	\$13,075
Total	19,834	\$9,488	10,257	\$9,037	9,577	\$10,047	1,949	\$8,359	3,249	\$10,388

Education Article § 24-703(h)(4), Annotated Code of Maryland, states that, "data that may be identifiable based on the size or uniqueness of the population under consideration may not be reported in any form by the Center." Due to the small population under consideration data are suppressed and disaggregations are omitted in compliance with the above requirement. Suppressed data are indicated with an *. Median quarterly wages are only provided when calculated on populations of 10 or more. Redacted medians are indicated with an ^. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing.

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				Some College			
			Female		Male		Female		Male	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	420	\$11,516	1,515	\$13,495	124	\$10,297	352	\$11,945
Trade, Transportation and Utilities	5,227	\$8,224	2,123	\$7,578	3,104	\$8,653	879	\$7,734	1,156	\$8,042
Information Technology	169	\$9,955	84	\$8,684	85	\$11,067	20	\$6,598	31	\$10,088
Financial and Real Estate	748	\$12,411	391	\$11,544	357	\$13,305	114	\$10,290	88	\$10,561
Professional and Business Services	3,064	\$11,250	1,468	\$10,449	1,596	\$12,068	397	\$9,425	404	\$10,659
Education	1,404	\$9,921	988	\$10,377	416	\$8,915	197	\$7,972	114	\$7,255
Health Services	3,317	\$9,094	2,726	\$9,226	591	\$8,467	911	\$8,754	224	\$8,244
Leisure and Hospitality	2,514	\$6,885	1,347	\$6,814	1,167	\$6,945	533	\$6,846	496	\$6,789
Other Services/Unclassified	730	\$9,440	407	\$8,311	323	\$10,650	157	\$7,775	103	\$9,371
Public Administration	726	\$11,669	303	\$11,102	423	\$12,663	91	\$10,571	103	\$11,280
Total	19,834	\$9,488	10,257	\$9,037	9,577	\$10,047	3,423	\$8,395	3,071	\$8,830

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Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				Still Enrolled			
			Female		Male		Female		Male	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	420	\$11,516	1,515	\$13,495	83	\$11,960	174	\$13,528
Trade, Transportation and Utilities	5,227	\$8,224	2,123	\$7,578	3,104	\$8,653	381	\$5,944	455	\$7,094
Information Technology	169	\$9,955	84	\$8,684	85	\$11,067	18	\$5,778	11	\$10,967
Financial and Real Estate	748	\$12,411	391	\$11,544	357	\$13,305	76	\$10,393	57	\$11,469
Professional and Business Services	3,064	\$11,250	1,468	\$10,449	1,596	\$12,068	292	\$9,651	277	\$12,889
Education	1,404	\$9,921	988	\$10,377	416	\$8,915	286	\$10,327	108	\$7,063
Health Services	3,317	\$9,094	2,726	\$9,226	591	\$8,467	620	\$8,602	148	\$7,215
Leisure and Hospitality	2,514	\$6,885	1,347	\$6,814	1,167	\$6,945	279	\$5,943	204	\$5,757
Other Services/Unclassified	730	\$9,440	407	\$8,311	323	\$10,650	62	\$5,795	39	\$9,946
Public Administration	726	\$11,669	303	\$11,102	423	\$12,663	77	\$10,783	74	\$8,071
Total	19,834	\$9,488	10,257	\$9,037	9,577	\$10,047	2,174	\$8,318	1,547	\$8,667

Education Article § 24-703(h)(4), Annotated Code of Maryland, states that, "data that may be identifiable based on the size or uniqueness of the population under consideration may not be reported in any form by the Center." Due to the small population under consideration data are suppressed and disaggregations are omitted in compliance with the above requirement. Suppressed data are indicated with an *. Median quarterly wages are only provided when calculated on populations of 10 or more. Redacted medians are indicated with an ^. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing.

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				Lower Division Degree			
			Female		Male		Female		Male	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	420	\$11,516	1,515	\$13,495	16	\$10,764	61	\$14,305
Trade, Transportation and Utilities	5,227	\$8,224	2,123	\$7,578	3,104	\$8,653	95	\$8,280	134	\$9,309
Information Technology	169	\$9,955	84	\$8,684	85	\$11,067	*	^	*	^
Financial and Real Estate	748	\$12,411	391	\$11,544	357	\$13,305	22	\$12,394	10	\$10,294
Professional and Business Services	3,064	\$11,250	1,468	\$10,449	1,596	\$12,068	56	\$10,617	63	\$12,429
Education	1,404	\$9,921	988	\$10,377	416	\$8,915	34	\$8,947	11	\$10,763
Health Services	3,317	\$9,094	2,726	\$9,226	591	\$8,467	154	\$12,858	24	\$10,905
Leisure and Hospitality	2,514	\$6,885	1,347	\$6,814	1,167	\$6,945	59	\$7,099	37	\$7,532
Other Services/Unclassified	730	\$9,440	407	\$8,311	323	\$10,650	*	^	*	^
Public Administration	726	\$11,669	303	\$11,102	423	\$12,663	23	\$14,273	51	\$16,486
Total	19,834	\$9,488	10,257	\$9,037	9,577	\$10,047	490	\$10,301	404	\$11,714

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Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				Bachelor's Degree or Higher			
			Female		Male		Female		Male	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	420	\$11,516	1,515	\$13,495	119	\$16,753	179	\$18,438
Trade, Transportation and Utilities	5,227	\$8,224	2,123	\$7,578	3,104	\$8,653	195	\$9,241	166	\$11,087
Information Technology	169	\$9,955	84	\$8,684	85	\$11,067	35	\$10,769	26	\$14,996
Financial and Real Estate	748	\$12,411	391	\$11,544	357	\$13,305	109	\$15,518	142	\$16,443
Professional and Business Services	3,064	\$11,250	1,468	\$10,449	1,596	\$12,068	473	\$13,134	430	\$16,553
Education	1,404	\$9,921	988	\$10,377	416	\$8,915	403	\$13,462	125	\$12,593
Health Services	3,317	\$9,094	2,726	\$9,226	591	\$8,467	587	\$12,254	81	\$11,040
Leisure and Hospitality	2,514	\$6,885	1,347	\$6,814	1,167	\$6,945	157	\$6,711	74	\$6,675
Other Services/Unclassified	730	\$9,440	407	\$8,311	323	\$10,650	63	\$10,934	26	\$11,935
Public Administration	726	\$11,669	303	\$11,102	423	\$12,663	80	\$11,830	57	\$12,145
Total	19,834	\$9,488	10,257	\$9,037	9,577	\$10,047	2,221	\$12,562	1,306	\$14,787

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Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall		No College		Some College		Still in College		Lower Division Degree		Bachelor's Degree or Higher	
			Hispanic, Any Race		Hispanic, Any Race		Hispanic, Any Race		Hispanic, Any Race		Hispanic, Any Race		Hispanic, Any Race	
	n	\$	n	\$	n	\$	\$	n	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	327	\$12,038	187	\$12,791	89	\$11,500	24	\$11,550	14	\$12,965	13	\$15,075
Trade, Transportation and Utilities	5,227	\$8,224	899	\$9,041	362	\$9,546	342	\$8,593	127	\$7,322	41	\$9,865	27	\$10,155
Information Technology	169	\$9,955	26	\$10,079	6	^	8	^	4	^	*	^	*	^
Financial and Real Estate	748	\$12,411	131	\$12,420	48	\$13,113	39	\$11,574	21	\$9,913	4	\$12,412	19	\$15,899
Professional and Business Services	3,064	\$11,250	442	\$10,696	156	\$9,518	140	\$10,555	62	\$10,019	18	\$13,764	66	\$13,889
Education	1,404	\$9,921	139	\$9,618	13	\$10,185	41	\$8,416	34	\$7,479	9	\$8,935	42	\$12,975
Health Services	3,317	\$9,094	482	\$9,139	121	\$9,118	207	\$8,853	90	\$9,012	20	\$10,720	44	\$11,806
Leisure and Hospitality	2,514	\$6,885	426	\$7,811	173	\$8,347	162	\$7,213	55	\$8,279	14	\$6,843	22	\$5,436
Other Services/Unclassified	730	\$9,440	109	\$10,650	32	\$11,286	43	\$9,783	23	\$8,691	*	^	*	^
Public Administration	726	\$11,669	70	\$11,258	17	\$10,472	24	\$9,050	17	\$10,637	4	^	8	^
Total	19,834	\$9,488	3,051	\$9,642	1,115	\$9,905	1,095	\$9,075	457	\$8,624	132	\$11,038	252	\$ 12,827

Education Article § 24-703(h)(4), Annotated Code of Maryland, states that, "data that may be identifiable based on the size or uniqueness of the population under consideration may not be reported in any form by the Center." Due to the small population under consideration data are suppressed and disaggregations are omitted in compliance with the above requirement. Suppressed data are indicated with an *. Median quarterly wages are only provided when calculated on populations of 10 or more. Redacted medians are indicated with an ^. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing.

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The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall						No College					
			African-American / Black Alone		Asian Alone		White Alone		African-American / Black Alone		Asian Alone		White Alone	
	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	323	\$12,225	91	\$17,192	1,309	\$13,211	138	\$11,294	*	^	579	\$13,115
Trade, Transportation and Utilities	5,227	\$8,224	2,042	\$7,775	259	\$6,984	2,278	\$8,564	671	\$8,168	28	\$9,779	846	\$9,273
Information Technology	169	\$9,955	49	\$7,537	19	\$15,167	76	\$10,144	7	^			9	^
Financial and Real Estate	748	\$12,411	235	\$10,344	69	\$17,530	372	\$13,015	46	\$10,062			64	\$11,160
Professional and Business Services	3,064	\$11,250	881	\$9,590	262	\$14,427	1,595	\$11,956	252	\$8,601	*	^	338	\$10,549
Education	1,404	\$9,921	416	\$9,205	97	\$9,180	759	\$10,757	66	\$8,451			49	\$7,464
Health Services	3,317	\$9,094	1,340	\$8,685	273	\$8,339	1,358	\$9,745	277	\$8,357	9	^	206	\$8,930
Leisure and Hospitality	2,514	\$6,885	743	\$6,571	153	\$5,827	1,350	\$7,128	236	\$6,706	12	\$ 10,416	363	\$7,949
Other Services/Unclassified	730	\$9,440	152	\$8,489	35	\$4,625	450	\$9,776	48	\$9,773	6	^	159	\$11,129
Public Administration	726	\$11,669	244	\$10,088	19	\$13,621	414	\$13,078	57	\$10,594	*	^	103	\$13,410
Total	19,834	\$9,488	6,425	\$8,572	1,277	\$9,379	9,961	\$10,204	1,798	\$8,482	65	\$9,658	2,716	\$10,194

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Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall						Some College					
			African- American / Black Alone		Asian Alone		White Alone		African-American / Black Alone		Asian Alone		White Alone	
	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	323	\$12,225	91	\$17,192	1,309	\$13,211	100	\$10,677	23	\$9,722	292	\$11,873
Trade, Transportation and Utilities	5,227	\$8,224	2,042	\$7,775	259	\$6,984	2,278	\$8,564	930	\$7,764	116	\$5,818	730	\$8,127
Information Technology	169	\$9,955	49	\$7,537	19	\$15,167	76	\$10,144	23	\$6,300	*	^	20	\$10,022
Financial and Real Estate	748	\$12,411	235	\$10,344	69	\$17,530	372	\$13,015	100	\$9,515	10	\$10,623	72	\$10,838
Professional and Business Services	3,064	\$11,250	881	\$9,590	262	\$14,427	1,595	\$11,956	303	\$9,425	45	\$9,251	324	\$10,549
Education	1,404	\$9,921	416	\$9,205	97	\$9,180	759	\$10,757	127	\$8,377	17	\$5,071	124	\$7,966
Health Services	3,317	\$9,094	1,340	\$8,685	273	\$8,339	1,358	\$9,745	581	\$8,698	57	\$7,844	347	\$8,802
Leisure and Hospitality	2,514	\$6,885	743	\$6,571	153	\$5,827	1,350	\$7,128	353	\$6,571	72	\$5,538	481	\$7,065
Other Services/ Unclassified	730	\$9,440	152	\$8,489	35	\$4,625	450	\$9,776	70	\$7,809	17	\$3,600	136	9,120
Public Administration	726	\$11,669	244	\$10,088	19	\$13,621	414	\$13,078	87	\$9,438	*	^	88	\$12,404
Total	19,834	\$9,488	6,425	\$8,572	1,277	\$9,379	9,961	\$10,204	2,674	\$8,277	364	\$6,797	2,614	\$9,007

Education Article § 24-703(h)(4), Annotated Code of Maryland, states that, "data that may be identifiable based on the size or uniqueness of the population under consideration may not be reported in any form by the Center." Due to the small population under consideration data are suppressed and disaggregations are omitted in compliance with the above requirement. Suppressed data are indicated with an *. Median quarterly wages are only provided when calculated on populations of 10 or more. Redacted medians are indicated with an ^. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing. Note: Race is reported independent of Ethnicity therefore values do not sum to the total.

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall						Still in College					
			African-American / Black Alone		Asian Alone		White Alone		African-American / Black Alone		Asian Alone		White Alone	
	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	323	\$12,225	91	\$17,192	1,309	\$13,211	47	\$14,802	16	\$20,151	176	\$12,167
Trade, Transportation and Utilities	5,227	\$8,224	2,042	\$7,775	259	\$6,984	2,278	\$8,564	309	\$6,676	63	\$4,671	353	\$6,899
Information Technology	169	\$9,955	49	\$7,537	19	\$15,167	76	\$10,144	6	^	4	^	13	\$5,618
Financial and Real Estate	748	\$12,411	235	\$10,344	69	\$17,530	372	\$13,015	46	\$10,101	15	\$14,643	59	\$11,172
Professional and Business Services	3,064	\$11,250	881	\$9,590	262	\$14,427	1,595	\$11,956	156	\$9,405	63	\$12,321	315	\$11,379
Education	1,404	\$9,921	416	\$9,205	97	\$9,180	759	\$10,757	106	\$8,902	40	\$9,335	214	\$10,287
Health Services	3,317	\$9,094	1,340	\$8,685	273	\$8,339	1,358	\$9,745	299	\$8,518	87	\$6,323	317	\$8,599
Leisure and Hospitality	2,514	\$6,885	743	\$6,571	153	\$5,827	1,350	\$7,128	100	\$5,758	43	\$6,070	283	\$5,882
Other Services/ Unclassified	730	\$9,440	152	\$8,489	35	\$4,625	450	\$9,776	19	\$8,234	9	^	56	\$6,803
Public Administration	726	\$11,669	244	\$10,088	19	\$13,621	414	\$13,078	56	\$8,163	10	\$12,349	73	\$11,989
Total	19,834	\$9,488	6,425	\$8,572	1,277	\$9,379	9,961	\$10,204	1,144	\$8,232	350	\$7,883	1,859	\$8,825

*MLDS Center may only report aggregate, de-identified data. Data requests containing data elements subject to the Family Educational Rights and Privacy Act (FERPA) require suppressing values less than 10 to avoid unauthorized disclosure of protected information. Additional values are masked to prevent calculating masked values when group totals and sub-totals are provided. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing. Suppressed cells are indicated with an *. Note: Race is reported independent of Ethnicity therefore values do not sum to the total.

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall						Lower Division Degree					
			African-American / Black Alone		Asian Alone		White Alone		African-American / Black Alone		Asian Alone		White Alone	
	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	323	\$12,225	91	\$17,192	1,309	\$13,211	*	^	*	^	64	\$13,977
Trade, Transportation and Utilities	5,227	\$8,224	2,042	\$7,775	259	\$6,984	2,278	\$8,564	52	\$8,308	10	\$11,873	139	\$8,668
Information Technology	169	\$9,955	49	\$7,537	19	\$15,167	76	\$10,144	*	^			4	^
Financial and Real Estate	748	\$12,411	235	\$10,344	69	\$17,530	372	\$13,015	7	^	*	^	21	\$11,990
Professional and Business Services	3,064	\$11,250	881	\$9,590	262	\$14,427	1,595	\$11,956	23	\$11,211	*	^	77	\$11,256
Education	1,404	\$9,921	416	\$9,205	97	\$9,180	759	\$10,757	6	^			33	\$9,556
Health Services	3,317	\$9,094	1,340	\$8,685	273	\$8,339	1,358	\$9,745	29	\$10,414	8	^	118	\$13,158
Leisure and Hospitality	2,514	\$6,885	743	\$6,571	153	\$5,827	1,350	\$7,128	19	\$7,200	4	^	64	\$7,598
Other Services/ Unclassified	730	\$9,440	152	\$8,489	35	\$4,625	450	\$9,776	13	\$14,207			33	\$8,710
Public Administration	726	\$11,669	244	\$10,088	19	\$13,621	414	\$13,078					58	\$16,358
Total	19,834	\$9,488	6,425	\$8,572	1,277	\$9,379	9,961	\$10,204	152	\$9,756	30	\$10,528	611	\$11,340

*MLDS Center may only report aggregate, de-identified data. Data requests containing data elements subject to the Family Educational Rights and Privacy Act (FERPA) require suppressing values less than 10 to avoid unauthorized disclosure of protected information. Additional values are masked to prevent calculating masked values when group totals and sub-totals are provided. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing. Suppressed cells are indicated with an *. ^ no records available to report. Note: Race is reported independent of Ethnicity therefore values do not sum to the total.

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall						Bachelor's Degree or Higher					
			African-American / Black Alone		Asian Alone		White Alone		African-American / Black Alone		Asian Alone		White Alone	
	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	323	\$12,225	91	\$17,192	1,309	\$13,211	36	\$19,434	46	\$20,099	198	\$17,474
Trade, Transportation and Utilities	5,227	\$8,224	2,042	\$7,775	259	\$6,984	2,278	\$8,564	80	\$7,515	42	\$11,698	210	\$10,530
Information Technology	169	\$9,955	49	\$7,537	19	\$15,167	76	\$10,144	12	\$9,973	11	\$16,885	30	\$10,740
Financial and Real Estate	748	\$12,411	235	\$10,344	69	\$17,530	372	\$13,015	36	\$13,860	43	\$19,615	156	\$15,753
Professional and Business Services	3,064	\$11,250	881	\$9,590	262	\$14,427	1,595	\$11,956	147	\$12,482	145	\$16,741	541	\$14,854
Education	1,404	\$9,921	416	\$9,205	97	\$9,180	759	\$10,757	111	\$12,393	40	\$10,720	339	\$13,529
Health Services	3,317	\$9,094	1,340	\$8,685	273	\$8,339	1,358	\$9,745	154	\$10,129	112	\$9,997	370	\$14,784
Leisure and Hospitality	2,514	\$6,885	743	\$6,571	153	\$5,827	1,350	\$7,128	35	\$8,478	22	\$5,073	159	\$6,768
Other Services/ Unclassified	730	\$9,440	152	\$8,489	35	\$4,625	450	\$9,776	15	\$9,836	*	^	66	\$11,163
Public Administration	726	\$11,669	244	\$10,088	19	\$13,621	414	\$13,078	31	\$11,102	*	^	92	\$12,142
Total	19,834	\$9,488	6,425	\$8,572	1,277	\$9,379	9,961	\$10,204	657	\$11,391	468	\$14,719	2,161	\$13,629

*MLDS Center may only report aggregate, de-identified data. Data requests containing data elements subject to the Family Educational Rights and Privacy Act (FERPA) require suppressing values less than 10 to avoid unauthorized disclosure of protected information. Additional values are masked to prevent calculating masked values when group totals and sub-totals are provided. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing. Suppressed cells are indicated with an *. ^ no records available to report. Note: Race is reported independent of Ethnicity therefore values do not sum to the total.

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				No College			
			FARMS		Non-FARMS		FARMS		Non-FARMS	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	588	\$11,894	1,347	\$13,611	339	\$11,943	488	\$13,406
Trade, Transportation and Utilities	5,227	\$8,224	2,198	\$8,255	3,029	\$8,188	904	\$8,655	862	\$9,157
Information Technology	169	\$9,955	46	\$8,835	123	\$10,412	9	^	12	\$7,572
Financial and Real Estate	748	\$12,411	243	\$10,994	505	\$13,301	80	\$10,525	50	\$11,460
Professional and Business Services	3,064	\$11,250	898	\$9,774	2,166	\$11,939	344	\$8,933	328	\$10,625
Education	1,404	\$9,921	319	\$9,208	1,085	\$10,185	55	\$8,191	71	\$8,473
Health Services	3,317	\$9,094	1,289	\$8,876	2,028	\$9,277	329	\$8,876	239	\$8,404
Leisure and Hospitality	2,514	\$6,885	910	\$7,086	1,604	\$6,759	360	\$7,345	315	\$7,784
Other Services/Unclassified	730	\$9,440	226	\$9,750	504	\$9,358	99	\$10,192	144	\$10,864
Public Administration	726	\$11,669	209	\$10,980	517	\$12,145	62	\$10,943	108	\$13,174
Total	19,834	\$9,488	6,926	\$8,980	12,908	\$9,824	2,581	\$9,076	2,617	\$10,007

Education Article § 24-703(h)(4), Annotated Code of Maryland, states that, "data that may be identifiable based on the size or uniqueness of the population under consideration may not be reported in any form by the Center." Due to the small population under consideration data are suppressed and disaggregations are omitted in compliance with the above requirement. Suppressed data are indicated with an *. Median quarterly wages are only provided when calculated on populations of 10 or more. Redacted medians are indicated with an ^. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing.

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				Some College			
			FARMS		Non-FARMS		FARMS		Non-FARMS	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	588	\$11,894	1,347	\$13,611	152	\$11,240	324	\$11,666
Trade, Transportation and Utilities	5,227	\$8,224	2,198	\$8,255	3,029	\$8,188	864	\$8,158	1,171	\$7,718
Information Technology	169	\$9,955	46	\$8,835	123	\$10,412	19	\$8,784	32	\$6,909
Financial and Real Estate	748	\$12,411	243	\$10,994	505	\$13,301	79	\$10,583	123	\$10,226
Professional and Business Services	3,064	\$11,250	898	\$9,774	2,166	\$11,939	297	\$9,866	504	\$10,206
Education	1,404	\$9,921	319	\$9,208	1,085	\$10,185	103	\$7,885	208	\$7,760
Health Services	3,317	\$9,094	1,289	\$8,876	2,028	\$9,277	542	\$8,625	593	\$8,713
Leisure and Hospitality	2,514	\$6,885	910	\$7,086	1,604	\$6,759	370	\$6,888	659	\$6,806
Other Services/Unclassified	730	\$9,440	226	\$9,750	504	\$9,358	78	\$8,840	182	\$8,276
Public Administration	726	\$11,669	209	\$10,980	517	\$12,145	67	\$10,161	127	\$11,124
Total	19,834	\$9,488	6,926	\$8,980	12,908	\$9,824	2,571	\$8,586	3,923	\$8,528

Education Article § 24-703(h)(4), Annotated Code of Maryland, states that, "data that may be identifiable based on the size or uniqueness of the population under consideration may not be reported in any form by the Center." Due to the small population under consideration data are suppressed and disaggregations are omitted in compliance with the above requirement. Suppressed data are indicated with an *. Median quarterly wages are only provided when calculated on populations of 10 or more. Redacted medians are indicated with an ^. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing.

Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				Still in College			
			FARMS		Non-FARMS		FARMS		Non-FARMS	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	588	\$11,894	1,347	\$13,611	51	\$12,615	206	\$12,929
Trade, Transportation and Utilities	5,227	\$8,224	2,198	\$8,255	3,029	\$8,188	293	\$6,550	543	\$6,528
Information Technology	169	\$9,955	46	\$8,835	123	\$10,412	8	^	21	\$5,937
Financial and Real Estate	748	\$12,411	243	\$10,994	505	\$13,301	43	\$10,396	90	\$11,454
Professional and Business Services	3,064	\$11,250	898	\$9,774	2,166	\$11,939	111	\$9,728	458	\$11,236
Education	1,404	\$9,921	319	\$9,208	1,085	\$10,185	86	\$9,655	308	\$9,537
Health Services	3,317	\$9,094	1,289	\$8,876	2,028	\$9,277	234	\$8,585	534	\$8,419
Leisure and Hospitality	2,514	\$6,885	910	\$7,086	1,604	\$6,759	126	\$6,398	357	\$5,602
Other Services/Unclassified	730	\$9,440	226	\$9,750	504	\$9,358	30	\$9,907	71	\$5,925
Public Administration	726	\$11,669	209	\$10,980	517	\$12,145	43	\$10,635	108	\$9,700
Total	19,834	\$9,488	6,926	\$8,980	12,908	\$9,824	1,025	\$8,234	2,696	\$8,497

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Appendix 1: High School Graduates, State of Maryland, 2019, Median Quarterly Wages Five Years after High School Graduation, Fiscal Quarter 2 of 2024

The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				Lower Division Degree			
			FARMS		Non-FARMS		FARMS		Non-FARMS	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	588	\$11,894	1,347	\$13,611	16	\$11,777	61	\$14,305
Trade, Transportation and Utilities	5,227	\$8,224	2,198	\$8,255	3,029	\$8,188	66	\$9,525	163	\$8,574
Information Technology	169	\$9,955	46	\$8,835	123	\$10,412	*	^	*	^
Financial and Real Estate	748	\$12,411	243	\$10,994	505	\$13,301	10	\$11,985	22	\$11,597
Professional and Business Services	3,064	\$11,250	898	\$9,774	2,166	\$11,939	25	\$10,369	94	\$11,698
Education	1,404	\$9,921	319	\$9,208	1,085	\$10,185	8	^	37	\$8,971
Health Services	3,317	\$9,094	1,289	\$8,876	2,028	\$9,277	50	\$11,799	128	\$12,949
Leisure and Hospitality	2,514	\$6,885	910	\$7,086	1,604	\$6,759	22	\$8,559	74	\$7,150
Other Services/Unclassified	730	\$9,440	226	\$9,750	504	\$9,358	*	^	*	^
Public Administration	726	\$11,669	209	\$10,980	517	\$12,145	18	\$16,871	56	\$15,242
Total	19,834	\$9,488	6,926	\$8,980	12,908	\$9,824	227	\$10,618	667	\$10,869

Education Article § 24-703(h)(4), Annotated Code of Maryland, states that, "data that may be identifiable based on the size or uniqueness of the population under consideration may not be reported in any form by the Center." Due to the small population under consideration data are suppressed and disaggregations are omitted in compliance with the above requirement. Suppressed data are indicated with an *. Median quarterly wages are only provided when calculated on populations of 10 or more. Redacted medians are indicated with an ^. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing.

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The tables below provide the distributions of high school graduates by select characteristics and the median quarterly wage for those graduates with same-employer wages. See the **Technical Appendix** for information on same-employer wages.

Sector	All Same-Employer High School Graduates		Overall				Bachelor's Degree or Higher			
			FARMS		Non-FARMS		FARMS		Non-FARMS	
	n	\$	n	\$	n	\$	n	\$	n	\$
Goods Production	1,935	\$13,019	588	\$11,894	1,347	\$13,611	30	\$18,099	268	\$17,776
Trade, Transportation and Utilities	5,227	\$8,224	2,198	\$8,255	3,029	\$8,188	71	\$8,389	290	\$10,442
Information Technology	169	\$9,955	46	\$8,835	123	\$10,412	7	^	54	\$13,351
Financial and Real Estate	748	\$12,411	243	\$10,994	505	\$13,301	31	\$14,308	220	\$16,234
Professional and Business Services	3,064	\$11,250	898	\$9,774	2,166	\$11,939	121	\$13,207	782	\$14,771
Education	1,404	\$9,921	319	\$9,208	1,085	\$10,185	67	\$13,062	461	\$13,266
Health Services	3,317	\$9,094	1,289	\$8,876	2,028	\$9,277	134	\$10,908	534	\$12,292
Leisure and Hospitality	2,514	\$6,885	910	\$7,086	1,604	\$6,759	32	\$7,952	199	\$6,557
Other Services/Unclassified	730	\$9,440	226	\$9,750	504	\$9,358	10	\$6,231	79	\$11,250
Public Administration	726	\$11,669	209	\$10,980	517	\$12,145	19	\$11,997	118	\$12,142
Total	19,834	\$9,488	6,926	\$8,980	12,908	\$9,824	522	\$11,952	3,005	\$13,494

Education Article § 24-703(h)(4), Annotated Code of Maryland, states that, "data that may be identifiable based on the size or uniqueness of the population under consideration may not be reported in any form by the Center." Due to the small population under consideration data are suppressed and disaggregations are omitted in compliance with the above requirement. Suppressed data are indicated with an *. Median quarterly wages are only provided when calculated on populations of 10 or more. Redacted medians are indicated with an ^. The MLDS Center uses a variety of methods for suppressing, including rounding and perturbing.

Appendix 2: Technical Documentation

Introduction

This technical documentation contains information on the primary data and methods used to prepare *The Career Preparation Expansion Act* (CPEA) report as well as overviews of the two state agencies who produce the report.

The annual CPEA report is submitted in fulfillment of the requirement in *The Career Preparation Expansion Act* (CPEA), Chapter 695 of 2018 (see Education Article § 21-206, Annotated Code of Maryland).

Report Requirements:

The Maryland Longitudinal Data System (MLDS) Center and the Governor's Workforce Development Board (GWDB) are required to produce a report on high school graduates for the five-year period after graduation on:

1. Wages earned;
2. Hours worked per week; and
3. The industry in which the individuals are employed.

State Agencies

The **Maryland Longitudinal Data System Center** (MLDS Center) is the State of Maryland's central repository for student and workforce data. The MLDS Center develops and maintains the MLDS to provide analyses, produce relevant information, and inform choices to improve student and workforce outcomes in the State of Maryland.

The **Governor's Workforce Development Board** (GWDB) serves as the Governor's chief strategy and policy-making body for workforce development in Maryland. The GWDB brings together leaders from business, labor, education, community organizations, and government to collaborate on business-driven workforce strategies that strengthen Maryland's economic competitiveness and expand pathways to work, wages, and wealth for all Marylanders.

MLDS Data

The MLDS connects data from across Maryland's education and workforce agencies. These data are subject to strict data management, security, and privacy requirements. The MLDS may only report aggregated, de-identified data. All research conducted by the MLDS Center focuses on what happens to students before and after critical transitions between education and workforce pathways. All research and analysis using the MLDS is cross-sector.

The analysis in the CPEA report focuses on the employment of individuals as they transition into the workforce after receiving their high school diploma, including whether any of the graduates enrolled in college or earned a college degree subsequent to high school graduation. Below is an overview of the available data within the System to support this analysis:

Education Data

The MLDS contains education data on all students from Maryland public high schools, students attending Maryland public and state-aided independent institutions of higher education, and adults completing GED® Testing or the National External Diploma Program® (NEDP®). Education data begin with the 2007-2008 academic year. The MLDS does not contain education data on students in private high schools. The MLDS contains limited data on students in private colleges and in workforce training programs. Further, data on unsuccessful attempts at fulfilling the GED® or NEDP® requirements are not included in the System. The MLDS contains limited information on out-of-state college enrollment and graduation for Maryland public high school graduates.

Wage Data

The MLDS System contains workforce data from quarterly Unemployment Insurance (UI) filings beginning with the first fiscal quarter of 2008 for individuals with a Maryland educational record (see the [MLDS Data Inventory](#) for a definition of *educational record*). UI filings are only available for Maryland employees who work for an in-state employer required to file UI and have a Maryland education record. Examples of employers that are not required to file UI include the federal government (including the military), certain non-profits, and self-employed and independent contractors. Individuals working in temporary employment, including federal postsecondary work-study programs, are also not subject to UI filings. These omissions mean it is incorrect to assume that individuals not counted as "employed" are unemployed.

The UI wages reported reflect the compensation paid during a fiscal quarter, rather than when the compensation was earned. UI wages reflect the sum of all compensation, including bonuses, commissions, tips, and other forms of compensation. The UI wage data do not distinguish between part-time and full-time employment, hourly and salaried wages, regular wages and commissions, bonuses, and other incentive pay. The UI wage data provided do not indicate the number of days or the number of hours a person worked in a fiscal quarter.

UI filings for a fiscal quarter may be incomplete. Employers may have filed UI wages after the data have been transmitted to the MLDS Center or have omitted individuals from their file.

Missing wage data and/or corrections to previously reported wages may be provided in subsequent fiscal quarters. While there is no time limit on correcting UI filings, most changes (additions and/or corrections) are completed within one fiscal quarter. The CPEA report includes three fiscal quarters of UI wage data. Two of the fiscal quarters have had at least one fiscal quarter of subsequent UI data reported, including the fiscal quarter used to derive median quarterly wages; therefore, errors in wage amounts due to corrections and late filings have been minimized. One of the fiscal quarters has not yet had a subsequent quarter of UI wage data filed. This fiscal quarter is used as part of the wage full-quarter wage methodology (see below); therefore, the reported wage visibility may be either overstated or understated.

Wage data in the MLDS include North American Industry Classification System (NAICS) codes for employers. This system classifies employers by sector rather than identifies the specific jobs performed by employees. For example, NAICS 62 is Health Care and Social Assistance, and NAICS 6221 is General Medical and Surgical Hospitals. Individuals who are doctors, hospital administrators, dietitians, and janitorial staff at a hospital would all have this same NAICS code. Employers select the sector and may change their sector designation at any time.

Contextual Data

Three sources of data were selected to provide context for the results and guide the analysis. Collectively, these sources provide comparisons to the outcomes reported.

MIT Living Wage Calculator

The [Living Wage Calculator](#) developed by the Massachusetts Institute of Technology (MIT) provides data on the cost of living in various geographic areas across the United States. The living wage calculator considers the cost of food, housing, health insurance, transportation, taxes, clothing, and other personal items to derive the minimum annual income required for basic self-sufficiency. It is more comprehensive than traditional poverty measures, which do not incorporate these broader costs of living. The measure selected from the Living Wage Calculator is *required annual income before taxes for one adult with no dependent children* (“Living Wage”). This annual income is converted to a quarterly income to align to the MLDS quarterly wage data. The Living Wage Calculator is reviewed each year in preparation for producing the CPEA report and the income reported is inflation adjusted (if necessary) using the CPI Inflation Calculator provided by the U. S. Department of Labor, Bureau of Labor Statistics to align to the wage period of the CPEA report. In 2024, the Living Wage Calculator was modified to include new categories of living expenses which, in turn, increase the living wage in Maryland by approximately \$2,500 per quarter over the prior formula.

Minimum Wage in Maryland

The minimum wage in Maryland for the calendar year 2024 was \$15.00 per hour. The quarterly minimum wage is calculated based upon employment for 30 hours per week for 52 weeks per year. The 30 hours per week threshold was selected to calculate earnings as employment at 30 hours is the minimum to be classified as full-time.

Full-Quarter Wage Methodology

The high school graduates included in the wage analysis are selected by using the U. S. Census Bureau Stable or Full-Quarter Employment Methodology (referenced as Full-Quarter throughout the report)¹⁹. This methodology excludes individuals from the median calculation who do not have wage data in either the fiscal quarter before or after the period of interest. The period of interest for CPEA is five years or the 20th fiscal quarter after high school graduation; accordingly, individuals were included in the median wage calculation if, in addition to having wages in quarter 20, they also had wages in quarters 19 and 21. For each high school cohort, the 20th quarter after graduation is fiscal quarter 2 in a calendar year. For the 2025 report on the 2019 cohort of high school graduates, the 20th quarter was fiscal quarter 2 of 2024. Accordingly, individuals were included in the median wage calculation²⁰ if, in addition to having wages in quarter 2 of 2024, they also had wages in fiscal quarter 1 of 2024 and fiscal quarter 3 of 2024.

The Full-Quarter Methodology provides a standardized method of determining whose wages to include in the analysis. Restricting analysis to “stable wage earners” provides a clearer picture of wage outcomes for workers fully engaged in the workforce and eliminates the potential to deflate median wage calculations by including the wages, or lack of wages, of workers who are absent, transient, or not fully engaged in the workforce. This method also reduces the impact of UI wage data limitations by excluding wages that may be incorrect due to incomplete or late filings.

Same-Employer Wage Methodology

The U.S. Census Bureau Stable or Full-Quarter Employment Methodology²¹ was used as a basis for selecting high school graduates to include in the industry-level wage analysis with the added requirement that the high school graduate must have been employed by the same employer for the nine-month period (Q19, Q20, and Q21) before deriving median wage calculations using Q20 wages.²²

Wage Bands

Wage bands were constructed to align to the contextual indicators selected for this report. The wages earned in the 20th quarter for those with full-quarter employment were used to assign each high school graduate to one of four wage groups. The wage band values are updated each year to align to that year’s wages.

Income Band	20 th Fiscal Quarter Wage
Below the Living Wage	< Living Wage
Above the Living Wage	>=Living Wage

NAICS Groupings

The industry of employment was determined by evaluating the North American Industry Classification System (NAICS) code reported with each wage record. NAICS codes were grouped according to standard reporting categories.²³

Sector Category	Sector Sub-Category	NAICS
Goods Producing	Natural Resources & Mining	Agriculture (11)
Goods Producing	Natural Resources & Mining	Mining (21)
Goods Producing	Goods Production	Construction (23)
Goods Producing	Goods Production	Manufacturing (31-33)
Service Providing	Trade, Transportation, & Utilities	Utilities (22)
Service Providing	Trade, Transportation, & Utilities	Wholesale & Retail (42-45)
Service Providing	Trade, Transportation, & Utilities	Transportation & Warehousing (48-49)
Service Providing	Information	Information Technology (51)
Service Providing	Financial & Real Estate	Finance & Insurance (52)
Service Providing	Financial & Real Estate	Real Estate (53)
Service Providing	Professional & Business Services	Professional, Scientific, Technical Services (54)
Service Providing	Professional & Business Services	Management (55)
Service Providing	Professional & Business Services	Administrative, Support & Waste Management (56)
Service Providing	Education & Health Services	Educational Services (61)
Service Providing	Education & Health Services	Health Care & Social Assistance (62)
Service Providing	Leisure & Hospitality	Arts, Entertainment & Recreation (71)
Service Providing	Leisure & Hospitality	Accommodation & Food Services (72)
Service Providing	Other Services	Other Services (81)
Service Providing	Public Administration	Public Administration (92)

Educational Attainment Methodology

Educational attainment has important implications for workforce outcomes:

- First, research suggests that employment outcomes and wages may vary by level of educational attainment.²⁴
- Second, high school graduates enrolled in college may be employed in part-time entry-level minimum-wage positions so they can prioritize college; comparatively high school graduates that did not enroll in college may have been available to enter the workforce in full-time career-track employment.
- Finally, the time to degree widely varies based upon the type of postsecondary degree. Certificate, Associate's, and Bachelor's degree programs are designed to require one, two, or four years of full-time study respectively. The length of each program impacts the amount of time graduates may have been in the workforce after earning their college degree. For example, Certificate graduates may enter the workforce three years earlier than Bachelor's degree graduates, while Associate's graduates may enter the workforce two years earlier than Bachelor's degree graduates.

Accordingly, separating the population of interest into groups by educational attainment helps identify wage differences that may occur when using a common point in time (five years after high school graduation) as a measure for a population who has had different amounts of time in the workforce.

Educational attainment was frozen 6 months prior to the end of the five-year period to allow students in each category time to transition from college to workforce and thus provide a more accurate picture of wages and industry of employment after college. The 20th quarter after high school graduation aligns with the postsecondary Spring term which would end in May or June of a given year; however, assignment to an educational attainment category is made as of each student's status in Fall (for example, December 2020 or Quarter 18 post-high school graduation for the 2018 cohort).

Seven educational attainment groups were created using the definitions below. The dates referenced below are for the 2018 cohort of high school graduates.

1. **No College:** High school graduates without an in-state or out-of-state college enrollment record by the end of Spring term 2024.
2. **Some College:** High school graduates enrolled for at least one term between Fall 2019 and Fall 2023 but who are not actively enrolled in college in the Spring 2024 or Fall 2024 terms and did not earn any level of postsecondary degree.
3. **Still in College:** High school graduates enrolled in college in-state or out-of-state in the Spring 2024 and/or Fall 2024 terms. These graduates may have earned a postsecondary degree by the end of the Fall 2023 term; however, they are still actively pursuing additional postsecondary education.
4. **Certificate Graduates:** High school graduates who earned a postsecondary Certificate by the end of the Fall term 2023 and are not enrolled in college in the Spring 2024 or Fall 2023 terms. These graduates may have continued their postsecondary education beyond the Certificate; however, they had disengaged from postsecondary education without earning an additional degree by Fall term 2023.
5. **Associate's Graduates:** High school graduates who earned an Associate's degree by the end of the Fall term 2023 and are not enrolled in college in the Spring 2024 and/or Fall 2024 terms. These graduates may have continued their postsecondary education beyond the Associate's; however, they had disengaged from postsecondary education without earning an additional degree by Fall term 2023.
6. **Bachelor's Graduates:** High school graduates who earned a Bachelor's degree by the end of the Fall term 2023 and are not enrolled in college in the Spring 2024 and/or Fall 2024 terms. These graduates may have continued their postsecondary education beyond the Bachelor's; however, they had disengaged from postsecondary education without earning an additional degree by Fall term 2023.
7. **Other Degree Attainment:** High school graduates who earned a post-baccalaureate degree or a graduate degree by the end of Fall 2023 term and are not enrolled in college in the Spring 2024 or Fall 2024 terms. These graduates may have continued their postsecondary education; however, they had disengaged from postsecondary education without earning an additional degree by Fall term 2023.

Educational attainment should not be interpreted as college graduation rates as the CPEA report does not provide the starting number of students entering each educational attainment category, only the

number of students who obtained each degree, are still enrolled in college, or stop attending college without graduating. Reporting on time to degree and college completion rates is outside the scope of this report.

Note, some high school graduates received more than one degree during the five-year period. Each graduate is counted only once, based upon highest degree attained. For example, if a high school graduate earned an Associate's degree and then earned a Bachelor's degree, the high school graduate is counted in the Bachelor's category. Other high school graduates earned a degree but were still progressing toward an additional degree, therefore some high school graduates in the *Still in College* category have already earned a degree. No high school graduates in the *Some College* category earned any level of postsecondary degree.

Demographic and Economic Groups

All high school graduates were assigned to one racial category, one ethnic category, one gender category, and one economic category.²⁵

Assignment to racial and ethnic categories were made based upon the methodology used by the U. S. Census for its Current Population Survey (CPS) which reports race independent of ethnicity. The racial and ethnic categories included in CPEA align to standard reporting practices employed by the U.S. Bureau of Labor Statistics (BLS). BLS reports labor data for three racial categories: White alone, Black or African-American alone, and Asian alone. Each racial category consists of individuals that identify with a single race but may be of any ethnicity. All other racial categories, including individuals identifying with two or more races, are omitted from BLS reports due to the small population size.²⁶ Small populations limit the conclusions that can be drawn from the data and may compromise the quality of any research.

This report uses student-level data on free or reduced-price meals (FARMS) eligibility for assignment to an economic category. FARMS is part of the National School Lunch Program (NSLP), administered by the United States Department of Agriculture (USDA). Students may be eligible for free or reduced-price meals through participation in certain need-based Federal Assistance Programs or if their family's income falls below a specified poverty threshold. Eligibility status may be determined through annual household applications or through direct certification. Students living in households with incomes at or below 130% of the federal poverty level are eligible for free meals, while students living in households with incomes between 130% and 185% of the federal poverty level are eligible for reduced-priced meals. Some students are directly certified based on participation in certain programs rather than exclusively on financial need (e.g., migrant education program, education of homeless children and youth, foster care).

FARMS does not measure socioeconomic status. Socioeconomic status is a complex measure that includes social status or prestige, occupation, educational attainment, income, and other factors. Many researchers use FARMS eligibility as a proxy for poverty. Using FARMS participation as a proxy for poverty may not correctly identify students experiencing poverty and treats all students as experiencing the same level of poverty. Using FARMS participation as a proxy for student poverty has limitations:

- The USDA has determined the number of children applying for FARMS declines in middle and high school due to the stigma associated with FARMS.
- Individual schools with 40% or more FARMS eligible students can elect to participate in the FARMS community eligibility provision. This election may report all students as FARMS even though some do not meet the poverty threshold.
- Student eligibility for FARMS can also change over time. Identifying FARMS participation in a single year may omit students who participated in FARMS in previous years.
- Not all students that participate in FARMS have identical levels of poverty. FARMS eligibility ranges from 130% to 185% of the federal poverty level.

A student's FARMS participation may be evaluated in a single year or based upon duration of time a student participates in FARMS. The method selected for determining FARMS participation can produce quite different results. The CPEA report evaluates FARMS status during 12th grade. As such, it likely underrepresents the number of students experiencing poverty in a given cohort, students living in poverty for longer durations, and does not include student cycling in and out of poverty throughout their elementary and secondary education.

Sources on FARMS:

- U.S. Department of Agriculture. Food and Nutrition Service. *Child nutrition programs: Income eligibility guidelines (July 1, 2019 - June 30, 2020)* <https://www.fns.usda.gov/cnp/fr-032019>
- Nation Center for Education Statistics. *Free or reduced price lunch: A proxy for poverty?* <https://nces.ed.gov/blogs/nces/post/free-or-reduced-price-lunch-a-proxy-for-poverty>
- Harwell, M., & LeBeau, B., *Student eligibility for a free lunch as an SES measure in education research*. Educational Researcher, 39(2), 120-131.

End Notes

- ¹This definition of high school graduate was selected to align to reporting definitions used by the National Center for Education Statistics (NCES) and the U. S. Bureau of Labor Statistics (BLS).
- ²See Technical Appendix. *Educational Attainment Methodology* section. Educational attainment should not be interpreted as college graduation rates as this report does not provide data on the number of students starting each degree, only the number of students who obtained each degree, are still enrolled in college or stop attending college without graduating. Reporting on college completion is outside the scope of this report.
- ³See Technical Appendix. *Wage Data*.
- ⁴Wages are actual for Q2 2021 and not inflation adjusted to current day values. If an individual had more than one source of wages for the period those sources were summed to a personal quarterly wage and that value was used in determining the median.
- ⁵See Technical Appendix. *Wage Data*.
- ⁶Glasmeier, A. (2025). *Living Wage Calculator*. Massachusetts Institute of Technology. <https://livingwage.mit.edu/states/24/locations>
- ⁷Projected lifetime earnings are based on the sum of median quarterly wages for individuals through the age of 65 for each education level.
- ⁸For example, Baum, S, Ma, J. & Payea, K. (2013). *Education Pays 2013: The benefits of higher education for individuals and society*. College Board.
- ⁹See Technical Appendix. *Wage Data*.
- ¹⁰See Technical Appendix. *NAICS Groupings*.
- ¹¹Maryland Department of Labor. (2024). *Maryland - Industry Series - Maryland's Quarterly Census of Employment and Wages (QCEW)*.
- ¹²U.S. Bureau of Economic Analysis. (2024). *Annual Gross Domestic Product (GDP) by State*. <https://apps.bea.gov>
- ¹³U. S. Bureau of Labor Statistics reports that over half of workers in service industries and goods-producing industries are paid hourly rather than salaried. This includes the retail trades, hotels, restaurants, manufacturing, and patient care. In Maryland, approximately 1.3 million workers are paid hourly. See BLS Reports, Characteristics of minimum wage workers, May 2024.
- ¹⁴MLDS Center. (September 2025). *Maryland College Labor Sector and Wage Explorer*. Baltimore, MD: Maryland Longitudinal Data System Center. https://mldscenter.maryland.gov/MD_CLaWE.html
- ¹⁵MLDS Center. (September 2025). *Maryland College Labor Sector and Wage Explorer*. Baltimore, MD: Maryland Longitudinal Data System Center. https://mldscenter.maryland.gov/MD_CLaWE.html
- ¹⁶Baum, S., Pender, M. & Welch, M. (2019). *Education Pays 2019: The benefits of higher education for individuals and society*. College Board.
- ¹⁷Glasmeier, A. (2025). *Living Wage Calculator*. Massachusetts Institute of Technology. <https://livingwage.mit.edu/states/24/locations>
- ¹⁸Maryland Higher Education Commission. (December 2024). Tuition and Fees, Interactive Dashboard.
- ¹⁹The Full-Quarter Employment (Stable) methodology is utilized by the U. S. Census Bureau to calculate average monthly earnings for individuals engaged in stable employment with any employer. The methodology is applied here to derive quarterly, rather than monthly median earnings. https://lehd.ces.census.gov/doc/QWI_101.pdf.
- ²⁰Some individuals have wages in a quarter from more than one employer. Those wages were summed and then the sum was used in the median quarterly wage calculation.
- ²¹The Full-Quarter Employment (Stable) methodology is utilized by the U.S. Census Bureau to calculate average monthly earnings for individuals engaged in stable employment with the same employer. The methodology applied here derives quarterly, rather than monthly, median earnings. https://lehd.ces.census.gov/doc/QWI_101.pdf.

²²For the NAICS quarterly median wage calculation, some individuals had wages in the quarter from more than one employer and more than one NAICS. Only wages from the employer that covered all three quarters were used in median wage calculations.

²³The 20 NAICS codes were grouped based upon industry sector as aligned to U. S. Bureau of Labor Statistics and U.S. Statistical Agencies Office of Management and Budget (Federal), Economic Classification Policy Committee.

²⁴For example, see:

Baum, S., Ma, J. & Payea, K. (2013). *Education Pays 2013: The benefits of higher education for individuals and society*. College Board.

Hout, M. (2012). *Social and economic returns to college education in the United States*. Annual Review of Sociology. 38: 379-400.

Kane, T.J. & Rouse, C. E. (1995). *Labor market returns to two-year and four-year college*. The American Economic Review, 85(3): 600-614

Thomas, S. & Zhang, L. (2005). *Post-baccalaureate wage growth within 4 years of graduation: The effects of college quality and college major*. Research in Higher Education. 46(4): 437-459.

²⁵Economic status was determined through a student's Free or Reduced Price Meals (FARMS) eligibility in their final year of high school. FARMS indicates that a student is eligible to receive low-cost or no-cost meals each school day. Students may be eligible for free or reduced-price meals through participation in certain Federal Assistance Programs or based on their family's income falling below a specified poverty threshold. The education community and this report rely on FARMS eligibility to identify economically disadvantaged students. See Appendix 8 for a discussion on FARMS.

²⁶U.S. Bureau of Labor Statistics. (2020). *Labor Force Statistics from the Current Population Survey: Concepts and Definitions*. <https://www.bls.gov/cps/definitions.htm#race>