

**2019** MIDDLE TENNESSEE  
WAGE & BENEFIT SURVEY

**SUMMARY REPORT** *for*  
REGION 2



**REGION 2**  
GILES COUNTY  
LAWRENCE COUNTY  
LEWIS COUNTY  
MAURY COUNTY  
PERRY COUNTY  
WAYNE COUNTY

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## Wage and Benefit Survey Project Team

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This project is the product of the yearlong effort of the following individuals:

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## Acknowledgment

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## Executive Summary

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The Business and Economic Research Center (BERC) at Middle Tennessee State University conducted a 40-county wage and benefit survey in Middle Tennessee between May and September 2019. The wage and benefit survey was sponsored by the Middle Tennessee Industrial Development Association (MTIDA) and the USDA as well as regional partners—the Upper Cumberland Development District, the South Central Tennessee Development District, the Greater Nashville Regional Council, the Nashville Chamber of Commerce, The Highlands Economic Partnership, Tennessee Central Economic Authority, Tennessee Department of Labor and Workforce Development, and Tennessee Chamber of Commerce and Industry—and local chambers and economic development organizations. The purpose of the survey is to provide local economic development officials and human resource managers a clear understanding of the compensation structure of the key occupations in the region. Reporting and analysis for the survey was designed to include both the full 40-county Middle Tennessee area and targeted subsets of counties. The present report addresses Maury, Lawrence, Giles, Perry, Lewis, and Wayne counties, Region 2.

From Region 2, 193 companies were invited to participate in this online wage and benefit survey. BERC contacted 167 companies through email and 26 companies through regular mail. As of September 2019, BERC received 46 completed surveys with an overall response rate of 23.8 percent. To break down the response rate, email contacts generated a significantly higher response rate than the regular mail contacts: response rate for email contacts was 26.9 percent, while the response rate for the regular mail was 3.8 percent. The 46 companies employed 6,493 people, representing about 12.1 percent of all private jobs in the study market area.<sup>1</sup> The wage and benefit survey data is organized by establishment size, and BERC provides a detailed profile from the survey results of 31 occupations.

## Key Highlights

### General

- The average number of weekly hours is estimated at 4,921.
- Average annual sales of the covered establishments total \$90.8 million.
- On average, covered establishments offer 9 paid holidays per year.
- On average, covered establishments offer 10.3 annual vacation days.

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<sup>1</sup> Quarterly Census of Employment and Wages (BLS)

### Health Insurance and Benefits

- Almost 90 percent of the companies offer health insurance. Cost sharing is a common practice among the companies.
- Companies offer a range of retirement benefits including a traditional retirement plan and defined contributions. About 88 percent of the responding companies offer defined contribution plans.
- Approximately 28 percent of companies offer career development opportunities, another 36 percent offer tuition payment, and 61 percent offer other forms of incentives and bonuses.
- Overall, total employee benefits equal to 30 percent of wages and salaries in the study market area.

### Wages

- The unweighted median hourly wage across occupations in the study market area is \$21.00. The study provides details of wages and benefits for each occupational cluster.

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## I. Introduction

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The Business and Economic Research Center (BERC), Middle Tennessee State University, conducted a wage and benefit survey between May and September 2019 for Maury, Lawrence, Giles, Perry, Lewis, and Wayne counties hereafter referred to as “Region 2.” The wage and benefit survey was sponsored by the Middle Tennessee Industrial Development Association (MTIDA) and the USDA as well as regional partners—the Upper Cumberland Development District, the South Central Tennessee Development District, the Greater Nashville Regional Council, the Nashville Chamber of Commerce, The Highlands Economic Partnership, Tennessee Central Economic Authority, Tennessee Department of Labor and Workforce Development, and Tennessee Chamber of Commerce and Industry—and local chambers and economic development organizations. The purpose of the survey is to provide local economic development officials and human resource managers a clear understanding of the compensation structure of the key occupations in the area.

In designing the online wage and benefit survey, BERC consulted existing wage and benefits surveys as well as the U.S. Bureau of Labor and Statistics (BLS) methodology for the Quarterly Census of Employment and Wages (QCEW) and the BLS *Occupational Outlook Handbook* to make the regional survey results comparable to national and state level occupational characteristics. BERC retained the Standard Occupational Classification (SOC) codes for all occupations included in the survey.

To make the survey process manageable, BERC, in consultation with the MTIDA, targeted 193 Region 2 companies. Although this study gathered information for around 140 occupations, the survey response rate did not allow for a detailed profile of all of these occupations. The detailed occupational profiles for 31 occupations will allow local economic development officials and companies to see how a given occupation benchmarked against average jobs in the region.

The rest of the report is organized as follows. After a brief discussion about the study region, study tasks, and general characteristics of industries in the region, section two introduces the conceptual framework and study methodology. Section three analyzes survey results, while section four provides rich details for the selected occupations.

### *I.A. Study Region*

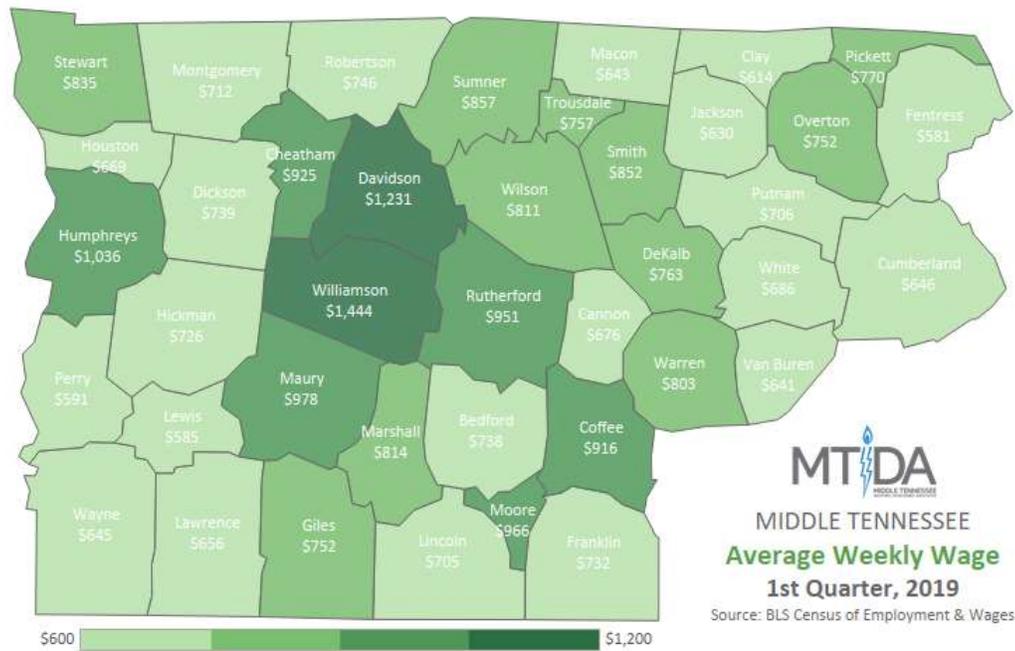
What is the study market area? The study market area is Maury, Lawrence, Giles, Perry, Lewis, and Wayne counties, with a labor force of 96,916<sup>2</sup> as of the 1st quarter of 2019. A map of the region can be seen below.



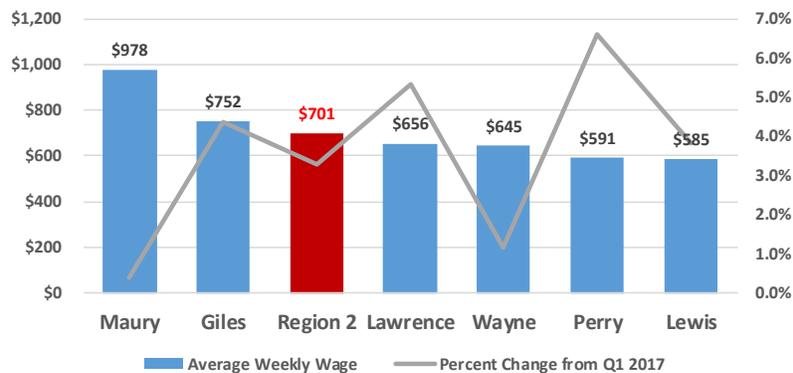
<sup>2</sup> Bureau of Labor Statistics

*I.B. An Analysis of Sectoral Wages in Region 2*

The following map and wage panel presents average wage data for six different sectors of the economy across Maury, Lawrence, Giles, Perry, Lewis, and Wayne counties, and its immediate neighbors and average wages across the region. The map and charts below show six major sectors with regard to the average weekly wage.<sup>3</sup>



**Region 2: Average Weekly Wage  
1st Quarter 2019**



Source : QCEW ([www.bls.gov](http://www.bls.gov)) and BERC

<sup>3</sup> Source: Quarterly Census of Employment and Wages (BLS), 1st Quarter of 2019

Region 2 : Average Weekly Wages by Sector (1st Quarter of 2019) and Percentage Change from 1st Quarter of 2017



Source : QCEW (www.bls.gov) and BERC

### *I.C. Study Tasks and Research Questions*

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What is the purpose of this study? Which sectors are surveyed? What types of occupational data are collected? This section addresses these questions briefly, while the next section treats methodological issues. Primary research questions this survey addresses are:

- What is the compensation structure in Region 2 area?
- What are the characteristics of the key occupations?
- How do average wages for the key occupations compare with overall average wages in the study region?

The purpose of this study is to answer these questions in a way that helps (1) human resource managers in the study region make informed decisions about the prevailing compensation structure when making hiring decisions and (2) local economic development officials understand the compensation structure in their market when helping prospective businesses successfully transition to their region.

In terms of compensation structure and occupational characteristics, the wage and benefit survey captures wages and benefits for each occupation as well as occupational characteristics, such as educational and licensing requirements, difficulty of filling vacant positions, trainee and entry level wages, and union membership. On the benefit side, the survey covers annual paid and unpaid leave; sick leave; personal days off; medical, dental, and vision insurance; retirement benefits; and incentives. Although the wage and benefit survey includes rich details about occupations, many of the completed surveys do not provide enough information about some of the employee characteristics. Because of missing data on selected occupational characteristics for some occupations, BEREC profiled less than one-third of the surveyed occupations.

## II. Conceptual Framework and Methodology

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The wage and benefit survey of Region 2 was a hybrid online and mailed survey with multiple reminders to all companies surveyed in the study market area. In this section, we briefly review issues regarding the survey design and analysis and define certain concepts used throughout the data analysis section.

### II.A. Definitions

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The following concepts will be used throughout the rest of the report:

**Annual Wage:** Annual wage is annualized salary and wages, calculated as follows:

$$\begin{aligned} \text{Annual Wage} &= 52 \times \text{Weekly Wage (1 Year = 52 Weeks)} \\ &= 52 \times (40 \times \text{Hourly Wage (1 Week = 40 Hours)}) \\ &= 52 \times (5 \times 8 \times \text{Hourly Wage (Work Week = 5 Days; and 1 Day = 8 Hours)}) \end{aligned}$$

**Mean (Average) Wage:** Average wage is the sum of the wages divided by the number of reporting establishments.

$$\text{Average Wage} = \frac{\text{sum of the wages}}{\text{number of establishments reporting that occupation}}$$

$$\text{Weighted Average Wage} = \frac{\text{sum of the total wages for an occupation}}{\text{number of jobs in that occupation}}$$

**Median (Middle Position) Wage:** Median wage represents the wage level that 50 percent of wages fall above and 50 percent of the wages fall below.

**Difficulty of Filling:** Difficulty of filling a vacant position, with 1 being extremely easy and 10 being extremely difficult.

## *II.B. Survey Design*

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BERC designed the survey in consultation with local economic development officials. A list of local companies was prepared, and each company was assigned a unique ID to access the online survey, which was hosted on the BERC website. The wage and benefit survey included a section about each company's total employment, annual revenues, and percent of part-time workers. The second section of the survey included a list of benefits a typical business offers to its employees.

The occupational employment section was carefully prepared. Using the BLS ([www.bls.gov](http://www.bls.gov)) staffing pattern for the manufacturing sector, BERC in consultation with local economic development officials prepared a list of occupations to be surveyed. BERC retained the original SOC code and title for occupations for the purpose of comparing the local compensation structure with the regional, state, or national compensation structure for the same occupation.

The survey also included several characteristics of each occupation for a detailed analysis. These characteristics include number of jobs, part-time status, trainee-level wage, entry-level wage, current wage, number of vacancies, licensing requirement, educational level requirement, and difficulty of filling a vacant position. For further details about the survey, see the separate appendix.

## *II.C. Survey Process and Data*

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BERC conducted a hybrid online and mailed wage and benefit survey between May and September 2019. All surveyed companies in the study market area received a cover letter and printed or electronic copy of the survey as well as instructions for online completion. Initially, 193 companies received the survey. To increase the sample size, BERC sent several reminders by email after the initial invitation to participate was sent. The final tally is shown in Table 1. BERC

received 46 completed surveys with a response rate of 24 percent. It is important to note that the response rate for e-mail contacts was about 27 percent.

Table 1: Wage and Benefit Survey Procedure and Response Rate

Number of Companies Surveyed	193
Number of Completed Surveys	46
Response Rate	23.83%
<b>Survey Procedure</b>	
Mode:	Online and Mailed Survey
Initial Letter:	Cover Letter with Survey Package, Company ID and Password
Reminders:	By email
Survey Closing Date:	October 2019
<b>Response Rate by Initial Contact Type</b>	
E-mail Contacts	167
Responses Generated	45
Response Rate	26.95%
Regular Mail Contacts	26
Responses Generated	1
Response Rate	3.85%

#### *II.D. Data Analysis*

BERC checked all survey data for accuracy and consistency. The cleaned survey database contains a unique company code for each responding company and survey responses to the survey categories. The companies did not respond to every occupation initially included in the survey; overall, the companies in Region 2 supplied information for 31 occupations. In the following section, BERC presents the survey results.

### III. Survey Results

This section provides a comprehensive analysis of the wage and benefit survey. First, BERC regroups the companies by employment size using the following three categories:

- Less Than 100
- 100–350
- More than 350

All major categories of data except wage by occupation are presented using these three categories. Where data is available, BERC presents survey findings using both unweighted (by establishment) and weighted (by number of jobs) mean and median. Occupational wages include both hourly and annualized wages, which assume a 40-hour workweek and 52 annual workweeks.

#### *III.A. Establishment Size, Employment, and Revenue*

Of the establishments surveyed, 57 percent identified themselves as having fewer than 100 employees. An additional 34 percent recorded having between 100 and 350 employees. About 9 percent has more than 350 employees. Overall, these 47 companies account for a total of 6,493 employees, an average of 138 per company. Of these employees, 3.2 percent were part-time.

**Table 2: Wage and Benefit Survey: Employment by Establishment Size and Part-Time Status**

Employment Size	Number of Companies	Number of Employees			Part-Time Workers (%)
		Total	Median	Average	
Less Than 100	27	1,173	42	43	3.1%
100-350	16	2,614	146	163	3.8%
Over 350	4	2,706	678	677	1.5%
<b>Regional</b>	<b>47</b>	<b>6,493</b>	<b>72</b>	<b>138</b>	<b>3.2%</b>

**Average weekly hours.** The table below presents average weekly hours in the study market area: in general, median weekly work hours are 2,000 in the study market area. Average weekly hours per employee are around 40. The table below shows average weekly hours for companies by employment size: average weekly work hours for employees working at companies in the over-350 employment range are 27,060. At the other end of the spectrum are companies with less than 100 employees, whose average weekly work hours total 1,387.

Table 3: Wage and Benefit Survey: Average Weekly Hours

Employment Size	Average Weekly	Average Weekly		Median Weekly Hours
	Hours	Hours Per Employee	Median Weekly Hours	Per Employee
Less than 100	1,386.67	40.00	1,400	40.0
100-350	5,350.00	40.00	5,820	40.0
Over 350	27,060.00	40.00	27,120	40.0
Regional	4,920.85	40.00	2,000	40.0

**Union Membership.** A few companies in the study market area have a unionized workforce. Because these companies represent about 2 percent of total responses, BERC excluded them from a detailed analysis.

**Annual Revenues.** Overall, the average annual sales total \$90.8 million with a median of \$14.2 million. More details of revenues by company size can be seen in the table below.

Table 4: Wage and Benefit Survey: Average Annual Sales

Employment Size	Number of	Average Sales	Median Sales
	Companies Reporting		
Less than 100	27	\$19,366,560	\$8,000,000
100-350	16	\$42,873,000	\$26,750,000
Over 350	4	\$764,597,262	\$724,194,524
Regional	47	\$90,792,642	\$14,193,070

### III.B. Employee Benefits

BERC asked four sets of questions regarding employee benefits: time off, medical insurance, retirement, and education and other benefits. This section first provides a brief overview of employers' responses for each category and then analyzes each specific benefit in further detail.

**Time off.**<sup>4</sup> In this category of benefits, BERC included paid and unpaid holidays, paid vacation days, paid sick leave, paid jury duty, paid personal time off, and time off to vote. These benefit categories are in line with other wage and benefit studies as well as official methodologies such as those of BLS ([www.bls.gov](http://www.bls.gov)). Three major benefits top the chart: paid holidays, annual vacations, and paid jury duty.

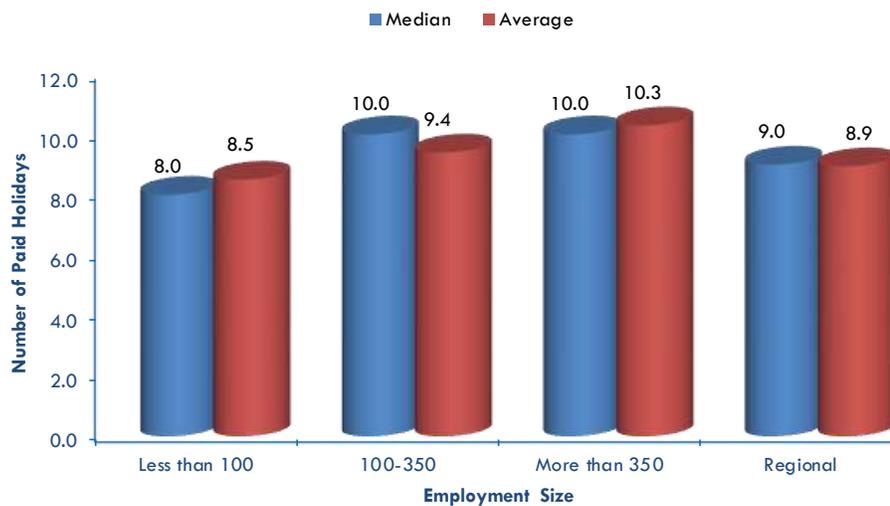
**Table 5: Wage and Benefit Survey: Benefits (Time off)**

Type of Benefit	Number of Responses	Percent of Companies
Paid Holidays	47	76.6%
Paid Vacation Days	47	72.3%
Paid Sick Leave	47	10.6%
Paid Jury Duty	47	57.4%
Time-off to Vote	47	14.9%

<sup>4</sup> BERC would like to caution readers that a number of respondents grouped all variations of "time off" and did not distinguish between sick leave, vacation, etc. Estimates given are conservative in nature and take this into account.

How do paid holidays, annual vacations, and annual sick leave vary by employment size? Chart 1 below presents median and average paid holidays by employment size. On average, the study market area companies offer 9 paid holidays annually. Chart 2 provides a frequency distribution of paid holidays by number of companies.

**Chart 1: Wage and Benefit Survey: Average Paid Holidays by Employment Size**

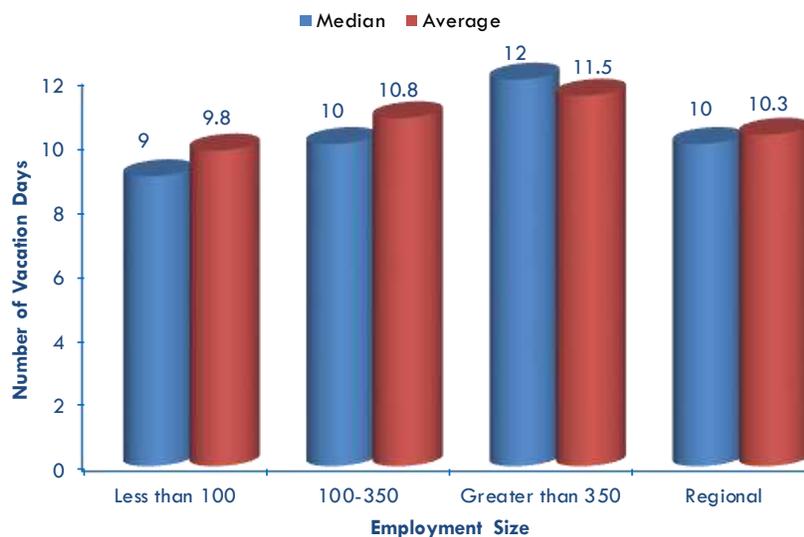


**Chart 2: Wage and Benefit Survey: Number of Paid Holidays**

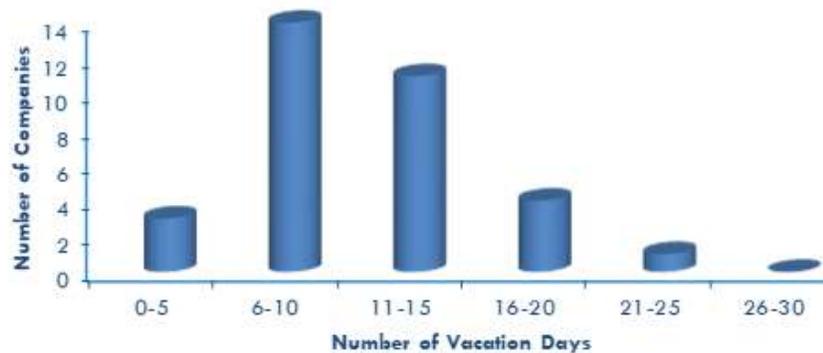


Chart 3 presents median and average annual vacations by company size. Overall, average vacation time in the study market area is 10.3 days. In interpreting vacation days, BERC cautions the reader that many companies have graduated vacation days that change with employees' tenure at a given company. Vacation days presented in Charts 3 and 4 suggest that if you become an employee of an area company, on average you can expect to receive around 10 vacation days. Most employers offer between 6 and 15 days of vacation as seen in Chart 4.

**Chart 3: Wage and Benefit Survey:  
Vacation Days by Employment Size**

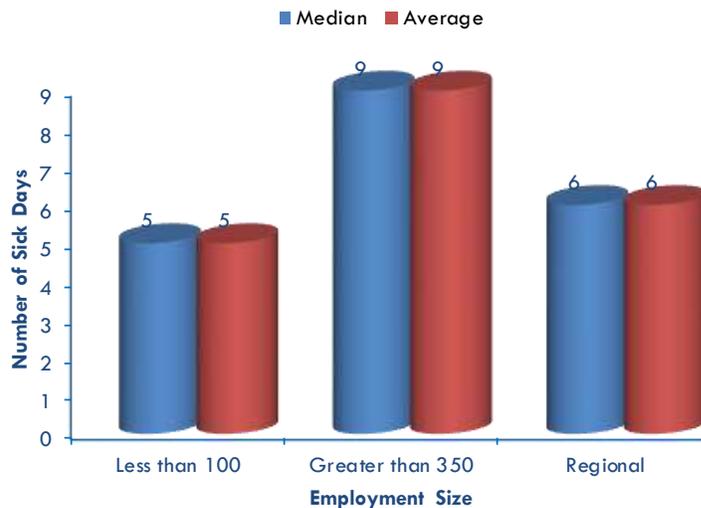


**Chart 4: Wage and Benefit Survey: Number of Vacation Days**

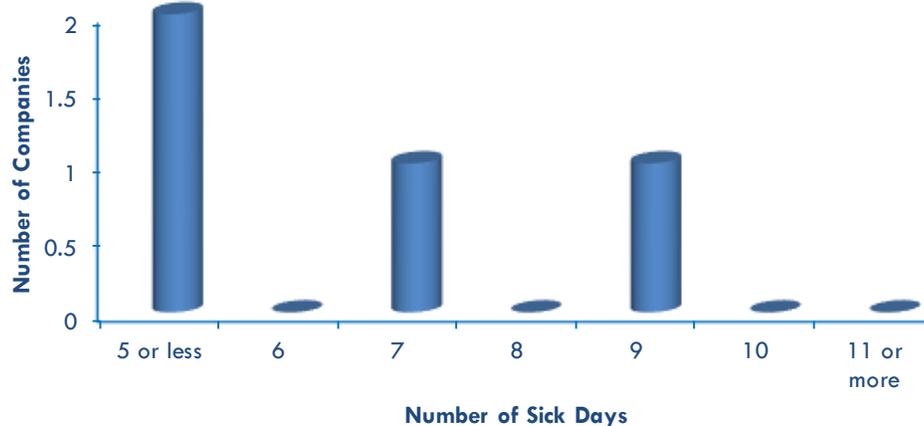


Finally, 13 percent of employers in the study market area offer sick leave. Companies with an employee size greater than 350 offer the most amount of sick leave days (9 days). The smaller companies with less than 100 employees offer 5 days of sick leave. There is not enough data for companies with an employee size between 100 and 350. Many companies do not offer sick leave and instead give employees a set amount of time off for illness, vacation, and so forth.

**Chart 5: Wage and Benefit Survey:  
Sick Days by Employment Size**



**Chart 6: Wage and Benefit Survey:  
Number of Paid Sick Days**



**Insurance.** What kinds of medical insurance do area companies offer their employees? Who pays what portion of the insurance premiums? The table below provides the percent of area companies offering health, dental, vision, life, and disability insurance to their employees.

Table 6: Wage and Benefit Survey: Insurance

Type of Insurance	Insurance to Employees		Who Pays?					
	Number of Responses	Percent of Companies	Employee	Percent of Companies	Employer	Percent of Companies	Cost Shared	Percent of Companies
Health	39	89.7%	0	0.0%	1	2.9%	34	97.1%
Dental	39	84.6%	0	0.0%	1	3.0%	32	97.0%
Vision	39	82.1%	2	6.3%	0	0.0%	30	93.8%
Life	39	84.6%	0	0.0%	8	24.2%	25	75.8%
Disability	39	76.9%	3	10.0%	10	33.3%	17	56.7%

Only a fraction of companies reported cost data.

The highlights from the above table are that almost 90 percent of the companies offer health and that 85 percent offer dental insurance. Ninety-seven percent of companies indicated the cost of health insurance is shared between employer and employee. Life insurance is offered by 84 percent of the companies. It is common practice for the employer to pay for a certain package that gives employees the option to add more insurance at their own expense. Disability insurance is offered by 78 percent of the companies, with employers usually paying for this coverage.

When companies offer insurance benefits to dependents, who pays?

Table 7 presents findings from the wage and benefit survey. As shown in Table 7, almost all companies offer health, dental, and vision insurance for dependents on a shared-cost basis.

Table 7: Wage and Benefit Survey: Insurance for Dependents

Type of Insurance	Who Pays?					
	Employee	Percent of Companies	Employer	Percent of Companies	Cost Shared	Percent of Companies
Health	0	0.0%	0	0.0%	35	100.0%
Dental	0	0.0%	1	3.0%	32	97.0%
Vision	2	6.3%	0	0.0%	30	93.8%

What is the average cost of providing medical insurance?

Overall, employees are expected to pay an average of \$1,428 for health insurance, \$235 for dental, and \$74 for vision. The employer's share for each employee is significantly higher for health (\$4,882) and dental insurance (\$373) while relatively lower for vision insurance (\$158). These costs are for insuring an employee. When dependents become part of the benefit plan, individual cost for employees' health insurance increases to \$6,064, dental to \$808, and vision to \$213. Similarly, the cost to employers of insuring dependents increases significantly for health (\$10,859) and vision insurance (\$748) but decreases for dental (\$338). Of course, the cost of insurance to both employees and employers varies by establishment size. Table 8 provides detailed cost figures by establishment size.

Table 8: Wage and Benefit Survey: Average Cost of Insurance

Employment Size	Insurance for Employees					
	Health Insurance		Dental Insurance		Vision Insurance	
	Employee Cost	Employer Cost	Employee Cost	Employer Cost	Employee Cost	Employer Cost
Less Than 100	\$1,759	\$3,925	\$268	\$520	\$83	\$343
100-350	\$1,101	\$5,380	\$212	\$287	\$62	\$66
Over 350	\$1,070	\$7,882	\$69	\$412	\$78	NA
Regional	\$1,428	\$4,882	\$235	\$373	\$74	\$158

Employment Size	Insurance for Dependents					
	Health Insurance		Dental Insurance		Vision Insurance	
	Employee Cost	Employer Cost	Employee Cost	Employer Cost	Employee Cost	Employer Cost
Less Than 100	\$7,499	\$7,658	\$838	\$242	\$246	\$517
100-350	\$5,021	\$13,381	\$769	\$1,039	\$169	\$249
Over 350	\$3,194	\$16,196	NA	\$816	\$215	NA
Regional	\$6,064	\$10,859	\$808	\$748	\$213	\$338

Only a fraction of companies reported cost data.

**Retirement and Other Benefits.** About 88 percent of companies in the study market area offer defined contribution plans to their employees (Table 9). Profit sharing is offered by about 3 percent of the companies. Traditional pension plans are offered by 6 percent and employee stock ownership plans by 9 percent of the companies.

Table 9: Wage and Benefit Survey: Types of Retirement Plans

Type of Plan	Number of Companies	Percent of Companies
Traditional Pension Plan	32	6.25%
Defined Contribution (401K, 403K, IRA, etc.)	32	87.50%
Profit Sharing	32	3.13%
Employee Stock Ownership Plan	32	9.38%

Some other benefits the surveyed companies offer their employees include career development, tuition payment, and other benefits and incentives. Table 10 provides the number and percent of companies offering these benefits. Overall, 28 percent offer career development, 36 percent offer tuition payment, and 61 percent offer incentives and bonuses.

**Table 10: Wage and Benefit Survey: Types of Incentives and Bonuses**

Type of Bonus and Incentive	Number of Companies	Percent of Companies
Career Development	36	27.78%
Tuition Payment	39	35.90%
Incentives and Bonuses*	36	61.11%

\*These incentives and bonuses include safety, production, and sales performance bonuses, discretionary bonuses, attendance bonuses, holiday bonuses, and other.

**Educational Reimbursement Benefits.** The table below provides data on the number of employees taking advantage of educational reimbursement. Corporations with more than 350 employees have the highest average number of employees taking advantage of educational benefits (23.3 employees). The large companies also have the highest percentage of employees completing educational programs (75 percent). The companies with employees between 100 and 350 have the highest retention rate (86 percent).

**Table 11: Employees Receiving Educational Reimbursement**

Company Size	Average Number of Employees Taking Advantage of Educational Reimbursement	Average Percent of Company Employees Taking Advantage of Educational Reimbursement	Average Percent of Employees Completing the Program	Average Percent of Employee Retention After Program Completion
Less Than 100	1.8	22.73%	71.43%	57.14%
100-350	9.3	46.15%	75.00%	85.71%
More than 350	23.3	75.00%	11.43%	5.71%
Regional	10.5	35.90%	32.38%	30.48%

**Do Companies Offer Educational Reimbursement Benefits?** Of 39 companies responding to this question, 14 indicated they offer educational-reimbursement programs. For many companies, a full-time employee must work several months before receiving benefits. Thirty-six percent of

companies require one year of service before receiving reimbursement, seven percent require 6 months, and 36 percent require three months or less.

***How much educational benefit do the companies offer?*** Fourteen companies reported monetary data on the amount of educational reimbursement, 78.5 percent of the companies reimburse 100% of the tuitions.

***Is there a limit to what employees can study to qualify for reimbursement?*** All reporting companies limit employees on what they can study to receive reimbursement. Typically, the requirement is that the field must be either directly related to the job, related to a future position within the company, or useful to the company in some form. About 64 percent of companies usually reimburse their employees' educational expenses after the class is completed. Fourteen percent pay before or during enrollment.

***What are the reimbursement criteria?*** Many companies indicated reimbursement is based on the grade employees earn. Nearly 50 percent require a grade of C or above for full reimbursement. About 21 percent pay for a passing grade, another 21 percent suggest other scaled versions.

***How do companies advertise educational-reimbursement benefits?*** Most companies advertise these benefits in more than one place. The most common places are through company postings, the employee handbook, and the hiring and orientation process.

***Where do these employees study?*** Employees study at wide range of institutions including public and private four-year universities, online schools, local community colleges, Tennessee College of Applied Technology (TCAT) centers, other technical programs, and conferences and workshops. In Region 2, the Tennessee College of Applied Technology was the most common places for employees to study.

***Program completion and retention.*** On average, around 36 percent of companies providing educational reimbursement had employees take advantage of this benefit. Each company had about 11 employees on average enroll in the educational reimbursement program. Of the employees that started the program, an average of 32 percent completed it. The companies reported that around 30 percent of all employees completing the program were still employed at the company.

### III.C. Value of Benefits

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Total compensation for an employee consists of wages and benefits. BERC asked employers to report average value of employee benefits as a percent of wages and salaries. A total of 28 companies (60 percent of the sample size) reported their employee benefits as a percentage of wages and salaries. Average benefits equal 30 percent of employee wages and salaries. BERC will use this average figure to estimate total employee compensation throughout the rest of this analysis. The following formula for each occupation will be used:

$$\text{Total Compensation} = \text{Average Wage} + (\text{Average Wage} \times 0.30)$$

### III.D. Selected Workplace Issues

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BERC asked covered employers questions about a few selected workplace issues: employee turnover, absenteeism, and training needs.

***Employee Turnover.*** What percent of companies cite employee turnover as an issue? Out of 35 responses, 66 percent of employers say this is an issue. A majority of companies answering “Yes” are either small or mid-size.

### Region 2: How many employees voluntarily left your organization within the last 12 months?

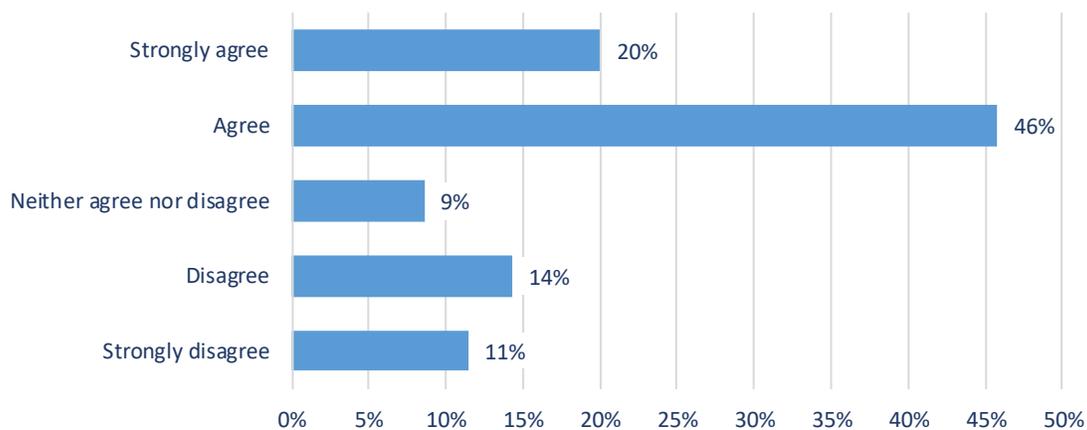
Employment Size	Number of Companies	Turnovers		
		Total Annual Turnovers	Average Annual Turnovers Per Company	Average Annual Percent Turnover
Less than 100	18	170	9	21%
100 to 350	10	399	40	20%
Grand Total	28	569	20	21%

What is the average percent of employee turnover? On average, the annual employee turnover rate is over 21 percent. When asked about the reason for turnover, the entire survey region mentioned job-related factors—such as pay, schedule, overtime, drug tests, shift work, retirement, and location—or personal factors—such as absenteeism, job abandonment, family and personal issues, relocation, and other employment opportunities. In Region 2, the most frequent answers are as follows:

- Job-Related: Retirement, attendance, abandonment
- Pay
- Employment Opportunities

### Region 2: Our management team finds turnover to be a challenge in our organization's normal operations.

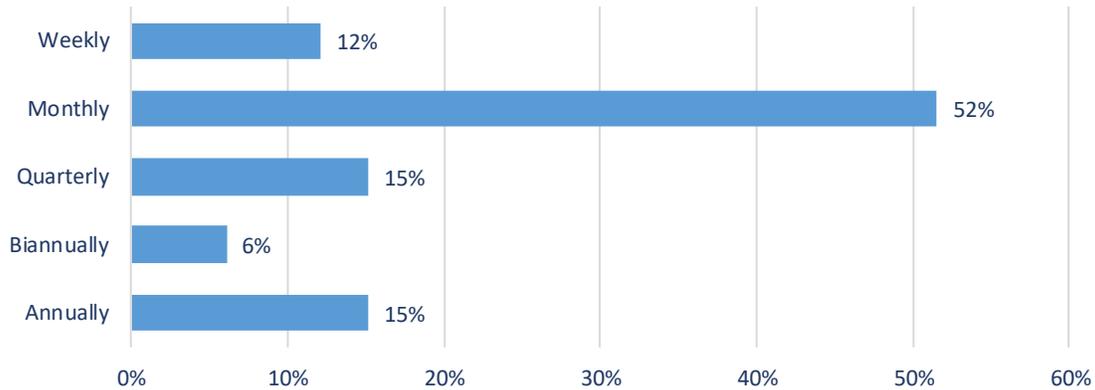
(N=35)



In Region 2, 64 percent of companies review turnover rates weekly or monthly.

### Region 2: How often does your management team review turnover rates?

(N=33)



**Absenteeism.** Is employee absenteeism a problem? Sixty-five percent of respondents say it is.

This issue affects all company sizes.

### Region 2: What is the approximate average annual absenteeism rate at your organization?

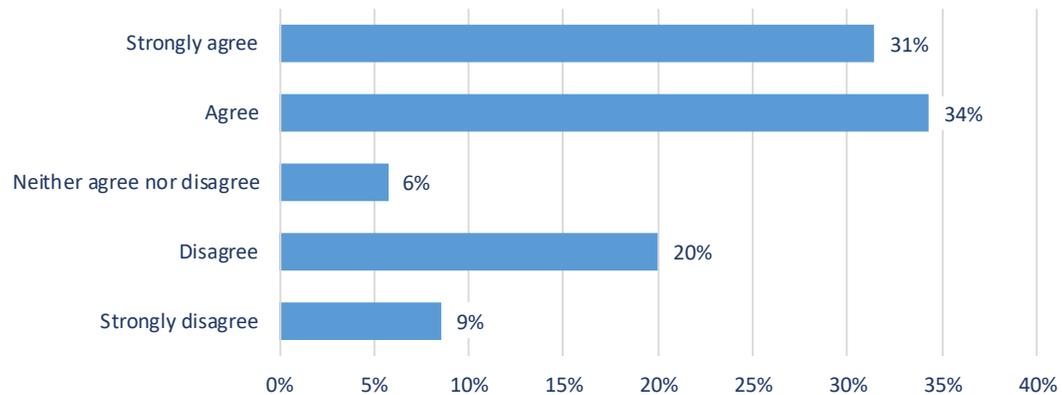
Employment Size	Number of Companies	Absenteeism		
		Total Annual Absenteeism Cases	Average Annual Absenteeism Cases Per Company	Average Annual Percent Absenteeism
Less than 100	16	42	3	7%
100 to 350	9	256	28	13%
Grand Total	25	386	15	9%

What is the average annual employee absenteeism rate? Surveyed companies average 9 percent absenteeism each year. When asked to name the most important factors for absenteeism, the entire survey region cited personal and family illness, transportation, emergency, childcare, and appointments. However, Region 2 companies replied as follows:

- Family-Related: Illness, childcare
- Personal: Transportation, illness

Region 2: Our management team finds absenteeism to be a challenge in our organization's normal operations.

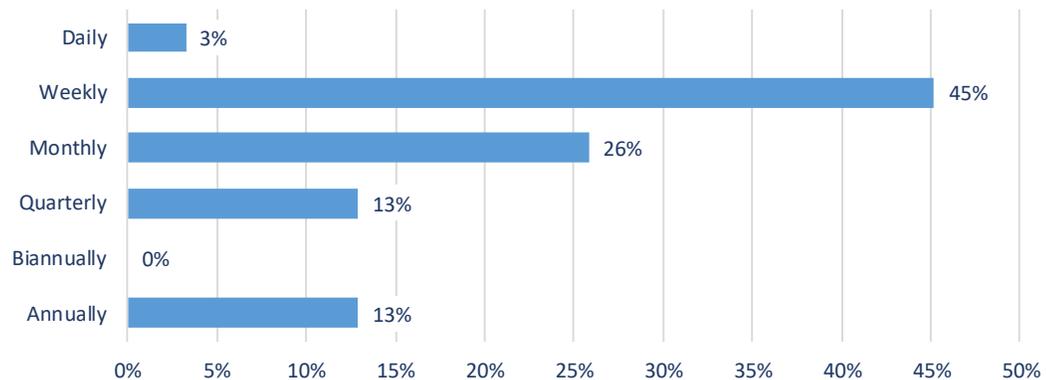
(N=35)



In Region 2, 74 percent of companies review absenteeism rates daily, weekly, or monthly.

Region 2: How often does your management team review absenteeism rates?

(N=31)

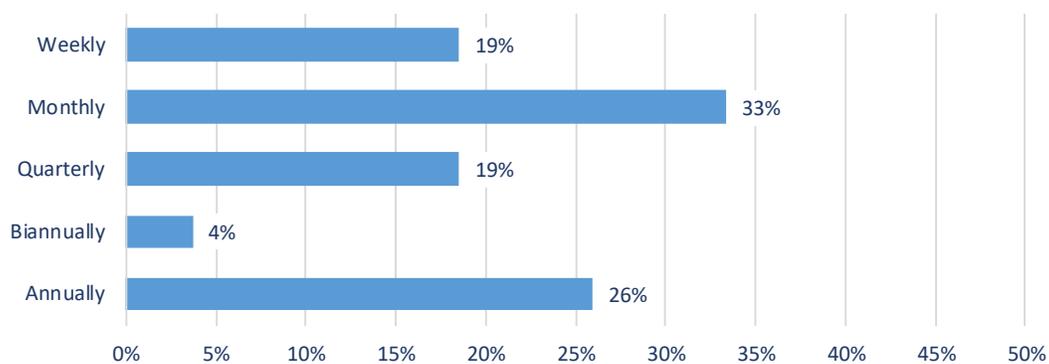


**Training Needs.** What types of training would companies like to see offered? While the entire survey region cited equipment training, maintenance, computer skills, safety and technical skills, management and soft skills, and leadership development as the top training interests, the companies in Region 2 cited the following major training needs:

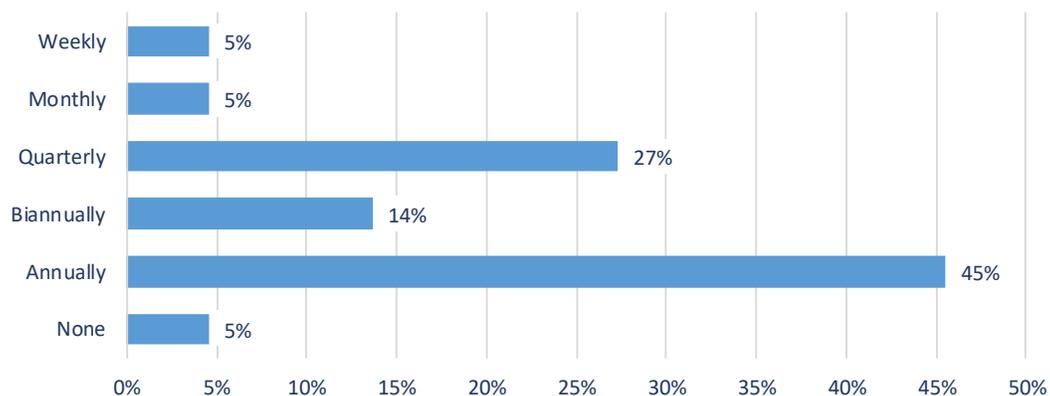
- Leadership
- Quality
- Safety
- Maintenance

Companies in Region 2 offer onsite training more frequently than offsite training. Fifty-two percent of Region 2 companies offer onsite training weekly or monthly, while only 10 percent offer offsite training weekly or monthly. However, almost half of Region 2 companies offer annual offsite training.

Region 2: How often does your company offer training for your employees?  
(N=27)

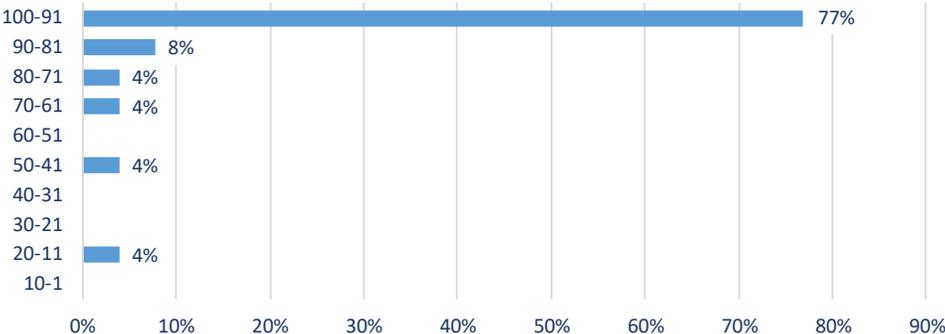


Region 2: How often does your company offer **offsite** training for your employees?  
(N=22)

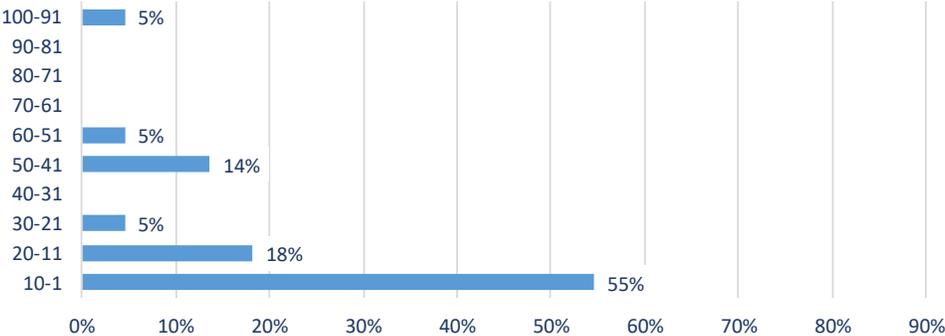


In Region 2, most respondents report that over 80 percent of their employees participate in onsite training. Only 10 percent of companies in Region 2 report that over half of their employees participate in offsite training. Most companies report that less than 10 percent of employees participate in offsite training.

Region 2: Estimate the percentage of your employees who participate in **onsite** training.  
(N=26)

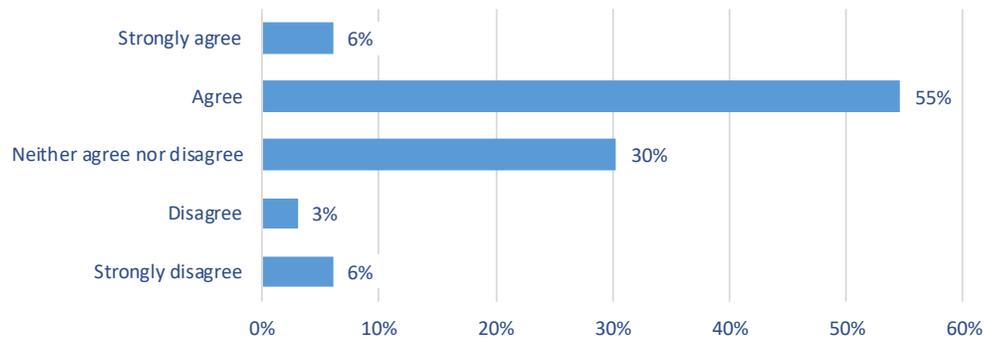


Region 2: Estimate the percentage of your employees who participate in **offsite** training.  
(N=22)

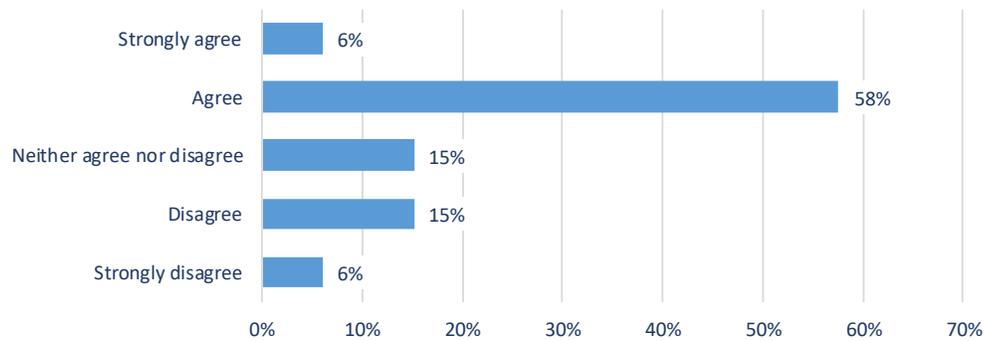


Sixty-one percent of Region 2 companies agree that training resources are available in Middle Tennessee. Similarly, 64 percent of Region 2 companies report they are likely to participate in a future survey about training needs.

Region 2: There are training resources available in Middle Tennessee to meet our needs.  
(N=33)

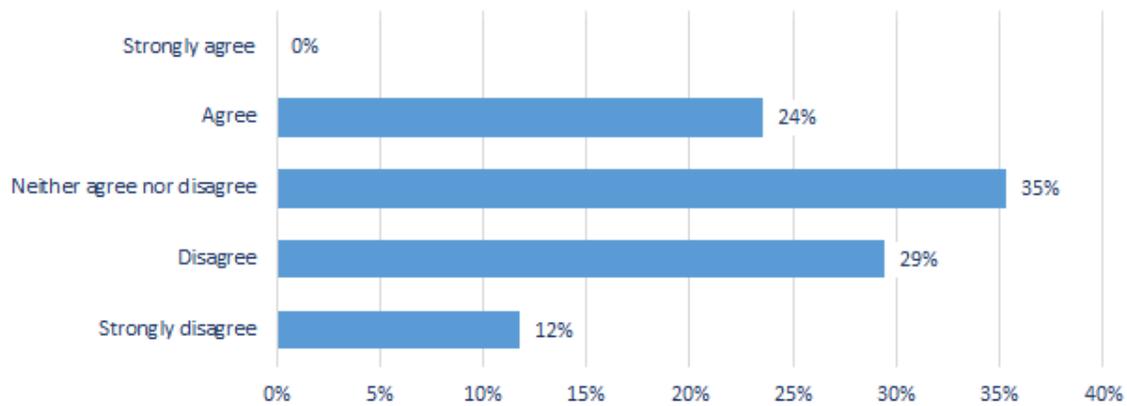


Region 2: Our organization is likely to participate in a survey or study focused on training needs.  
(N=33)



**Drug-Testing.** Additionally, we report responses for whether a company considers drug-related issues to be a problem for their employees. In Region 2, 24 percent of companies reported this to be an issue for their employees or their families.

**Region 2: Drug or addiction-related issues have represented a significant challenge to our employees or their families over the last 12 months**  
(N=34)



### III.E. Wages by Occupation

---

This section provides wage data for manufacturing companies and selected occupations surveyed in the study market area. The wage data will be presented in two general formats: (1) average wage by establishment size and cumulative wage distribution and (2) average wage by selected occupation. In presenting wage data, BERC will use both weighted (by jobs) and unweighted (by establishment) data. However, in the next section, in which we profile 31 occupations, BERC will use establishment-level (unweighted) wage data.

As previously stated, BERC, in consultation with local economic development officials, originally identified occupations for the wage and benefit survey. The 28 companies responding to the survey provided data for 31 occupations listed. If fewer than three companies reported on a given occupation, BERC excluded that occupation from the list.

***Wages by Establishment Size.*** Throughout this section, BERC uses establishment size and company size interchangeably. How do wages vary by establishment size? Table 12 presents aggregate wage data by both hourly and annualized wage. Unweighted wage data is the establishment data, whereas weighted wage data is employment adjusted. Overall, companies

pay an average hourly wage of \$25.60 in the study market area. The median establishment wage is \$21. Annualized average and median establishment wages are \$53,249 and \$43,680, respectively. Table 12 illustrates slight variations in wage by employment size.

Table 12: Wage and Benefit Survey: Average Wages by Employment Size

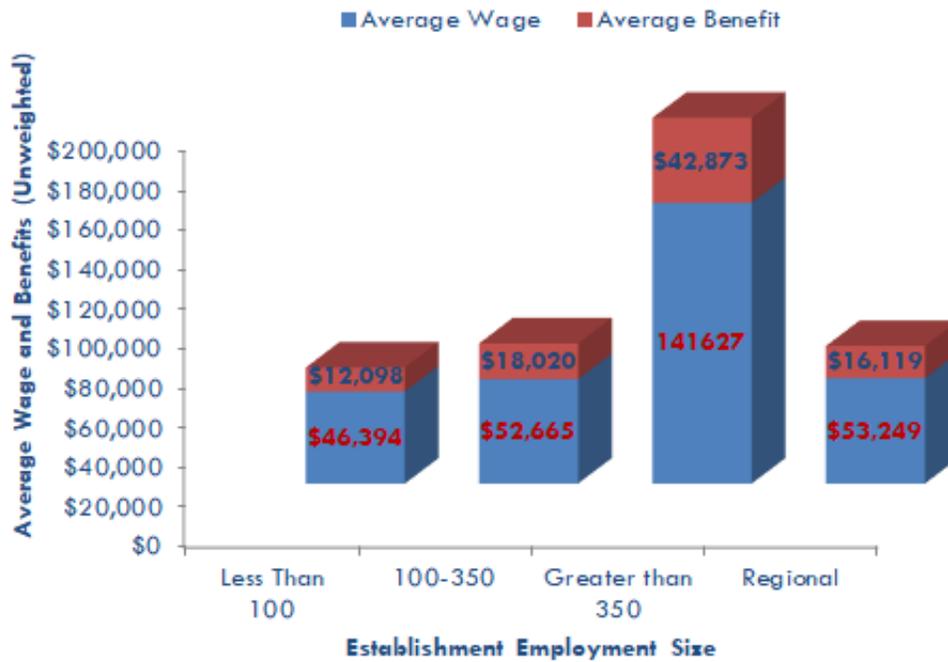
Employment Size	Unweighted Hourly Wages		Weighted Hourly Wages		Number of Jobs
	Average (Mean)	Median	Average (Mean)	Median	
Less than 100	\$22.30	\$19.00	\$23.14	\$19.00	151
100-350	\$25.32	\$22.00	\$24.64	\$22.00	145
Over 350	\$68.09	\$57.13	\$64.93	\$56.58	11
Regional	\$25.60	\$21.00	\$31.88	\$25.00	307

Employment Size	Unweighted Annual Wages		Weighted Annual Wages		Number of Jobs
	Average (Mean)	Median	Average (Mean)	Median	
Less than 100	\$46,394	\$39,520	\$48,125	\$39,520	151
100-350	\$52,665	\$45,760	\$51,261	\$45,760	145
Over 350	\$141,627	\$118,820	\$135,048	\$117,678	11
Regional	\$53,249	\$43,680	\$66,316	\$52,000	307

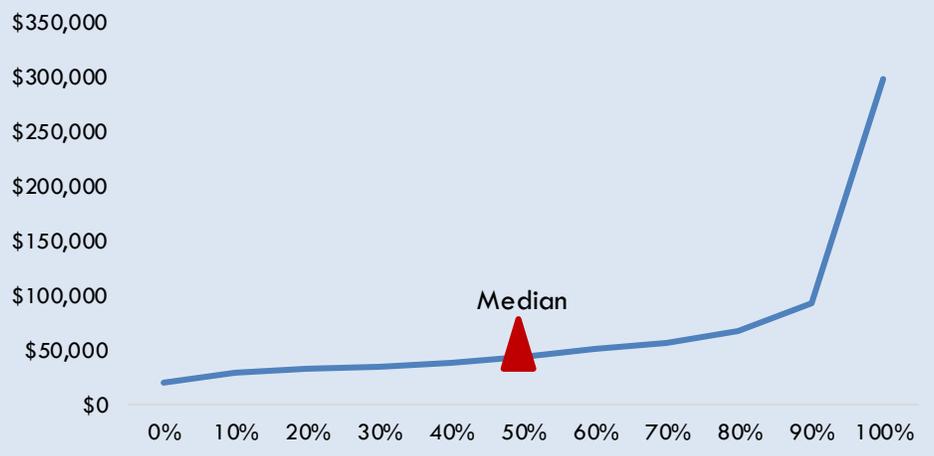
Chart 7 presents average compensation (wages + benefits) by establishment size. Although average compensation varies by establishment size, overall compensation in the study market area is \$69,368 (\$53,249 + \$16,119). The total compensation figures in Chart 7 represent unweighted establishment wages and benefits.

**Chart 7: Wage and Benefit Survey: Total Compensation by Employment Size**



Finally, Chart 8 below plots wage distribution in the study market area. Overall distribution suggests wage distribution is highly skewed at the ninth and tenth deciles. The median wage in the distribution is marked on the chart, and this chart will be used in the occupational templates.

**Chart 8: Wage and Benefit Survey: Wage Distribution in the Study Market Area**



***Wage by Occupations.*** Where data is available, this section presents occupational information by trainee-level wage, entry wage, average wage, number of jobs, educational requirement, difficulty of filling vacant positions, and licensing requirement. Appendices I-IV tabulate the covered occupations by employment, educational and licensing requirements, difficulty of filling vacant positions, and current openings, as well as the occupational-level wage data.

#### IV. Detailed Occupational Profiles

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This section includes templates for 31 occupations. Data reported in each of these templates have already been reported in previous sections. What is new in these templates is that the company characteristics are provided for the companies reporting that job. These profiles are labeled as Profiles 1–31. Each profile may be used as a standalone document for informational purposes.



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### IV. Appendix Tables IV: Average Annualized Wages for the Covered Occupations:

- (1) Weighted (by Job) Median and Average Wages and
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<b>Appendix Table I: Wage and Benefits Survey 2019: Characteristics of the Covered Occupations</b>					
<b>SOC Code and Title</b>		<b>Number Companies Reporting</b>	<b>Number Jobs</b>	<b>Current Openings</b>	<b>Difficulty of Filling (1-10)</b>
<b>11-0000 Management Occupations</b>					
11-1011	Chief Executives	12	17	0	6
11-1021	General and Operations Managers	16	31	0	5
11-2021	Marketing Managers	3	12	0	5
11-2022	Sales Managers	8	29	4	5
11-3012	Administrative Services Managers	8	32	0	5
11-3013	Facilities Managers	6	15	0	5
11-3030	Financial Managers	7	6	1	6
11-3060	Purchasing Managers	4	4	0	2
11-3070	Transportation, Storage, and Distribution Managers	6	6	0	5
11-3120	Human Resources Managers	11	11	0	5
11-9199	Managers, All Other	7	16	0	4
<b>13-1000 Business Operations Specialists</b>					
13-1020	Buyers and Purchasing Agents	5	10	1	4
13-1070	Human Resources Workers	3	5	0	6
<b>13-2000 Financial Specialists</b>					
13-2011a	Accountants	9	18	0	6
<b>17-2000 Engineers</b>					
17-2110	Industrial Engineers, Including Health and Safety	4	6	0	7
<b>19-0000 Life, Physical, and Social Science Occupations</b>					
19-4099	Quality Control Analysts	4	5	0	5
<b>37-1000 Supervisors of Building and Grounds Cleaning and Maintenance Workers</b>					
37-2010	Building Cleaning Workers	3	3	0	4
<b>41-0000 Sales and Related Occupations</b>					
41-9099	Sales and Related, All Other	4	27	1	6
<b>43-0000 Office and Administrative Support Occupations</b>					
43-3030	Bookkeeping, Accounting, and Auditing Clerks	5	7	0	5
43-4050	Customer Service Representatives	7	25	0	5
43-5071	Shipping, Receiving, and Inventory Clerks	8	14	1	5
<b>49-0000 Installation, Maintenance, and Repair Workers</b>					
49-9040	Industrial Machinery Installation, Repair, and Maintenance	4	23	0	6
49-9070	Maintenance and Repair Workers, General	8	44	0	6
<b>51-0000 Production Occupations</b>					
51-1010	First-Line Supervisors of Production and Operating Workers	13	52	0	5
51-2000	Assemblers and Fabricators	7	118	7	4
51-4020	Forming Machine Setters, Operators, and Tenders, Metal and Plastic	3	14	0	5
51-4040	Machinists	4	8	1	5
51-4120	Welding, Soldering, and Brazing Workers	8	60	12	5
51-9060	Inspectors, Testers, Sorters, Samplers, and Weighers	4	11	0	5
51-9199	Production Workers, All Other	7	246	8	4
<b>53-0000 Transportation and Material Moving Occupations</b>					
53-7060	Laborers and Material Movers	6	71	0	5

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Appendix Table II: Wage and Benefits Survey 2019: Characteristics of the Covered Occupations

SOC Code and Title	Minimum Required Educational Level				Licensing Requirement	
	High School or Less	Vocational School	Associate's Degree	Bachelor's Degree	No	Yes
	<b>11-0000 Management Occupations</b>					
11-1011 Chief Executive	14.3%		14.3%	71.4%	80.0%	20.0%
11-1021 General and Operations Managers	10.0%		20.0%	70.0%	90.0%	10.0%
11-2021 Marketing Managers			33.3%	66.7%	100.0%	
11-2022 Sales Managers			25.0%	75.0%	85.7%	14.3%
11-3012 Administrative Services Managers	25.0%		50.0%	25.0%	80.0%	20.0%
11-3013 Facilities Managers	20.0%			80.0%	100.0%	
11-3030 Financial Managers				100.0%	66.7%	33.3%
11-3060 Purchasing Managers	50.0%		50.0%		100.0%	
11-3070 Transportation, Storage, and Distribution Managers	80.0%			20.0%	100.0%	
11-3120 Human Resources Managers	12.5%		25.0%	62.5%	62.5%	37.5%
11-9199 Managers, All Other	66.7%			33.3%	100.0%	
<b>13-1000 Business Operations Specialists</b>						
13-1020 Buyers and Purchasing Agents	100.0%				100.0%	
13-1070 Human Resources Workers	33.3%		33.3%	33.3%	100.0%	
<b>13-2000 Financial Specialists</b>						
13-2011a Accountants	12.5%		12.5%	75.0%	71.4%	28.6%
<b>17-2000 Engineers</b>						
17-2110 Industrial Engineers, Including Health and Safety			25.0%	75.0%	75.0%	25.0%
<b>19-0000 Life, Physical, and Social Science Occupations</b>						
19-4099 Quality Control Analysts				100.0%	66.7%	33.3%
<i>Supervisors of Building and Grounds</i>						
<b>37-1000 Cleaning and Maintenance Workers</b>						
37-2010 Building Cleaning Workers	100.0%				100.0%	
<b>41-0000 Sales and Related Occupations</b>						
41-9099 Sales and Related, All Other				100.0%	100.0%	
<b>43-0000 Office and Administrative Support Occupations</b>						
43-3030 Bookkeeping, Accounting, and Auditing Clerks	66.7%		33.3%		100.0%	
43-4050 Customer Service Representatives	100.0%				100.0%	
43-5071 Shipping, Receiving, and Inventory Clerks	100.0%				85.7%	14.3%
<b>49-0000 Installation, Maintenance, and Repair Workers</b>						
49-9040 Industrial Machinery Installation, Repair, and Maintenance	100.0%				100.0%	
49-9070 Maintenance and Repair Workers, General	87.5%	12.5%			66.7%	33.3%
<b>51-0000 Production Occupations</b>						
51-1010 First-Line Supervisors of Production and Operating Workers	92.3%			7.7%	77.8%	22.2%
51-2000 Assemblers and Fabricators	100.0%				83.3%	16.7%
51-4020 Forming Machine Setters, Operators, and Tenders, Metal and Plastic	100.0%				100.0%	
51-4040 Machinists	75.0%	25.0%			33.3%	66.7%
51-4120 Welding, Soldering, and Brazing Workers	100.0%				66.7%	33.3%
51-9060 Inspectors, Testers, Sorters, Samplers, and Weighers	100.0%				100.0%	
51-9199 Production Workers, All Other	100.0%				100.0%	
<b>53-0000 Transportation and Material Moving Occupations</b>						
53-7060 Laborers and Material Movers	100.0%				80.0%	20.0%

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Appendix Table III: Wage and Benefits Survey 2019: Average Hourly Wages (Unweighted) for the Covered Occupations								
SOC Code and Title	Trainee Level (Hourly)		Minimum Hourly in Range		Maximum Hourly in Range		Current Wages	
	Average (Mean)	Median	Average (Mean)	Median	Average (Mean)	Median	Average (Mean)	Median
<b>11-0000 Management Occupations</b>								
11-1011 Chief Executives	N/A	N/A	\$56.0	\$58.0	\$68.1	\$71.2	\$66.7	\$58.0
11-1021 General and Operations Managers	\$28.8	\$29.5	\$36.6	\$35.0	\$48.6	\$40.0	\$47.4	\$40.0
11-2021 Marketing Managers	N/A	N/A	N/A	N/A	N/A	N/A	\$32.7	\$21.0
11-2022 Sales Managers	N/A	N/A	N/A	N/A	N/A	N/A	\$42.5	\$43.0
11-3012 Administrative Services Managers	N/A	N/A	N/A	N/A	N/A	N/A	\$31.1	\$24.5
11-3013 Facilities Managers	N/A	N/A	N/A	N/A	N/A	N/A	\$43.9	\$44.7
11-3030 Financial Managers	N/A	N/A	N/A	N/A	N/A	N/A	\$47.3	\$50.0
11-3060 Purchasing Managers	N/A	N/A	N/A	N/A	N/A	N/A	\$21.8	\$22.0
11-3070 Transportation, Storage, and Distribution Managers	N/A	N/A	N/A	N/A	\$23.1	\$21.9	\$20.1	\$18.8
11-3120 Human Resources Managers	N/A	N/A	\$28.7	\$27.0	\$36.7	\$36.4	\$26.6	\$26.0
11-9199 Managers, All Other	N/A	N/A	\$28.6	\$27.3	\$38.5	\$39.0	\$29.9	\$23.5
<b>13-1000 Business Operations Specialists</b>								
13-1020 Buyers and Purchasing Agents	N/A	N/A	\$15.5	\$15.0	\$20.8	\$20.5	\$18.4	\$17.0
13-1070 Human Resources Workers	N/A	N/A	N/A	N/A	N/A	N/A	\$27.5	\$30.0
<b>13-2000 Financial Specialists</b>								
13-2011a Accountants	N/A	N/A	\$20.9	\$21.6	\$25.3	\$27.5	\$26.8	\$25.8
<b>17-2000 Engineers</b>								
17-2110 Industrial Engineers, Including Health and Safety	\$29.4	\$31.3	\$29.8	\$30.3	\$35.2	\$35.0	\$34.0	\$33.1
<b>19-0000 Life, Physical, and Social Science Occupations</b>								
19-4099 Quality Control Analysts	N/A	N/A	N/A	N/A	N/A	N/A	\$31.1	\$30.3
<b>37-1000 Supervisors of Building and Grounds Cleaning and Maintenance Workers</b>								
37-2010 Building Cleaning Workers	\$8.8	\$8.3	\$11.0	\$11.0	\$13.0	\$13.0	\$11.8	\$11.5
<b>41-0000 Sales and Related Occupations</b>								
41-9099 Sales and Related, All Other	N/A	N/A	N/A	N/A	N/A	N/A	\$29.7	\$22.0
<b>43-0000 Office and Administrative Support Occupations</b>								
43-3030 Bookkeeping, Accounting, and Auditing Clerks	N/A	N/A	\$16.3	\$15.0	\$22.0	\$20.0	\$17.8	\$17.0
43-4050 Customer Service Representatives	N/A	N/A	\$14.8	\$14.5	\$17.2	\$18.0	\$15.5	\$15.5
43-5071 Shipping, Receiving, and Inventory Clerks	\$12.6	\$13.0	\$14.2	\$14.0	\$17.3	\$18.0	\$15.0	\$15.2
<b>49-0000 Installation, Maintenance, and Repair Workers</b>								
49-9040 Industrial Machinery Installation, Repair, and Maintenance	N/A	N/A	N/A	N/A	N/A	N/A	\$26.5	\$27.5
49-9070 Maintenance and Repair Workers, General	\$17.3	\$17.0	\$17.6	\$18.0	\$26.0	\$26.0	\$21.0	\$22.0
<b>51-0000 Production Occupations</b>								
51-1010 First-Line Supervisors of Production and Operating Workers	\$21.7	\$19.0	\$21.9	\$19.0	\$30.2	\$28.0	\$25.6	\$25.0
51-2000 Assemblers and Fabricators	\$11.3	\$11.0	\$12.7	\$13.0	\$16.9	\$16.0	\$14.9	\$13.0
51-4020 Forming Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	N/A	N/A	N/A	N/A	N/A	\$16.3	\$16.0
51-4040 Machinists	N/A	N/A	\$16.4	\$16.6	\$22.6	\$23.5	\$19.8	\$19.9
51-4120 Welding, Soldering, and Brazing Workers	N/A	N/A	\$14.3	\$14.0	\$20.9	\$19.0	\$15.7	\$14.7
51-9060 Inspectors, Testers, Sorters, Samplers, and Weighers	N/A	N/A	\$14.4	\$14.0	\$20.2	\$19.6	\$17.6	\$18.2
51-9199 Production Workers, All Other	N/A	N/A	\$14.2	\$14.0	\$17.8	\$17.7	\$15.7	\$15.4
<b>53-0000 Transportation and Material Moving Occupations</b>								
53-7060 Laborers and Material Movers	\$12.7	\$13.0	\$12.9	\$12.8	\$16.6	\$16.6	\$14.7	\$15.6

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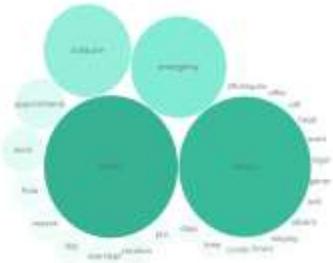
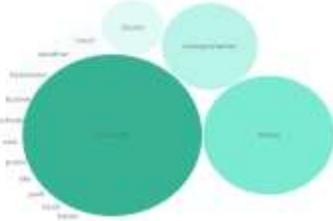
Appendix Table IV: Wage and Benefits Survey 2019: Average Annualized Wages for the Covered Occupations				
SOC Code and Title	Weighted (by Job)		Unweighted (by Establishment)	
	Average (Mean)	Median	Average (Mean)	Median
<b>11-0000 Management Occupations</b>				
11-1011 Chief Executives	\$125,272.7	\$120,640.0	\$138,736.0	\$120,640.0
11-1021 General and Operations Managers	\$109,374.5	\$151,860.8	\$98,612.8	\$83,200.0
11-2021 Marketing Managers	\$107,466.7	N/A	\$67,946.7	\$43,680.0
11-2022 Sales Managers	\$102,848.6	\$110,240.0	\$88,400.0	\$89,440.0
11-3012 Administrative Services Managers	\$112,125.0	\$39,520.0	\$64,740.0	\$50,960.0
11-3013 Facilities Managers	\$96,825.5	\$99,840.0	\$91,399.4	\$92,996.8
11-3030 Financial Managers	\$98,280.0	\$104,000.0	\$98,280.0	\$104,000.0
11-3060 Purchasing Managers	\$45,370.0	\$45,760.0	\$45,370.0	\$45,760.0
11-3070 Transportation, Storage, and Distribution Managers	\$39,457.6	\$34,320.0	\$41,860.0	\$39,124.8
11-3120 Human Resources Managers	\$55,408.6	\$63,086.4	\$55,408.6	\$54,080.0
11-9199 Managers, All Other	\$53,219.6	\$45,760.0	\$62,171.2	\$48,880.0
<b>13-1000 Business Operations Specialists</b>				
13-1020 Buyers and Purchasing Agents	\$37,635.5	\$34,840.0	\$38,234.6	\$35,360.0
13-1070 Human Resources Workers	\$55,061.8	\$62,400.0	\$57,102.9	\$62,400.0
<b>13-2000 Financial Specialists</b>				
13-2011a Accountants	\$51,287.6	\$52,520.0	\$55,645.9	\$53,601.6
<b>17-2000 Engineers</b>				
17-2110 Industrial Engineers, Including Health and Safety	\$71,378.7	\$72,800.0	\$70,668.0	\$68,900.0
<b>19-0000 Life, Physical, and Social Science Occupations</b>				
19-4099 Quality Control Analysts	\$71,895.2	\$78,270.4	\$64,660.3	\$62,940.8
<b>37-1000 Supervisors of Building and Grounds Cleaning and Maintenance Workers</b>				
37-2010 Building Cleaning Workers	\$24,613.3	\$23,920.0	\$24,613.3	\$23,920.0
<b>41-0000 Sales and Related Occupations</b>				
41-9099 Sales and Related, All Other	\$85,125.9	N/A	\$61,706.7	\$45,760.0
<b>43-0000 Office and Administrative Support Occupations</b>				
43-3030 Bookkeeping, Accounting, and Auditing Clerks	\$37,024.0	\$37,440.0	\$36,920.0	\$35,360.0
43-4050 Customer Service Representatives	\$33,106.7	\$35,360.0	\$32,240.0	\$32,240.0
43-5071 Shipping, Receiving, and Inventory Clerks	\$30,980.1	\$31,553.6	\$31,203.0	\$31,553.6
<b>49-0000 Installation, Maintenance, and Repair Workers</b>				
49-9040 Industrial Machinery Installation, Repair, and Maintenance	\$48,100.0	N/A	\$55,120.0	\$57,200.0
49-9070 Maintenance and Repair Workers, General	\$45,579.0	\$45,760.0	\$43,760.2	\$45,760.0
<b>51-0000 Production Occupations</b>				
51-1010 First-Line Supervisors of Production and Operating Workers	\$51,094.4	\$53,497.6	\$53,245.4	\$52,000.0
51-2000 Assemblers and Fabricators	\$27,954.4	\$27,040.0	\$30,971.2	\$27,040.0
51-4020 Forming Machine Setters, Operators, and Tenders, Metal and Plastic	\$34,765.7	\$33,280.0	\$33,973.3	\$33,280.0
51-4040 Machinists	\$41,002.0	\$41,454.4	\$41,262.0	\$41,444.0
51-4120 Welding, Soldering, and Brazing Workers	\$38,102.1	\$44,408.0	\$32,575.4	\$30,617.6
51-9060 Inspectors, Testers, Sorters, Samplers, and Weighers	\$38,124.5	\$39,603.2	\$36,618.4	\$37,835.2
51-9199 Production Workers, All Other	\$31,777.6	\$30,680.0	\$32,749.6	\$31,980.0
<b>53-0000 Transportation and Material Moving Occupations</b>				
53-7060 Laborers and Material Movers	\$32,690.0	\$33,280.0	\$30,565.6	\$32,416.8

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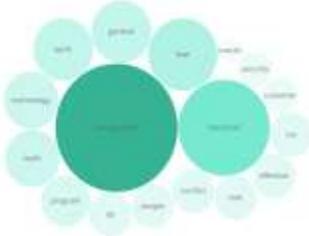
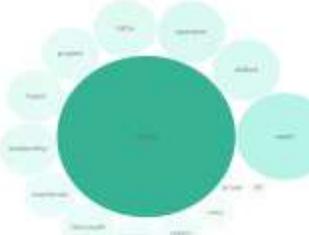
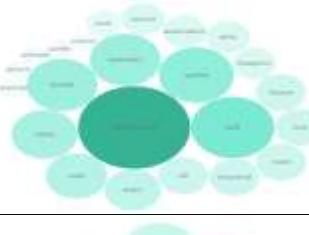
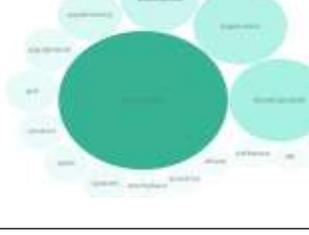
Appendix: Absenteeism, Turnover, and Training Needs

A Comparative Perspectives

Absenteeism could be attributed to two broad categories: Personal and Family reasons. Personal reasons could be illness, transportation problems, or simply now show. On the other hand, family reasons could be family illness, emergency, childcare, and appointments.

Topic	5 most frequently used words	Word cloud	Interpretation of the topic
1	Family, illness, emergency, childcare, appointment		Family illness, emergency, childcare, appointments
2	Personal, illness, transportation, issues, court		no show, illness, transportation

Training

Topic	5 most frequently used words	Word cloud	Interpretation of the topic
1	Management, technical, lean, general, work		People management, ISO, equipment training, technical
2	Computer, communication, jon, manufacture, team		Computer skills, business writing,
3	Safety, weld, skilled, operator, OSHA		Safety (OSHA, Bloodborne pathogens), welding, machine operators, industry certificates (six sigma, Deltek-CostPoint, QMS)
4	Maintenance, soft, quality, operation, forklift		Maintenance, soft skills (work ethics), quality
5	Leadership, development, supervisor, mechanical, supervisory		Supervisor development, leadership

Turnover can be divided into job-related factors and personal factors.

Job-related factors	
	Pay, schedule, overtime, drug test
	Shift work, retirement, location
Personal factors	
	Absenteeism, job abandonment, attendance
	Family and personal issues
	Relocation
	employment opportunities

Topic	5 most frequently used words	Word cloud	Interpretation of the topic
	Employment, opportunity, reason, reallocation, benefit		Relocation, employment opportunities,
	Move, issue, wage, environment, career		Wages, family and personal issues
	Work, retirement, good, change, shift		Shift work, retirement, location

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	Job, attendance, personal, absenteeism, school		Absenteeism, job abandonment, attendance issues
	Pay, hour, high, schedule, overtime		Pay, schedule, overtime, drug test

Region	Training	Turnover	Absenteeism
1	Skill (QMS, lean, communication, read)	Work environment: shift, drug test, commute	Family related: illness, child care
	Maintenance (mechanical, forklift, engineer, technical)	pay	Personal: transportation, illness
	Leadership (supervisory)	Employment opportunities	
2	Leadership	Job-related: retirement, attendance, Abandonment	Family related: illness, child care
	Quality	Employment opportunities	Personal: transportation, illness
	Safety	Pay	
	Maintenance		
3	Skill (tools operation, press operation, weld)	Employment opportunities	Family related: illness, child care
	Leadership (supervisory)	Job related: shifts, commute, attendance, Abandonment	Personal: transportation, illness
	Management (team building, time management)	pay	
	Safety		
4	Leadership	Job related: Attendance, shifts hours, Abandonment	Family related: illness, child care
	Maintenance	Employment opportunities	Personal: transportation, illness
	Safety		
	Soft skills - communication		

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5	Leadership	Employment opportunities	Family related: illness, child care
	Management	Personal reasons: family	Personal: transportation, illness
	Computer skills	pay	
		Job related: type of work, shift hours, attendance, Abandonment	
6	Leadership	Job related: attendance, Abandonment, shifts schedule, working conditions	Family related: illness, child care
	Safety	Pay	Personal: transportation, illness
	Management		
	Quality		
	Maintenance		
7	Safety (OSHA)	Employment opportunities	Family related: illness, child care
	Leadership	Job related: Attendance, Abandonment, drug test	Personal: transportation, illness
	Skills (computer and machines)	Pay	
	Management		
8	Safety	Employment opportunities	Family related: illness, child care
	Skills (soft, computer, machines)	Job related: work environment, retirement, shift hours	Personal: transportation, illness
	Leadership (supervisory)	Personal reasons	
9	Communication	Job related: retirement, shift hours,	Family related: illness, child care
	Computer Skills	Personal reasons: moving	Personal: transportation, illness
	Safety (OSHA)	Employment opportunities	
10	Leadership	Pay	
	Safety	Job related: drug test, type of work, attendance, abandonment, shift hours, management issues	
	Management	Personal reasons: moving, family issues	
	Computer Skills	Employment opportunities	
11	Leadership	Job related: Attendance, job abandonment, compensation, work environment, shift hours, management, type of work, no advancement	Family related: illness, child care

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	Maintenance	Employment opportunities	Personal: transportation, illness
	Safety	Pay	Weather Conditions
	Management	Personal issues: family, relocation	
	Computer and communication		
12	Leadership	Job related: benefits, attendance, working conditions, shift hours, job abandonment, retirement, no advancement	Family related: illness, child care
	Safety + certificates	Pay	Personal: transportation, illness
	Management	Employment opportunities	Work Conditions
	Soft skills	Personal reasons: commute, moved	
13	Safety	Employment opportunities	Family related: illness, child care
	Computer and communication	Job related: Attendance, retirement, shift hours, type of work	Personal: transportation, illness, court
	Management	Personal issues: family, relocation	
	Leadership	Pay	