

Chillicothe Labor Basin

Labor Availability Analysis – 2025

Caldwell • Carroll • Chariton • Daviess • Grundy • Harrison • Linn •
Livingston • Macon • Mercer • Putnam • Ray • Sullivan



Prepared For
Rumery & Associates

Sponsored By
Chillicothe Development, Inc., the City of Chillicothe, Missouri,
and Chillicothe Municipal Utilities

Prepared By
The Docking Institute of Public Affairs

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Mission:

To facilitate effective public policy decision-making among governmental and nonprofit entities



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Chillicothe Available Labor Analysis - 2025

Executive Summary

- The purpose of this report is to assess the “Available Labor Pool” (Pool) in the Chillicothe Labor Basin. The Pool represents those who indicate that they are looking for employment or would consider taking a new or different job for the right opportunities.
- The Chillicothe Labor Basin includes Caldwell, Carroll, Chariton, Daviess, Grundy, Harrison, Linn, Livingston, Macon, Mercer, Putnam, Ray, and Sullivan counties in north central Missouri.
- The labor basin has a total population of approximately 130,672, with 60,054 in the Civilian Labor Force, and 57,824 employed. The Docking Institute’s analysis estimates that the Available Labor Pool within the labor basin includes 32,117 individuals.
- An estimated 3,648 members of the Pool (11.4%) are non-employed and are currently seeking employment, while 4,345 (13.5%) are non-employed but might be interested in a job for the right opportunities. Additionally, 4,576 members (14.2%) are employed and currently looking for different jobs, while 19,548 (60.9%) are employed but might be interested in new employment for the right opportunities.
- The average age of the Pool is 47 (mean) and 49 (median) years old, more than half (54.5%) of the Pool are male, and nearly all (97.5%) have at least a high school diploma. Almost three-quarters (73.3%) have at least some college-level educational experience, and 33.7% have at least a bachelor’s degree. Six percent said that they speak another language, and most of that group (34.8%) speaks Spanish.
- Semi-skilled laborers account for 16.4% of the Pool, while highly skilled laborers comprise 10.8%. Service sector workers represent 32%, and professional employees make up 15.9%. Almost a quarter (24.9%) of the Pool are non-employed individuals.
- An estimated 22,353 Pool members report having training and/or experience in working in data entry and using a phone, while 20,747 would consider employment in that field.

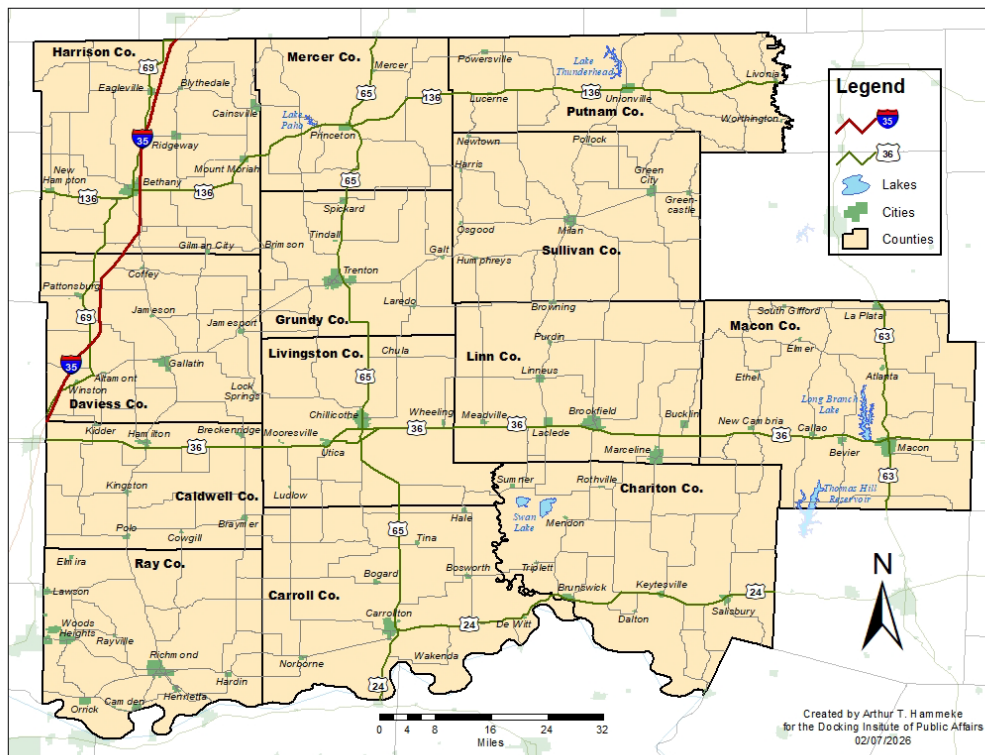
- Of those with distribution/warehousing experience, 76% moved materials or loaded trucks, 52% worked in inventory control or scheduling, 37% held administrative or management positions, and 23% worked in accounting or bookkeeping.
- Of those with manufacturing/processing experience, 72% worked in production, fabrication, or assembly; 62% held positions in administration, management, or sales; 45% worked in maintenance, shipping, or receiving; and 25% worked in accounting or bookkeeping.
- Among Pool members with some college experience (73.3%), 29% studied business and economics, 17% studied biological sciences, 15% studied social sciences, 15% studied physical sciences, 10% studied education, 9% studied arts and humanities, and 5% studied computer science and math.
- More than a third (38%) have completed technical certificates. Among these individuals, 31% earned certificates in nursing or in related fields such as certified nurse assistant (CNA), emergency medical technician (EMT), and other healthcare-related areas; 18% earned certificates in transportation and automotive and diesel technology; and 16% earned certificates in public safety, security, and paralegal services.
- More than three-quarters (76%) of working members of the Pool at least agree that they “enjoy the things they do” at work, 70% at least agree that they have “generally positive work environments,” and 65% at least agree that they “receive fair pay.”
- Almost 70% of the Pool will take a job outside of their primary field of employment.
- More than a quarter (28.7%) will work the 2nd shift, 26.3% will work weekends, 20.8% will work the night shift, and 17.6% will work rotating shifts.
- A large majority (92%) of the Pool will commute up to 15 minutes, one-way, for a job, and 82% will commute up to 30 minutes, one-way.
- A majority (64%) are “not likely at all” to relocate for a job, while 15% are “somewhat likely,” 12% are “moderately likely,” 4% are “very likely,” and 5% are “extremely likely” to do so.

- More than 90% of the Pool consider good vacation benefits and sick leave as “very important” benefits for a new job. At least 80% of the Pool view good salary/hourly wage, good retirement benefits, flexible hours/flex-time, good health benefits, and on-the-job training or paid training as “very important” considerations for a new job.
- An estimated 11% are available for positions paying \$15 per hour, 25% are available at \$20 per hour, 68% at \$30 per hour, 85% at \$40 per hour.
- Among semi-skilled laborers, 19.8% anticipate earning between \$15 and \$20 per hour in a new or different job, while no highly skilled laborers are available at that wage. In the service sector, 19.9% anticipate wages in that same range, while no professional employees are available at that wage.
- Of the 24,124 employed members of the Pool, 28% are underemployed.
- Half (50%) of the underemployed workers consider themselves underemployed because they have skills that are not being used currently on the job, 48% possess education levels exceeding those needed for their current job, 41% earned more money at a past but similar job, and 20% feel they cannot work as many hours as they would like at their job.
- The average age is 43 (mean) and 45 (median) years old, and 55.8% are female. Almost half (45.7%) hold at least bachelor’s degrees, 60.9% hold at least associate’s degrees, and all (100%) have high school diplomas.
- The largest share of the underemployed are service sector workers (47%), while semi-skilled laborers, highly skilled laborers, and professional employees follow with 34%, 10%, and 9%, respectively.
- More than 90% of underemployed workers rate good salary/hourly wage, good vacation benefits, sick leave, and flexible hours/flex-time as “very important.”
- Of the underemployed workers, 24% are available for wages ranging from \$15 to \$20 per hour, 47% are available for wages ranging from \$20 to \$25 per hour, and 80% are available for wages ranging from \$25 to \$30 per hour.
- Of underemployed Pool members, 39% are looking for or are interested in new job opportunities to address their current underemployment status.

The Chillicothe Labor Basin

The Chillicothe Labor Basin includes 13 counties in north central Missouri. As shown in Map 1 below, the counties include Caldwell, Carroll, Chariton, Daviess, Grundy, Harrison, Linn, Livingston, Macon, Mercer, Putnam, Ray, and Sullivan. The counties were selected because communities in the counties are within an hour commute (one-way) of Chillicothe, Missouri.

The labor basin has a total population of approximately 130,672, with 60,054 in the Civilian Labor Force, and 57,824 employed. The Docking Institute's analysis estimates that the Available Labor Pool within the labor basin includes 32,117 individuals.



Map 1: Chillicothe Labor Basin

The Available Labor Pool consists of working-age area residents who are 1) currently not working and looking for a job, 2) not working *but* interested in a new or different job given the right opportunities, 3) currently working *and* looking for another job, or 4) currently employed *but* interested in a new or different job given the right opportunities. Please see the Methods Section for more information about the Institute's Available Labor Pool analysis methodology and the survey research methods used for this study.

Key Questions

This report assesses the characteristics of the Available Labor Pool in the Chillicothe Labor Basin by answering the following questions:

- What proportion of the labor force – employed, unemployed, homemaker, student, retired, and disabled – are looking for or would consider a new employment opportunity?
- What skills and education levels do these workers and potential workers possess?
- How many years of experience do workers have in their current jobs?
- What types of jobs have they had in the past?
- What types of considerations (pay, benefits, commute time) shape their decision-making?
- What are some of the characteristics of semi-skilled laborers, highly skilled laborers, service sector workers, and professional employees?
- What percentage is willing to change fields of employment for a new job opportunity?
- What percentage is willing to relocate for a new employment opportunity?
- What types of work shifts are they willing to work?
- What is their level of job satisfaction?
- What percentage consider themselves underemployed?
- What are some of the characteristics of the underemployed?

The Chillicothe Labor Basin's Available Labor Pool

An estimated 3,648 members of the Pool (11.4%) are non-employed¹ and are currently seeking employment, while 4,345 (13.5%) are non-employed *but* might be interested in a job for the right opportunities. Additionally, 4,576 members (14.2%) are employed and currently looking for different jobs, while 19,548 (60.9%) are employed but might be interested in new employment for the right opportunities.²

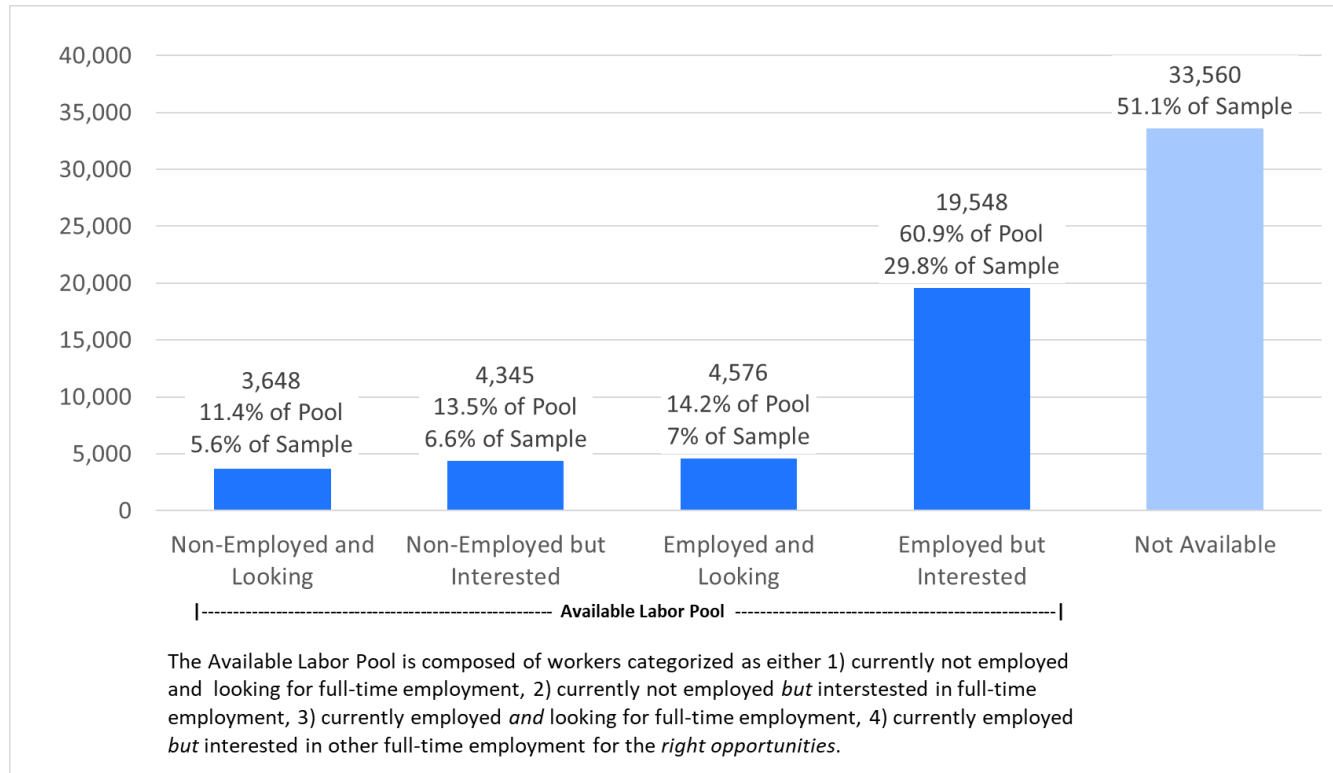


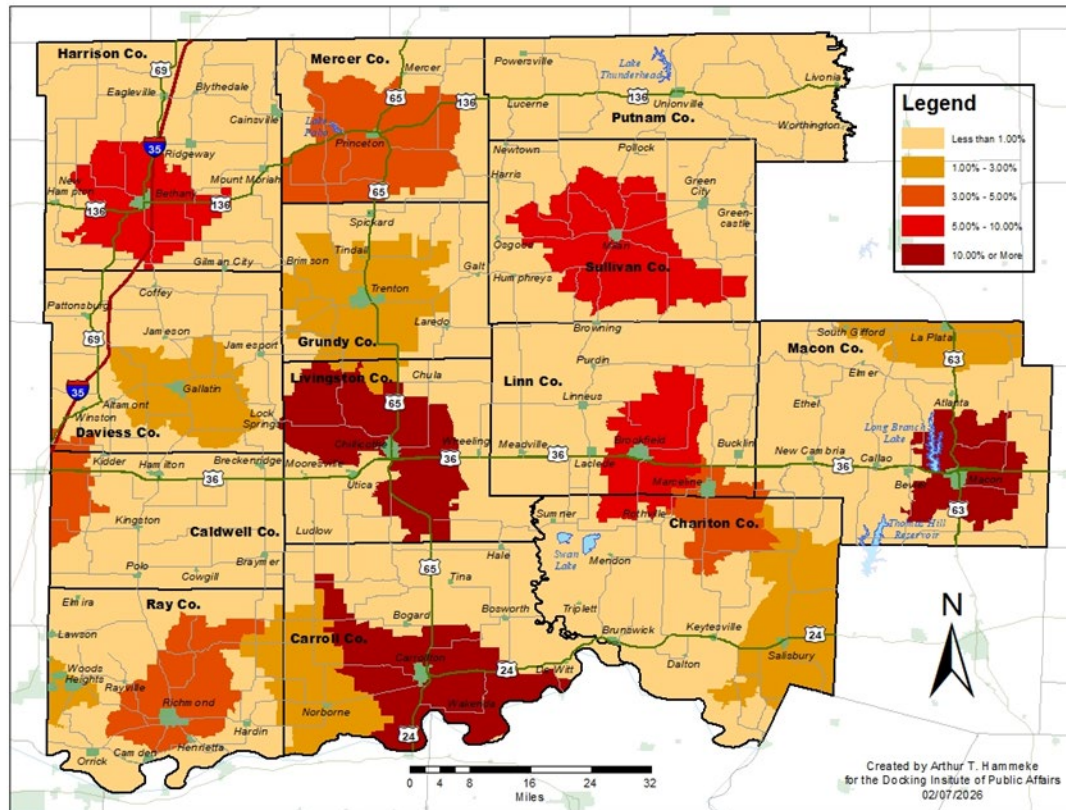
Figure 1. Available Labor Pool for the Chillicothe Labor Basin

¹ “Non-employed” includes officially unemployed members of the Civilian Labor Force (CLF) as well as full-time students, homemakers, service members, retirees, and disabled individuals who are not in the CLF but indicate they are available for employment.

² Figure 1 also shows the percentages of each group within the full sample of survey respondents. Overall, 51.1% of the sample is not seeking nor would consider a new job opportunity.

Map 2 illustrates how ZIP Code areas across the Chillicothe Labor Basin compare in their share of the total available labor.

- ZIP Code areas in Carroll, Livingston, and Macon counties stand out, contributing **10% or more** of the Available Labor Pool (dark red).
- ZIP Code areas in Chariton, Harrison, Linn, and Sullivan account for **5% to 10%** of the Pool (red).
- ZIP Code areas in Caldwell, Chariton, Daviess, Linn, Mercer, and Ray contribute **3% to 5%** (orange).
- ZIP Code areas in Carroll, Chariton, Daviess, Grundy, Livingston, Macon, and Ray counties contribute **1% to 3%** (dark yellow).
- ZIP Code areas in all counties contribute **up to 1%** of the Available Labor Pool (light yellow).



Map 2: Percent of Total Available Labor in Labor Basin by ZIP Code

Table 1 shows the age, gender, and education levels of the 32,117-member Available Labor Pool. The average age of the Pool is 47 (mean) and 49 (median) years old, more than half (54.5%) of the Pool are male, and nearly all (97.5%) have at least a high school diploma. Almost three-quarters (73.3%) have at least some college-level educational experience, and 33.7% have at least a bachelor's degree. Six percent said that they speak another language, and most of that group (34.8%) speaks Spanish.

Table 1. Characteristics of the Available Labor Pool

Age Information		Age in 2025	
Range		19 to 72	
Mean Average		47	
Median Average		49	

Gender	Number	Percent	
Male	17,514	54.5	
Female	14,147	44.0	
Other Identity	170	0.5	
Prefer Not to Say	286	0.9	
Total	32,117	100	

Highest Level of Education	Number	Percent	Cumulative Percent
Doctoral Degree	327	1.0	1.0
Master's Degree	4,178	13.0	14.0
Bachelor's Degree	6,320	19.7	33.7
Associate's Degree	4,432	13.8	47.5
Some College	8,287	25.8	73.3
High School Diploma	7,784	24.2	97.5
Less HS Diploma	789	2.5	100
Total	32,117	100	

Additional Language	Number	Percent
"Yes"	2,015	6.3
Spanish	701	34.8
German	602	29.9
Japanese	336	16.7
French	193	9.6
Dutch	145	7.2
American Sign Language	38	1.9

Table 2 presents the occupational categories of the 32,117-member Available Labor Pool. Semi-skilled laborers account for 16.4% of the Pool, while highly skilled laborers comprise 10.8%. Service sector workers represent 32%, and professional employees make up 15.9%. Almost a quarter (24.9%) of the Pool are non-employed individuals.

The table also presents the mean and median job tenures for each occupational category. For example, construction, cleaning, labor, and delivery workers average about 17.8 years (mean) and 10 years (median) on the job. Semi-Skilled Labor *as a group* average 17.1 years (mean) and 10.3 years (median) on the job.

Table 2. Major Occupational Categories of Available Labor

Occupational Category	Number	Percent	Years at Job	
			Mean	Median
Construction/Cleaning/Labor/Delivery	3,426	10.7	17.8	10.0
Manufacturing/Maintenance/Trucking	1,841	5.7	16.4	10.6
Total Semi-Skilled Labor	5,267	16.4	17.1	10.3
Mechanic/Welder/Comp Tech	1,906	5.9	9.2	6.6
Crew Management/Protection Services	1,556	4.8	15.5	12.1
Total Highly Skilled Labor	3,462	10.8	12.4	9.4
Customer Service	2,646	8.2	4.3	2.7
Clerical	1,902	5.9	6.2	4.0
Office or Dept Manager	1,893	5.9	13.0	9.0
Health Aide/Nurse	2,922	9.1	12.9	11.0
Education Aide/Teacher	930	2.9	10.3	13.6
Total Service Sector Employees	10,292	32.0	9.3	9.0
Exec Management	1,266	3.9	10.9	8.2
Accounting/Programming/Engineering/Research	1,666	5.2	8.8	6.0
Doctor/Professor/Attorney	1,457	4.5	11.5	5.0
Writer/Artist/Musician	713	2.2	7.2	6.0
Total Professional Sector Employees	5,103	15.9	9.6	6.0
Homemaker/Students/Unemployed	2,359	7.3	n/a	n/a
Retirees/Disabled	5,634	17.5	n/a	n/a
Total Non-Employed	7,993	24.9		
Total	32,117	100		

Figure 2 shows the occupational sectors of employed members of the Available Labor Pool. The percentages shown differ from those shown in Table 2, which includes both employed and non-employed Pool members (Figure 2 includes working Pool members only).

The figure shows that service sector employees make up the largest share at 43%, while semi-skilled laborers, professional employees, and highly skilled laborers follow at 22%, 21%, and 14%, respectively.

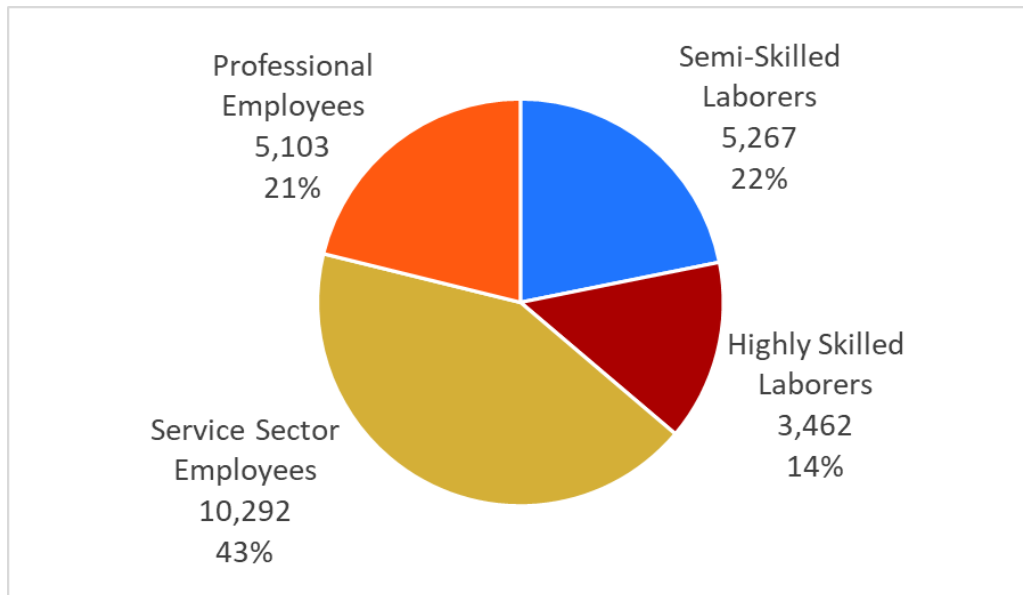
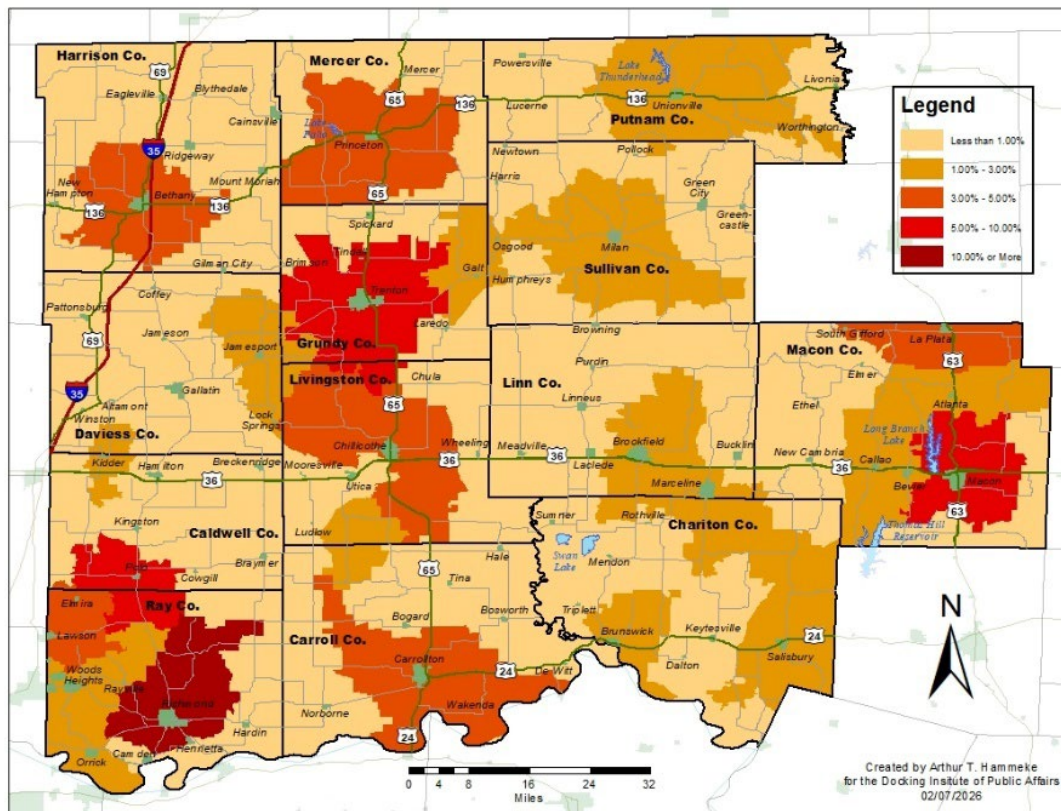


Figure 2. Occupational Sectors of Available Labor (Employed Only)

Map 3 shows the share of Available Labor Pool workplaces by ZIP Code area across the labor basin.

- ZIP Code areas in Ray County account for **10% or more** of Pool-member workplaces (dark red).
- ZIP Code areas in Caldwell, Grundy, Livingston, Macon, and Ray counties hold **5% to 10%** of the workplaces (red).
- ZIP Code areas in Carroll, Harrison, Livingston, Macon, Mercer, and Ray counties hold **3% to 5%** of the workplaces (orange).
- ZIP Code areas in all counties but Harrison and Mercer counties account for **1% to 3%** of the workplaces (dark yellow).
- ZIP Code areas in all counties contribute **less than 1%** of the workplaces (light yellow).



Map 3. Percent of Available Labor Pool Workplaces by ZIP Code

Work Experiences and Current Skills

To better understand the types of workers available for new or different employment in the Chillicothe Labor Basin, survey respondents were asked about their work skills and previous job experiences.

Table 3 and Figure 3 (following pages) present the current employment status of Pool members and prior work or training experience. Table 3 shows how many individuals are currently employed in each job category and how many, both employed and non-employed, report previous experience or training in those same fields. It also shows the combined total of those now working in a category, plus those with relevant past experience. Individuals whose current job matches their prior experience are counted only once and are not included again in the prior-experience column.

For example, 1,817 Pool members are currently employed as general laborers, construction workers, cleaners, or similar roles. An additional 411 individuals (both employed and non-employed) report previous experience or training in those occupations, resulting in a total of 2,228 individuals with relevant backgrounds in those occupations.

Table 3. Current Work Experience Plus Previous Work or Training Experience

	Current Employment* Number +	Previous Work/Training** Number =	Current plus Previous Work or Training^ Number
Working with Hands			
Construction, Cleaning, Manual Labor	1,817	411	2,228
Farm or Ranch Labor	868	939	1,807
Manufacturing and Assembly	978	1,430	2,408
Maintenance	236	755	991
Driving (Delivery, Bus, Postal)	740	1,074	1,815
Truck Driving/Heavy Equip. Operator	627	1,317	1,944
Skilled Labor	1,270	1,311	2,581
Crew Management	996	1,092	2,088
Working with People			
General Customer Service	2,646	2,137	4,783
Office Management	1,893	2,301	4,193
Governmental Services	560	1,372	1,932
Executive Management	1,266	797	2,064
Advanced Social Services	1,012	341	1,353
Working with Numbers			
Clerical	1,902	1,665	3,567
Accounting/Finance/Banking	1,027	282	1,310
Researcher/Analyst	47	41	88

(Table continues to next page)

Current Work Experience Plus Previous Work or Training Experience (Continued)

	Current Employment* Number +	Previous Work/Training** Number =	Current plus Previous Work or Training^ Number
Working with Technology			
IT Maint., Tech. Maint. (Non-Medical)	635	0	635
Software Dev./Computer Prog.	346	502	848
Engineer/Designer	246	300	546
Providing Health Services			
Health Aide (CNA, Tech, Home Aid)	762	940	1,701
Nurse (RN, LPN)	2,160	417	2,577
Advanced Medical Practitioner	246	0	246
Providing Educational Services			
Education Aide	203	378	581
Teacher/Trainer	728	668	1,395
Professor/Lecturer	199	0	199
Creative Arts			
Musician/Artist/Designer	545	146	691
Writer/Editor	168	165	333
Total	24,124	20,779	

* Retired, disabled, non-working students, homemakers are not included.

** If an individual's previous job is the same as the current job, they are not counted in the Previous Work/Training Column.

^ Totals might not sum precisely due to rounding.

Figure 3 (next page) presents the same data shown in Table 3, but in graphic format.

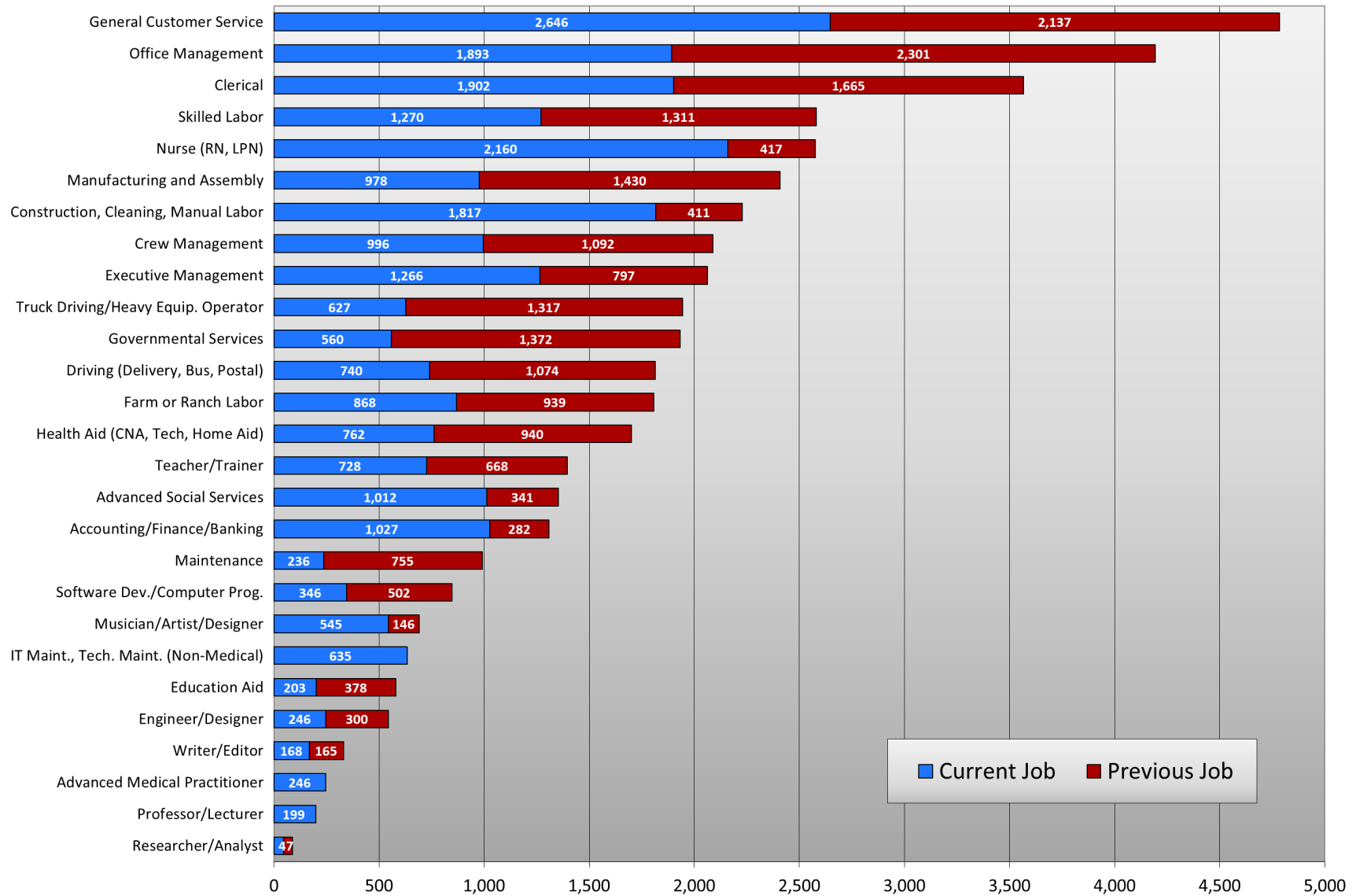


Figure 3. Current Work Experience Plus Previous Work or Training Experience

In addition to asking respondents to provide their current employment status and previous work/training experience (the results of which are shown in the previous table and figure), respondents were asked about the six specific employment fields listed in Figure 4.

Respondents were first asked if they had training or work experience in a specific field and then if they would take a job in that field regardless of their prior training or experience. For example, the figure shows that an estimated 22,353 Pool members report having training and/or experience in working in data entry and using a phone (blue column), while 20,747 would consider employment in that field (red column).

The third column (gold) shows the number who have experience/training in a field **and** are willing to work in that field again.

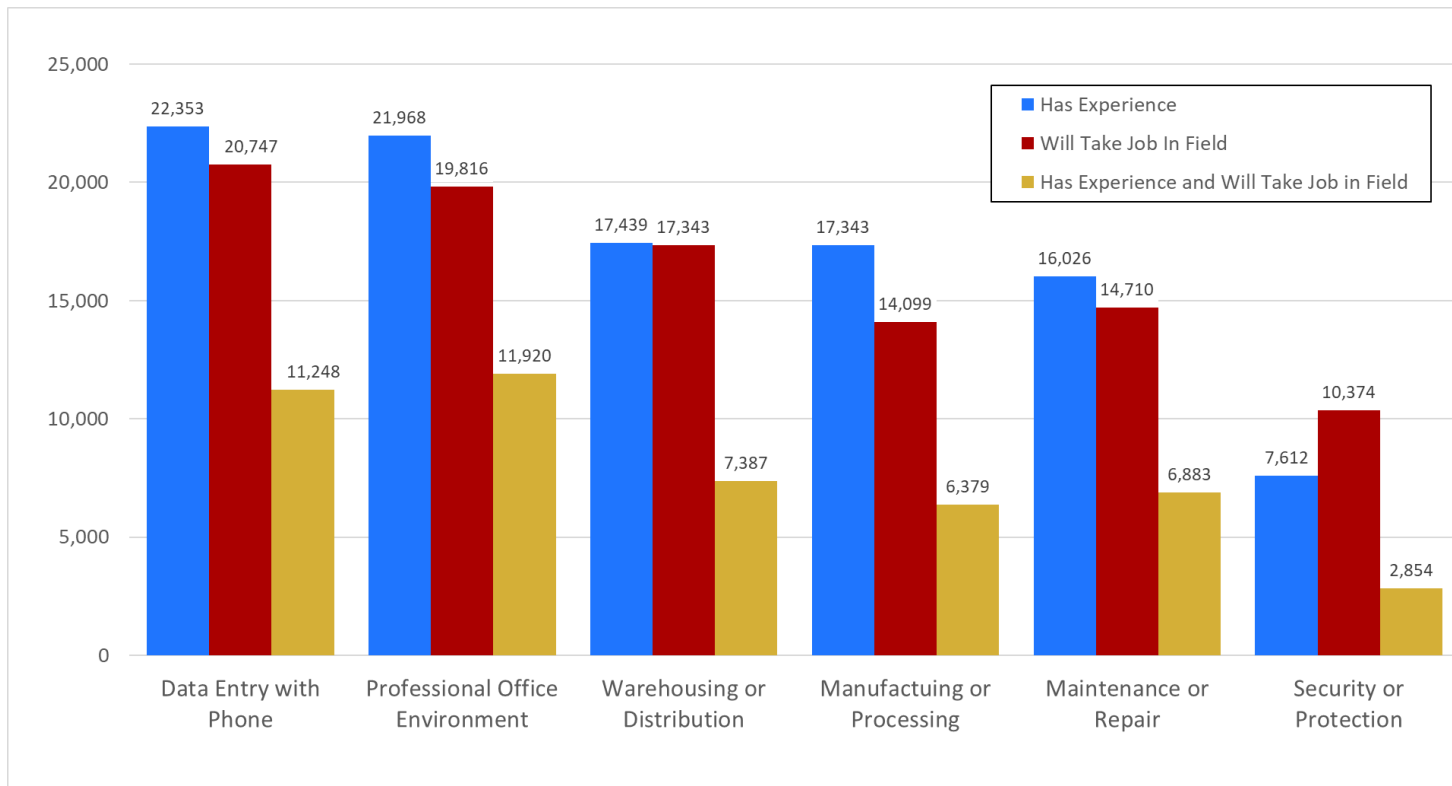


Figure 4. Work Experience/Willing to Work in Field

Survey respondents indicating that they had training or experience in distribution/warehousing or manufacturing/processing were asked additional questions to assess the types of work they performed at those jobs. Figures 5 and 6 (next page) show the responses to those questions. Survey respondents could select more than one answer option.

Figure 5 shows that, of those with distribution/warehousing experience, 76% moved materials or loaded trucks, 52% worked in inventory control or scheduling, 37% worked in administration or management positions, and 23% held accounting or bookkeeping positions.

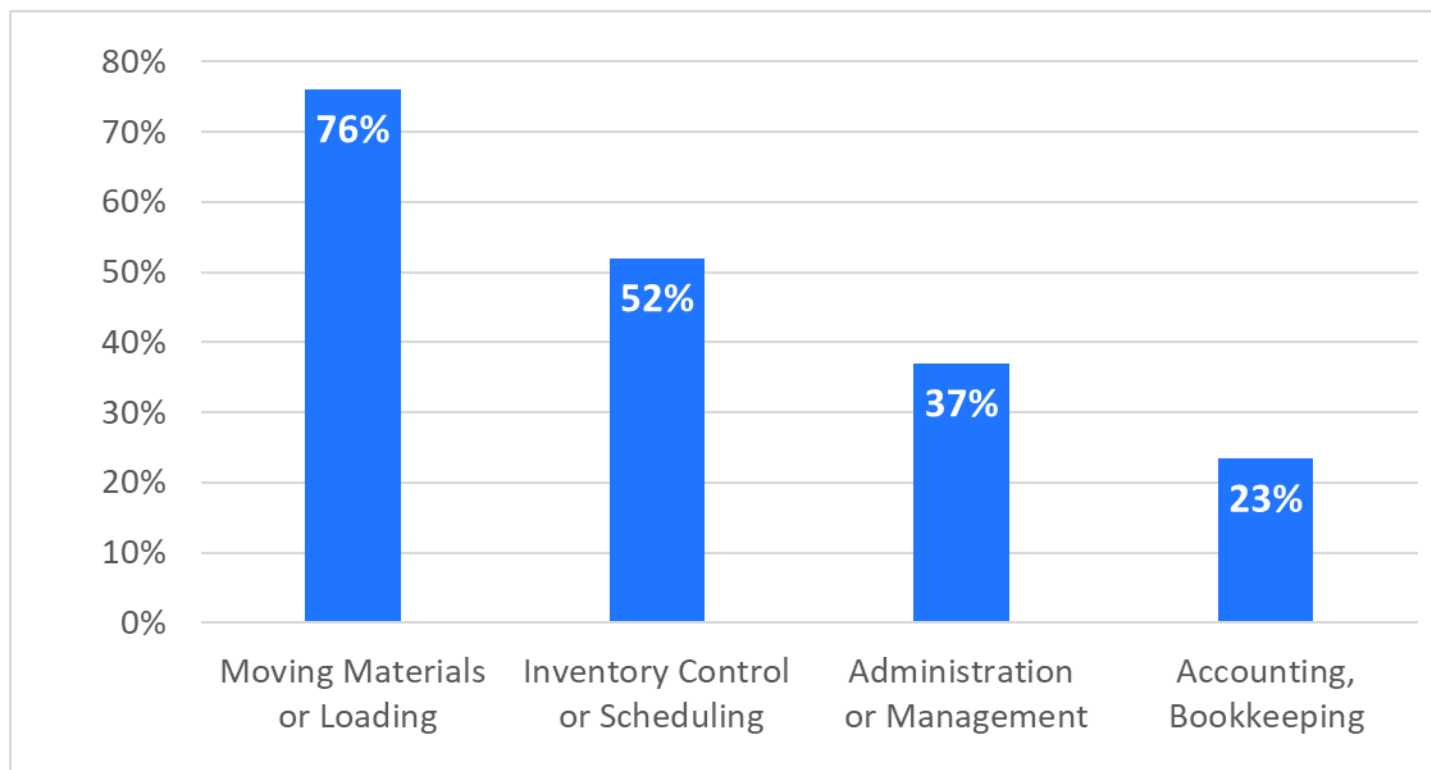


Figure 5. Experience/Training in Distribution Center or Warehouse

Figure 6 shows that, of those with manufacturing/processing experience, 72% worked in production, fabrication, or assembly; 62% held positions in administration, management, or sales; 45% worked in maintenance, shipping, or receiving; and 25% worked in accounting or bookkeeping.

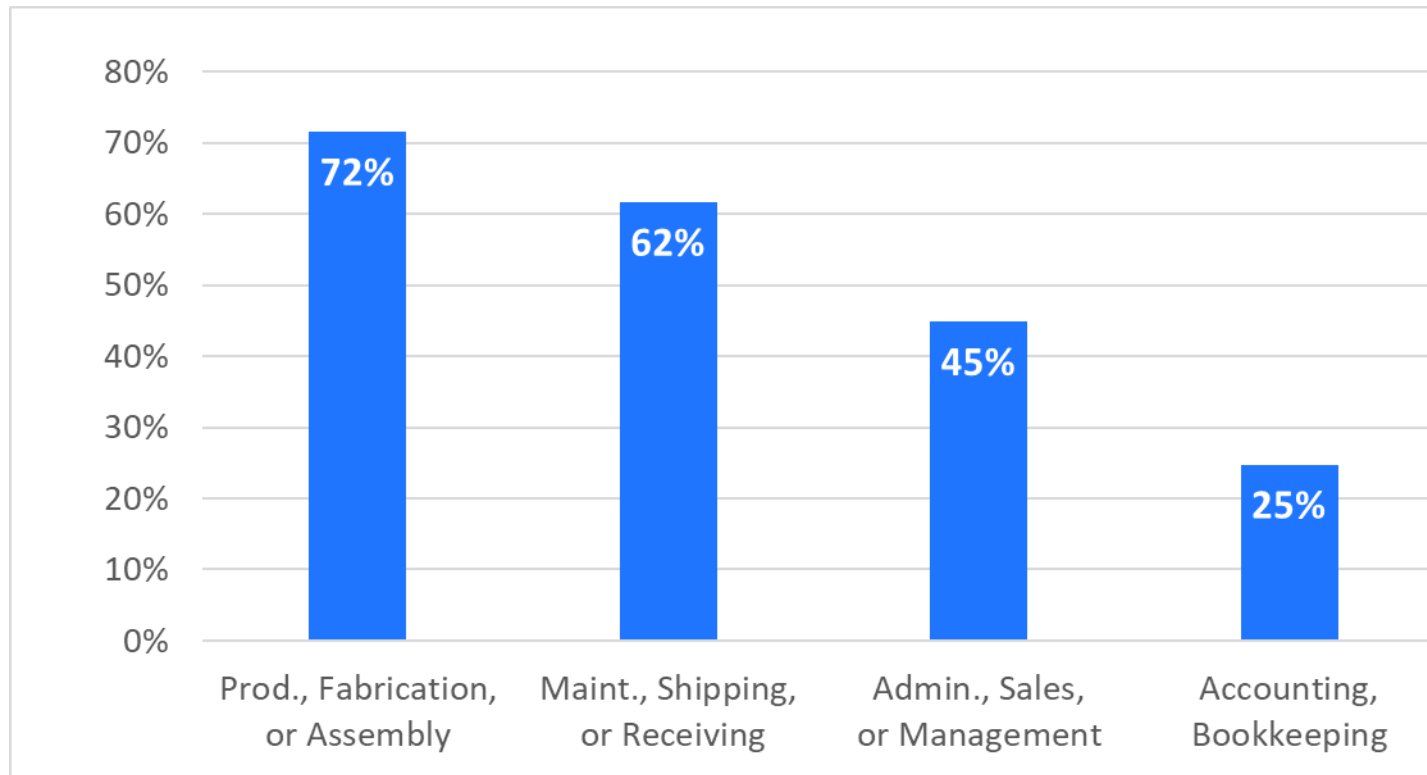


Figure 6. Experience/Training in Manufacturing or Processing

Educational Experiences and Job Satisfaction

Table 1 (page 11) shows that 73.3% of the Pool have at least some college experience, while 47.5% hold at least an associate's degree, 33.7% hold at least a bachelor's degree, and 14% hold at least a master's degree. Respondents who had completed at least some college were asked to provide their major area of study. Answers were grouped into seven categories:

Social Sciences: Sociology, Psychology, Anthropology, Politics, and Social Work.

Biological Sciences and Health: Biology, Agriculture, Nursing, Pre-med, Pre-vet, and Human Performance.

Physical Sciences and Engineering: Physics, Geology, Chemistry, and Engineering.

Business and Economics: Management, Accounting, Finance, Marketing, and Economics.

Education: Elementary and Secondary Teaching.

Computer Science and Math: Computer Programming or Technology, Networking, Web Design, and Math.

Arts and Humanities: Art, Music, History, Philosophy, and Languages.

Figure 7 shows the distribution of academic fields studied by members of the Available Labor Pool. The highest percentage studied business and economics (29%), while others studied biological sciences (17%), social sciences (15%), physical sciences (15%), education (10%), arts and humanities (9%), and computer science and math (5%).

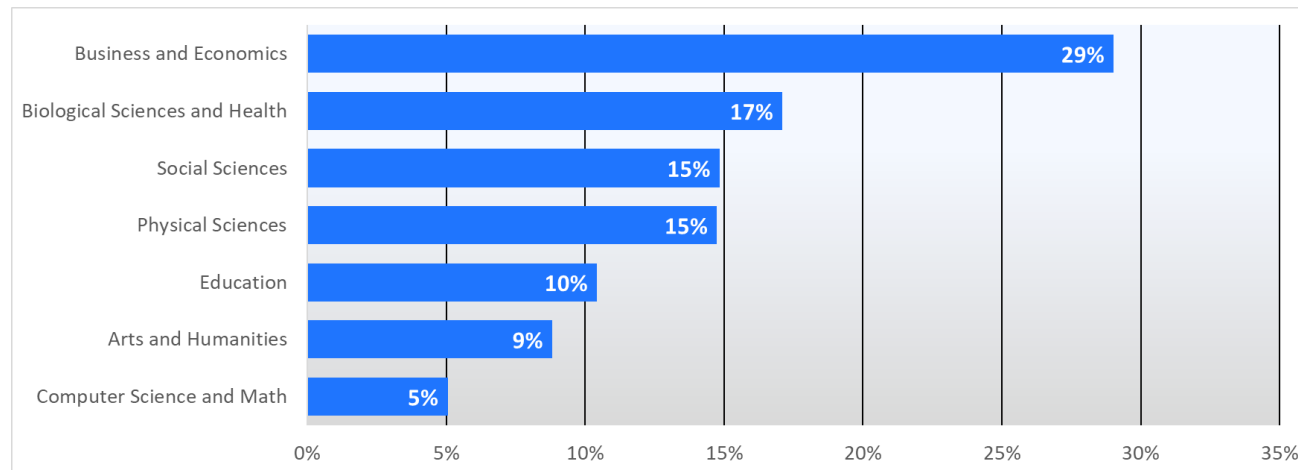


Figure 7. Academic Field of Study

Survey respondents were also asked if they have certificates or credentials in a technical field. Those answering “Yes” were asked to provide the field of their technical certificate or credential. Figures 8 and 9 (next page) show responses to the two questions.

Figure 8 shows that 38% of the Pool completed a technical certificate or credential.

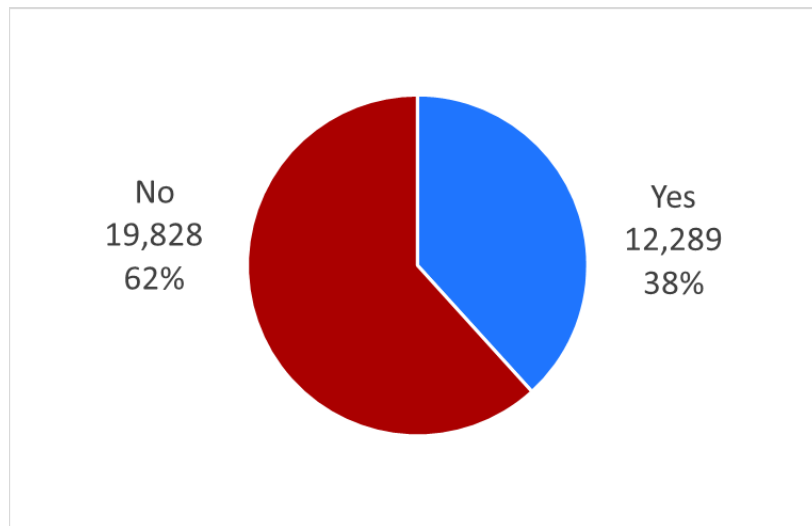


Figure 8. Technical Certificate

Figure 9 (next page) shows that, among those individuals, 31% earned a certificate in nursing or in related fields such as certified nurse assistant (CNA), emergency medical technician (EMT), and other healthcare-related areas. The figure also shows that 18% earned certificates in transportation and automotive and diesel technology; 16% earned certificates in public safety, security, and paralegal services; 12% earned certificates in business, finance, and administrative support; and 10% earned certificates in HVAC, electronics, and information technology.

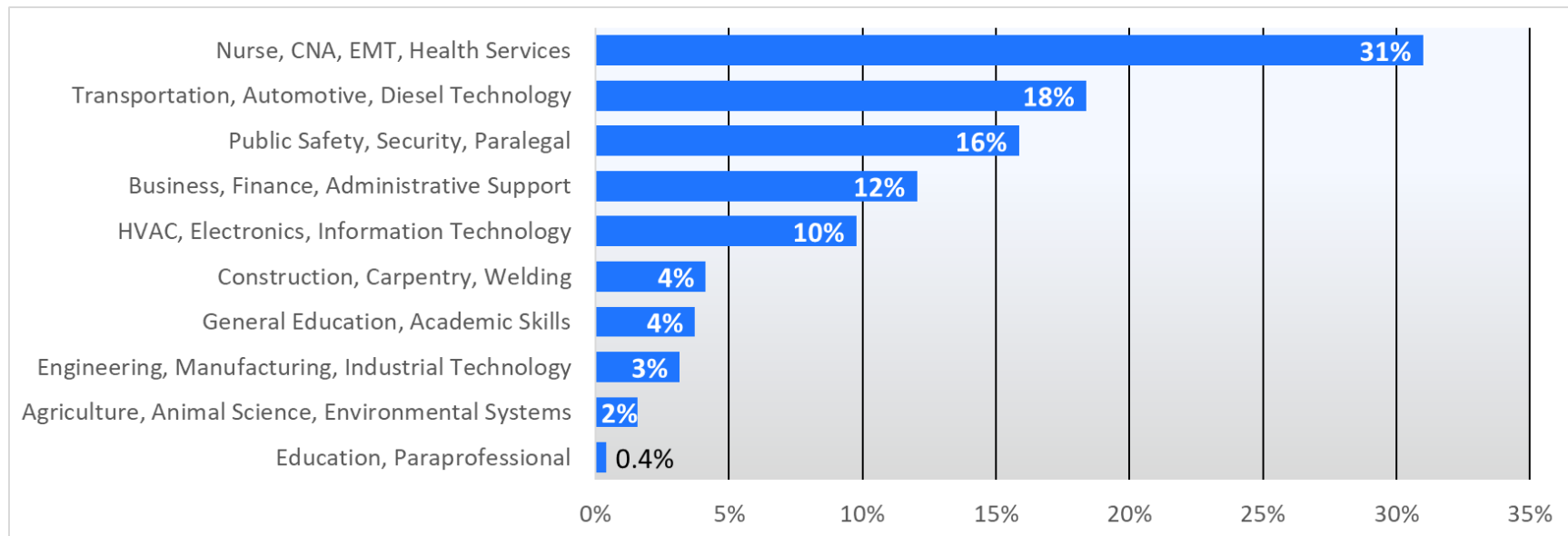


Figure 9. Certificate Area of Study

Figure 10 (next page) addresses job satisfaction among working members of the Available Labor Pool (Working Pool) and, for a comparison group, working survey respondents who are **not** part of the Available Labor Pool (Working Non-Pool). Items are ordered by the combined percentages of “Strongly Agree” and “Agree” responses from the Working Pool. The combined responses are referred to as “at least agree.”

The figure shows that 76% of the Working Pool at least agree that they “enjoy the things they do” at work, while 90% of the Working Non-Pool feel the same way. Additionally, 70% of the Working Pool at least agree that they have “generally positive work environments,” while 84% of the Working Non-Pool feel the same way.

The figure also shows that 65% of the Working Pool at least agree that they “receive fair pay,” while 70% of the Working Non-Pool feel the same way. Additionally, 65% of the Working Pool at least agree that they have “reasonable workloads,” while 79% of the Working Non-Pool feel the same way.

Additionally, 56% of the Working Pool at least agree that they “have fair chances at pay increases,” while 64% of the Working Non-Pool feel the same way.

Finally, 36% of the Working Pool at least agree that they have “fair chances at promotion,” while 34% of the Working Non-Pool feel the same way.

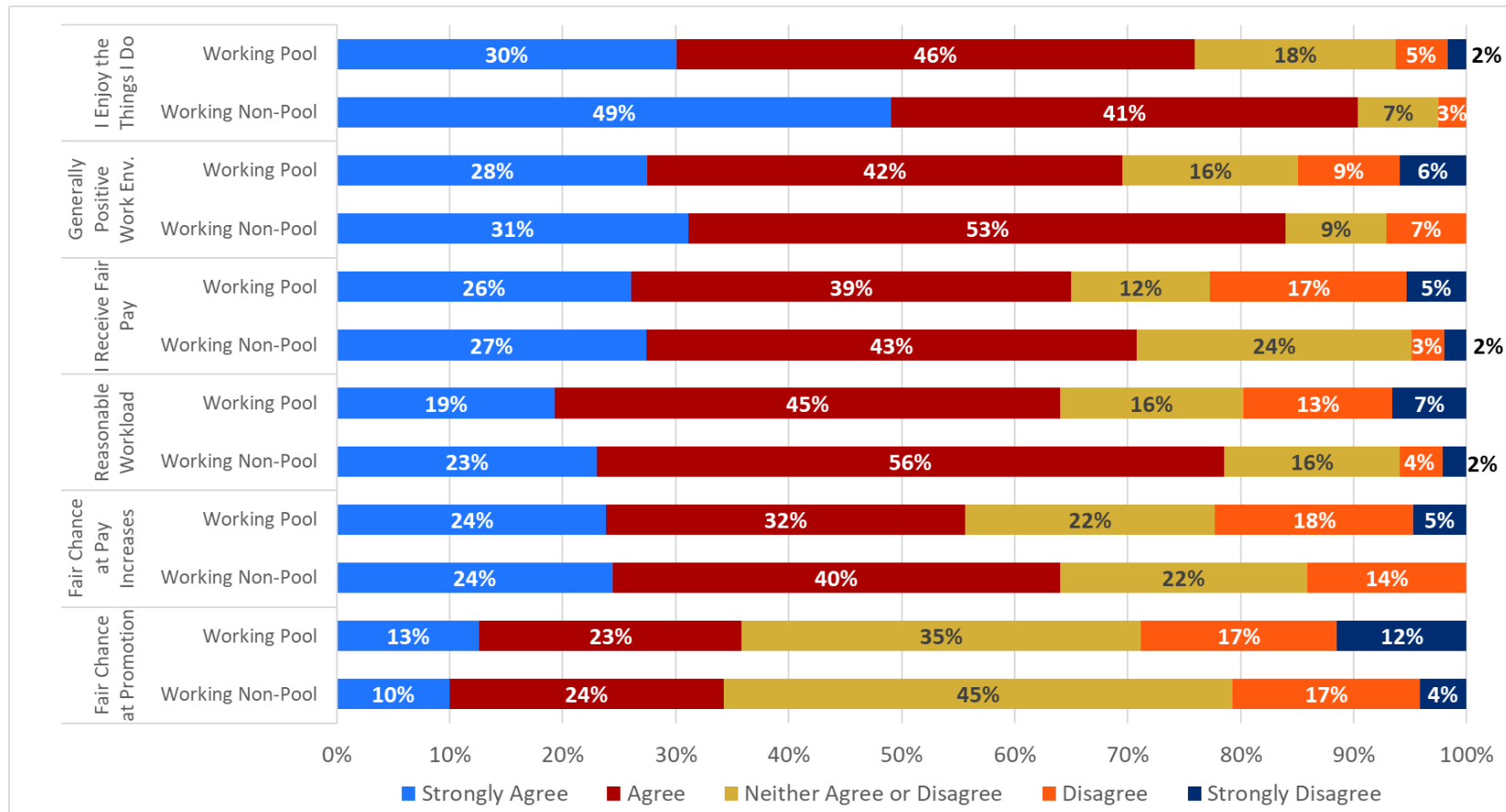


Figure 10. Job Satisfaction (Working Pool and Working Non-Pool)

Considerations for Employment

Important considerations for employers, economic developers, site selectors, and others include which shifts people are willing to work, if they would take a job in a new field, for how many minutes they are willing to commute, if they would relocate for the right opportunity, which benefits or opportunities matter most to them when considering a new job, and what their wage expectations look like. Wage expectations are discussed in the next section of this report. For now, the other considerations listed above will be explored.

For example, Figure 11 shows that 69% of the Pool are willing to accept positions outside of their primary field of employment. In addition, 28.7% of the Pool will work the 2nd shift, 26.3% will work weekends, 20.8% will work the night shift, and 17.6% will work rotating shifts for a new or different job.

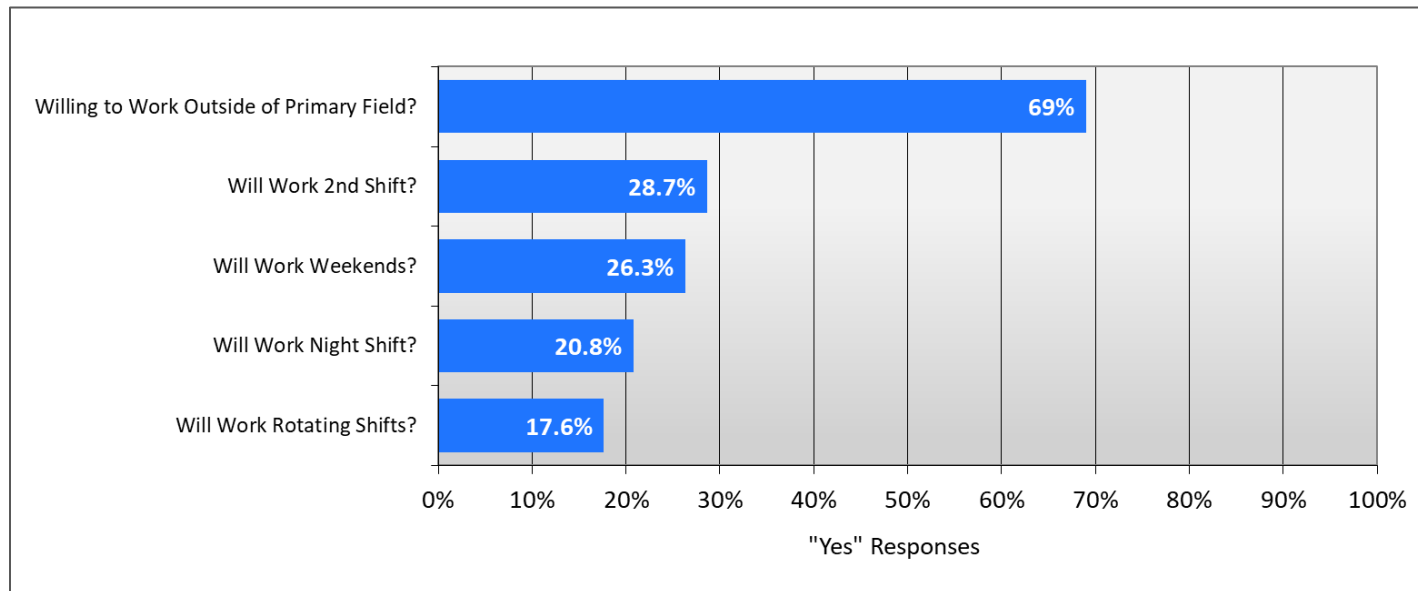


Figure 11. Working Outside of Primary Field and Work Shifts

Another important consideration for many employers is whether workers are willing to commute for a new or different employment opportunity. Figure 12 shows that 92% of the Pool will commute up to 15 minutes, and 82% will commute up to 30 minutes, one-way, for a new or different job.

After 35 minutes, the percentage of workers declines. The figure shows that 46% are willing to commute up to 45 minutes and 17% are willing to commute up to 60 minutes, one-way, for a new or different job opportunity.

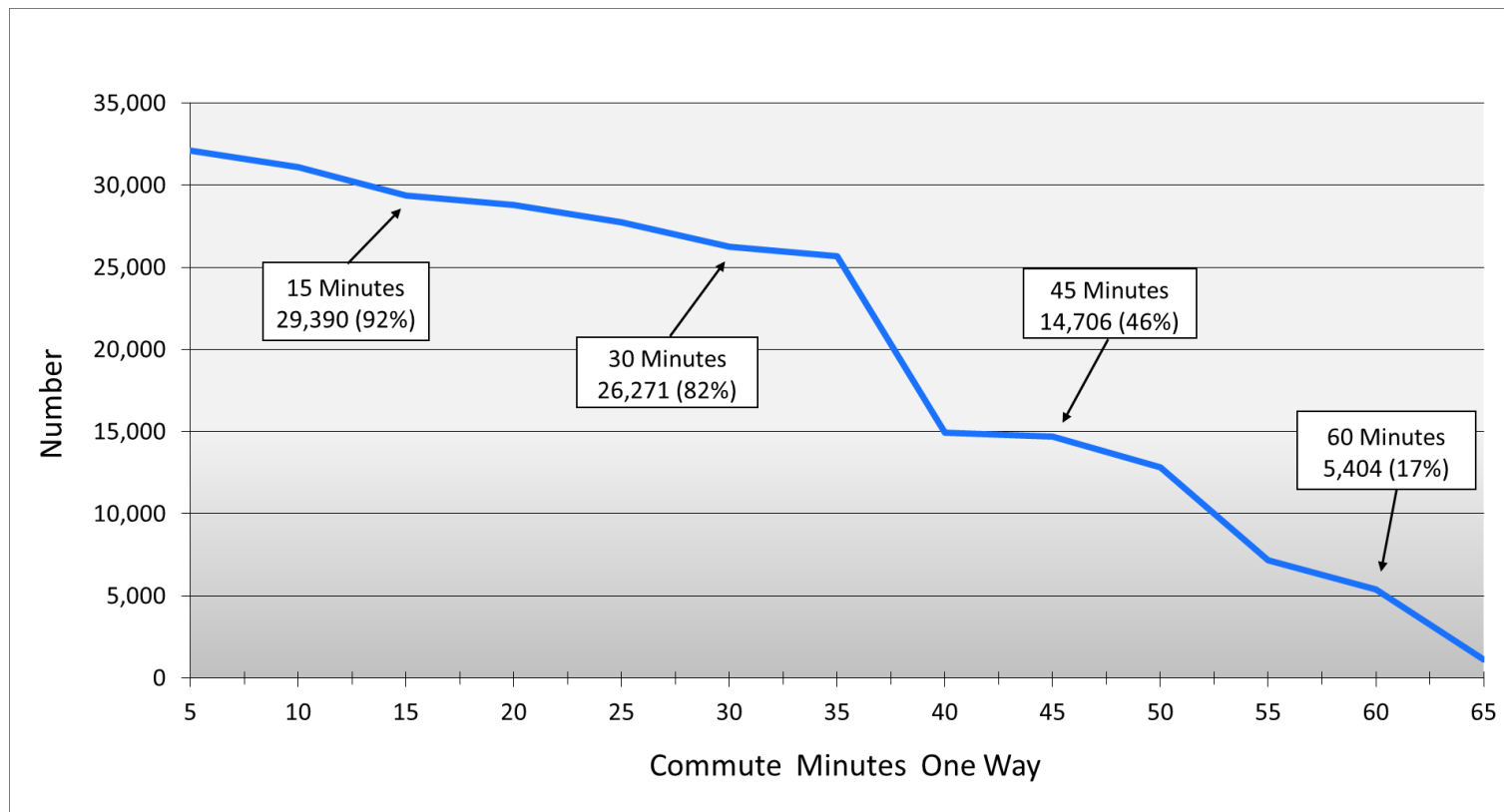


Figure 12. Available Labor by Commute Minutes

Pool members were asked how likely they would be to relocate for a new or different job given the right opportunities. Answer options ranged from “Extremely Likely” to “Not Likely at All”. Figure 13 shows that the majority (64%) are “not at all likely” to move for a job, while 15% are “somewhat likely,” 12% are “moderately likely,” 4% are “very likely,” and 5% are “extremely likely” to do so.

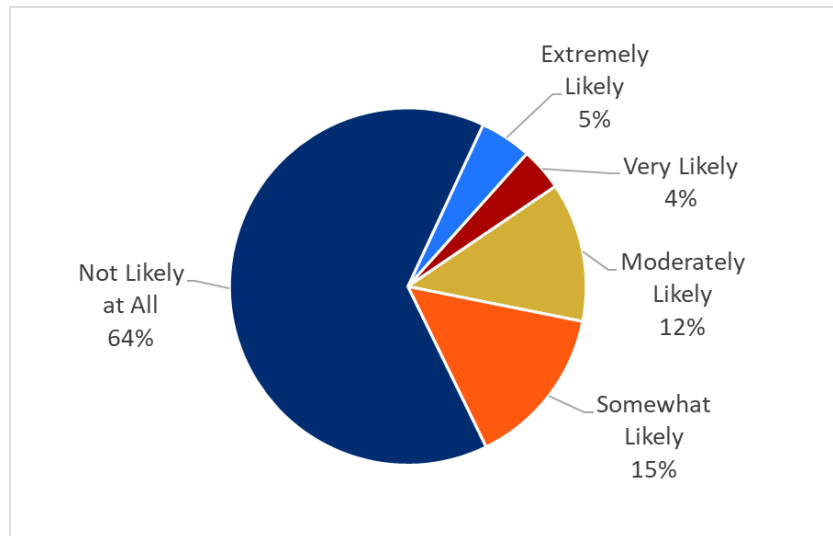


Figure 13. Moving for an Employment Opportunity

Pool members were also asked whether various benefits and opportunities would be “very important” in their decision to take a new job. Working respondents were also asked if they currently receive each benefit or opportunity. “Yes” and “no” response options were provided for each item. Figure 14 (next page) shows the share responding “yes” to each item, with new-job considerations shown in blue and currently received items in red.

The figure shows that good vacation benefits and sick leave are “very important” to more than 90% of the Available Labor Pool, while 84% and 69% of working members of the Pool (the Working Pool) receive these benefits. The figure also shows that more than 80% of the Pool view a good salary or hourly wage, good retirement benefits, flexible hours or flex-time, good health benefits, and on-the-job or paid training as “very important” when considering a new job. Among the Working Pool, the shares currently receiving these benefits range from 54% (flexible hours/flex-time) to 81% (retirement benefits).

Remote work, education assistance, and childcare assistance round out the bottom of the list. These items are considered “very important” by 59%, 42%, and 18% of the Pool, respectively. For the Working Pool, 8% work remotely, 44% receive education assistance, and 7% receive childcare assistance.

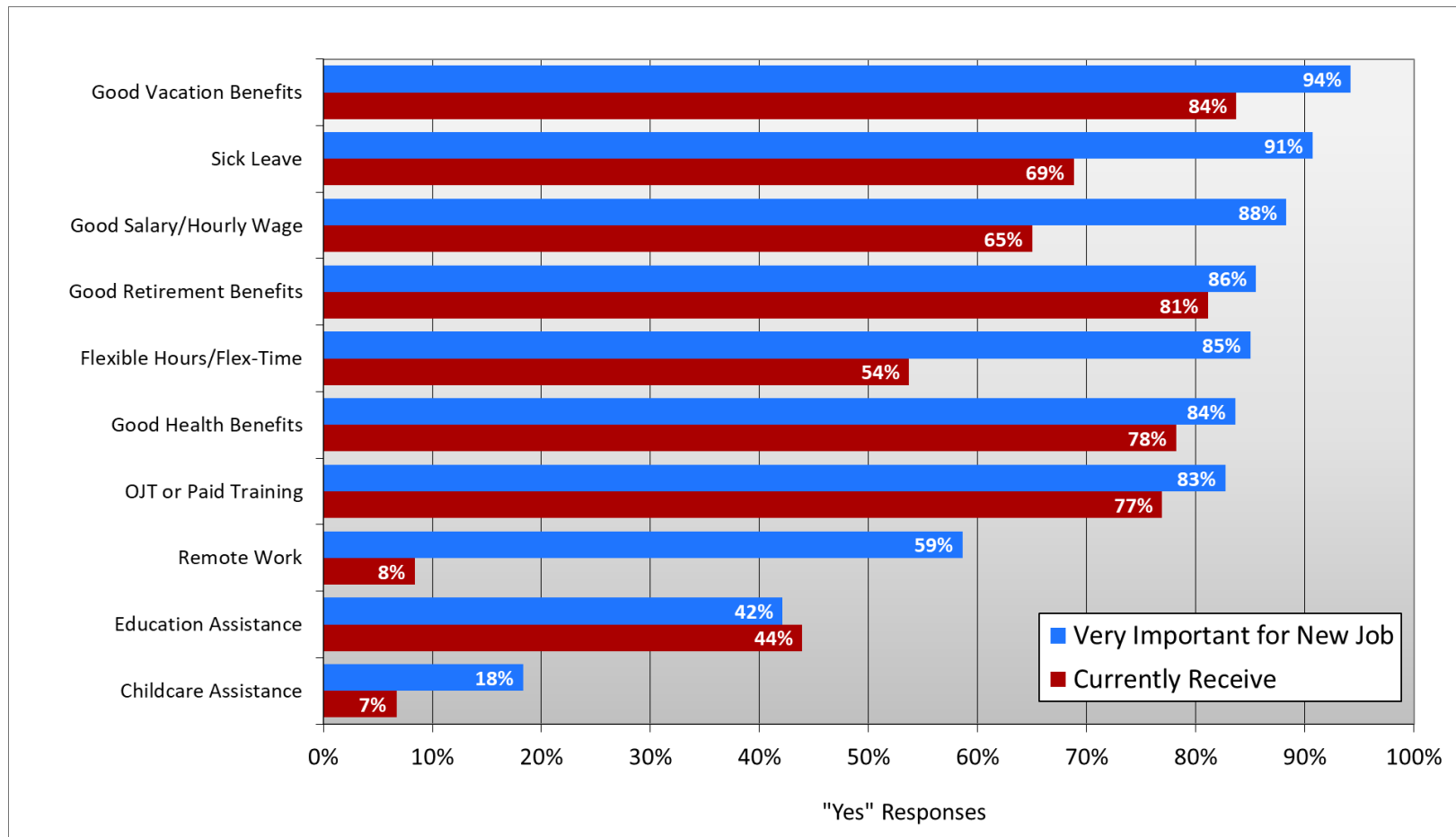


Figure 14. Benefits/Opportunities “Very Important” to Change Jobs and Currently Received

Wage Expectations

Expected wages for a new or different job are another key consideration for employers and economic developers. Figure 15 shows wage expectations among members of the Pool. An estimated 11% are available for positions paying \$15 per hour, while 25% are available at \$20 per hour. Availability increases at higher wage levels, with 68% available at \$30 per hour and 85% available at \$40 per hour.³

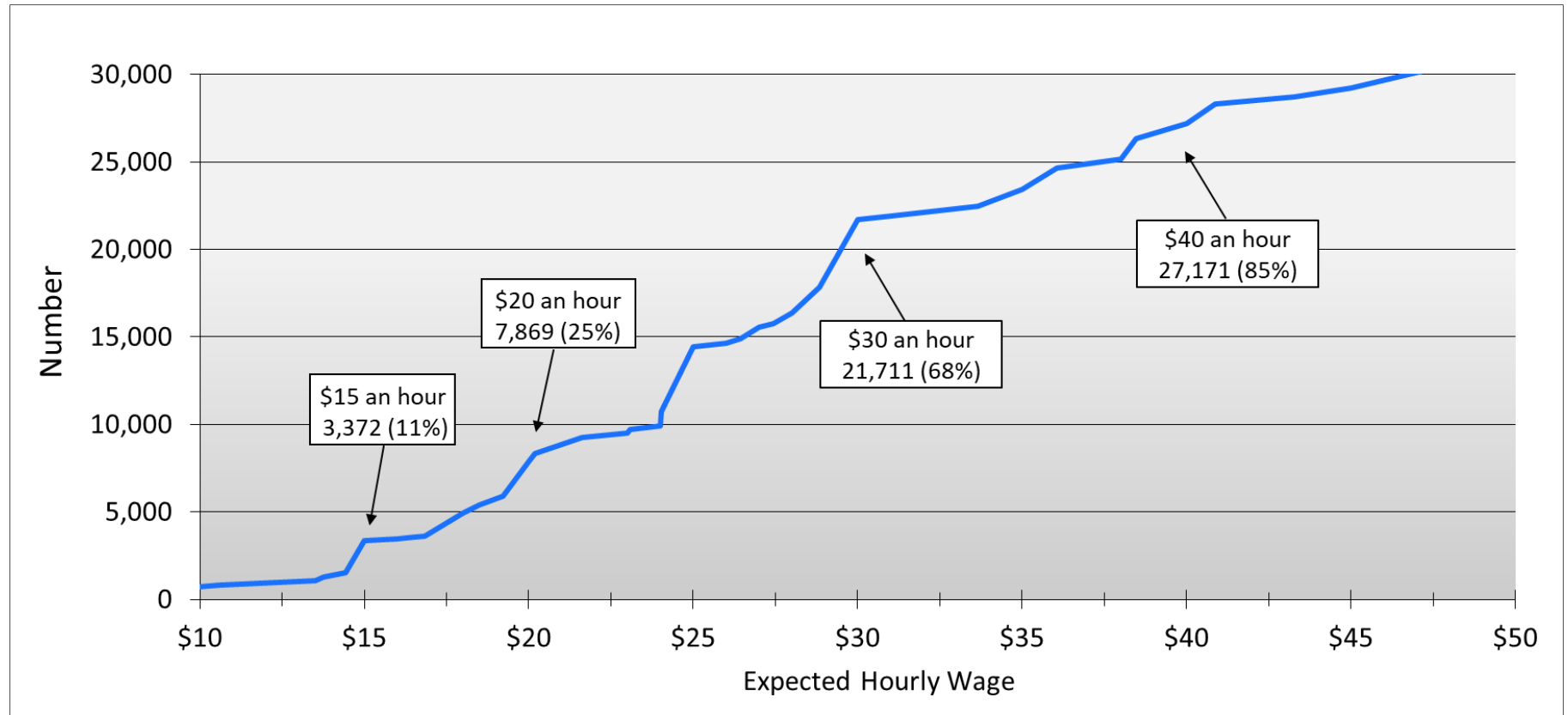


Figure 15. Available Labor Pool by Expected Hourly Wage

³ See the Appendix for an hourly wage/annual salary conversion chart.

Table 4 shows expected wage categories across the four main occupational sectors. For example, among semi-skilled laborers, 19.8% anticipate earning between \$15 and \$20 per hour in a new or different job, while no highly skilled laborers are available at that wage range. In the service sector, 19.9% expect wages in that same wage range, while no professional employees are available at that wage range.⁴

Table 4. Expected Wages by Occupational Sector

	Semi-Skilled Laborers		Highly Skilled Laborers		Service Sector Employees		Professional Employees	
	(N = 26) (+/- 19.2% MoE)		(N = 17) (+/- 23.8% MoE)		(N = 48) (+/- 14.1% MoE)		(N = 20) (+/- 21.9% MoE)	
	Number	Cumulative %	Number	Cumulative %	Number	Cumulative %	Number	Cumulative %
\$50 or More	5,267	100	3,462	100	10,292	100	5,103	100
\$45 to \$50	5,267	100	3,233	93.4	9,585	93.1	4,961	97.2
\$40 to \$45	5,267	100	2,998	86.6	8,360	81.2	4,532	88.8
\$35 to \$40	5,267	100	2,751	79.5	7,692	74.7	4,246	83.2
\$30 to \$35	5,065	96.2	1,739	50.2	6,352	61.7	3,217	63.1
\$25 to \$30	4,610	87.5	1,504	43.4	6,294	61.2	2,860	56
\$20 to \$25	1,826	34.7	194	5.6	4,718	45.8	1,475	28.9
\$15 to \$20	1,045	19.8	0	0	2,043	19.9	0	0
\$10 to \$15	1,045	19.8	0	0	648	6.3	0	0
Up to \$10	56	1.1	0	0	0	0	0	0

⁴ It is assumed that a job seeker would, if offered, take a higher hourly wage than expected. As such, cumulative percentages are provided.

Table 5 presents expected wage categories for semi-skilled laborers and service-sector workers who are willing to change fields of employment (see Figure 11). These individuals, along with non-employed Pool members, are treated as “transferable workers,” meaning they could potentially move into either of these two sectors.⁵

Table 5: Expected Wage Categories of Transferable Workers

Transferable Workers		
Will Change Fields &		
Semi-Skilled + Service Sector + Non-Employed		
(N = 87) (+/- 11% MoE)		
	<i>Number</i>	<i>Cumulative %</i>
\$50 or More	13,431	100
\$45 to \$50	12,919	96.2
\$40 to \$45	12,275	91.4
\$35 to \$40	11,178	83.2
\$30 to \$35	10,471	78
\$25 to \$30	9,802	73
\$20 to \$25	7,651	57
\$15 to \$20	4,371	32.5
\$10 to \$15	1,745	13
Up to \$10	490	3.6

⁵ It is assumed that non-employed Pool members will take jobs (all things being equal) in either semi-skilled or service sector fields.

Figure 16 integrates information from Tables 4 and 5 to show wage expectations by category for each occupational sector and for transferable workers. The figure shows that about half of semi-skilled laborers expect to earn a wage close to \$20 to \$25 per hour, while about half of highly skilled laborers expect a wage ranging from \$30 to \$35 per hour. Among service sector workers, about half expect a wage close to \$20 to \$25, while about half of professional employees expect a wage ranging from \$25 to \$30 per hour. About half of transferable workers expect a wage close to \$20 to \$25 per hour.

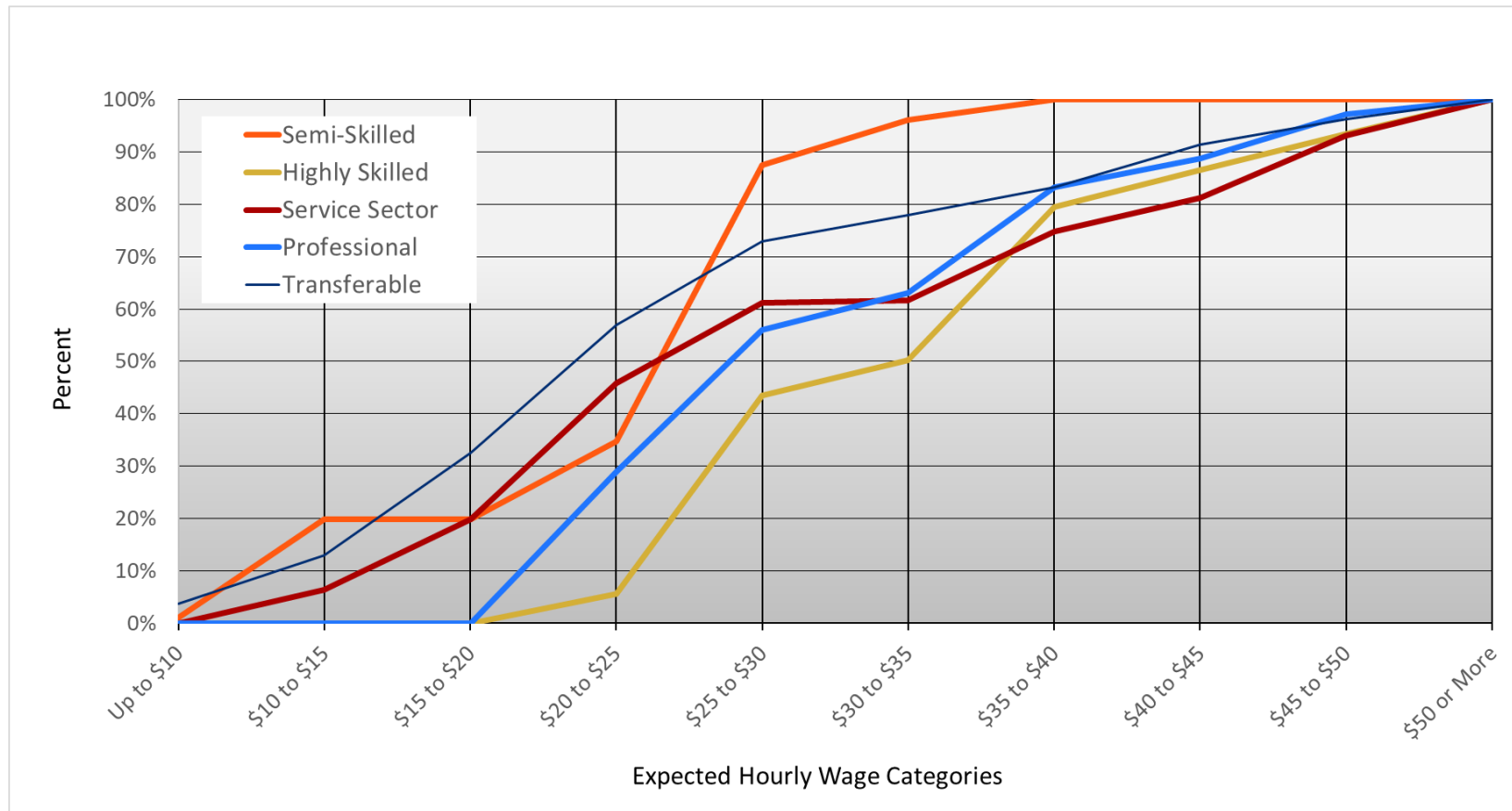


Figure 16. Wage Expectations by Occupation Sector with Transferable Workers

Underemployment

Underemployment is a significant issue in many communities. To assess underemployment in the Chillicothe Labor Basin, *employed members of the Pool* were presented with a scenario describing underemployment.⁶ They were then asked if they perceive themselves as underemployed because: 1) their skill level is greater than their current job requires, 2) they possess higher levels of education than is required on the job, 3) they earned a higher income at a similar job previously, or 4) they are unable to work as many hours as they would like at their job.

Figure 17 shows that 24,124 members of the Available Labor Pool are employed. Of these Pool members, 28% (see Figure 18 next page) answered “yes” to one or more of the questions presented above. These Pool members are considered “underemployed.”

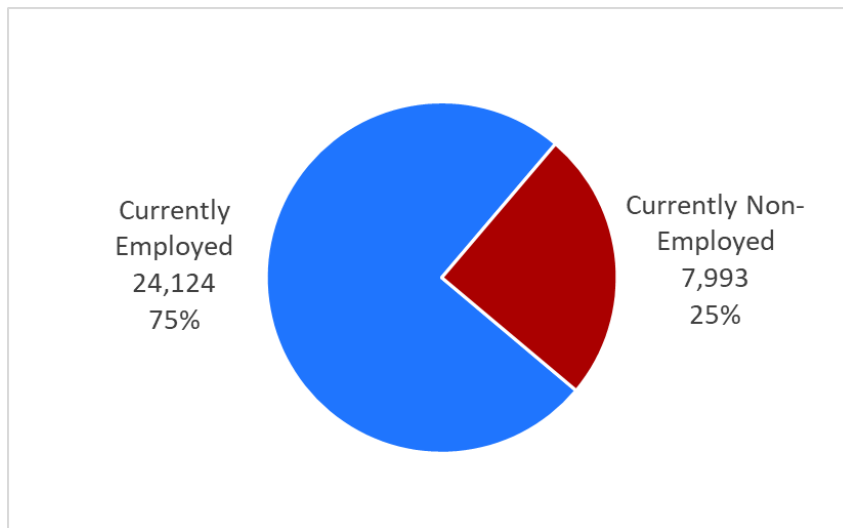


Figure 17. Employed and Non-Employed Members of the Available Labor Pool

⁶ “Because of circumstances, some workers feel that they are underemployed because they have jobs that do not fully match their skills, education, or experiences. A master plumber, for example, taking tickets at a movie theater would be a mismatch between skill level and job requirements. As such, we could consider the master plumber underemployed.”

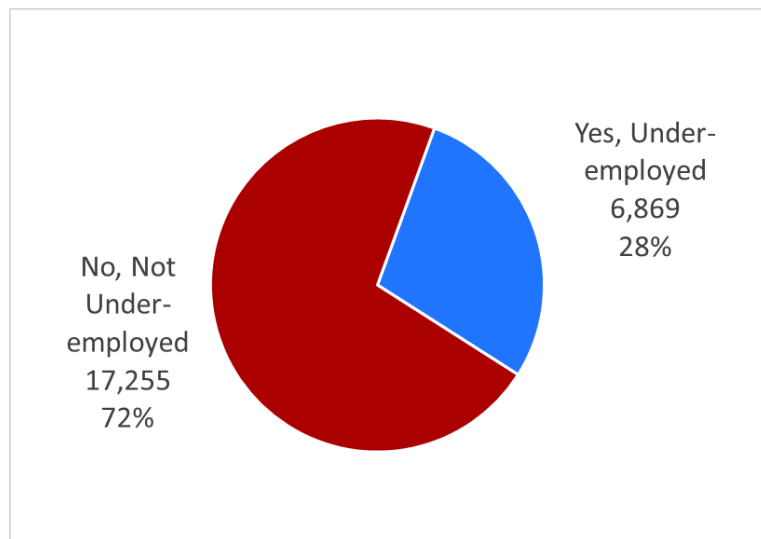


Figure 18. Underemployed Workers

Figure 19 (next page) shows the percentages of the positive responses (i.e., “yes” answers) to the various measures of underemployment. Half (50%) consider themselves underemployed because they have skills that are not being used currently on the job, while 48% possess education levels exceeding those needed for their current job. When asked if they are underemployed because they earned more money at a past but similar job, 41% responded “yes,” while 20% feel they cannot work as many hours as they would like at their job.

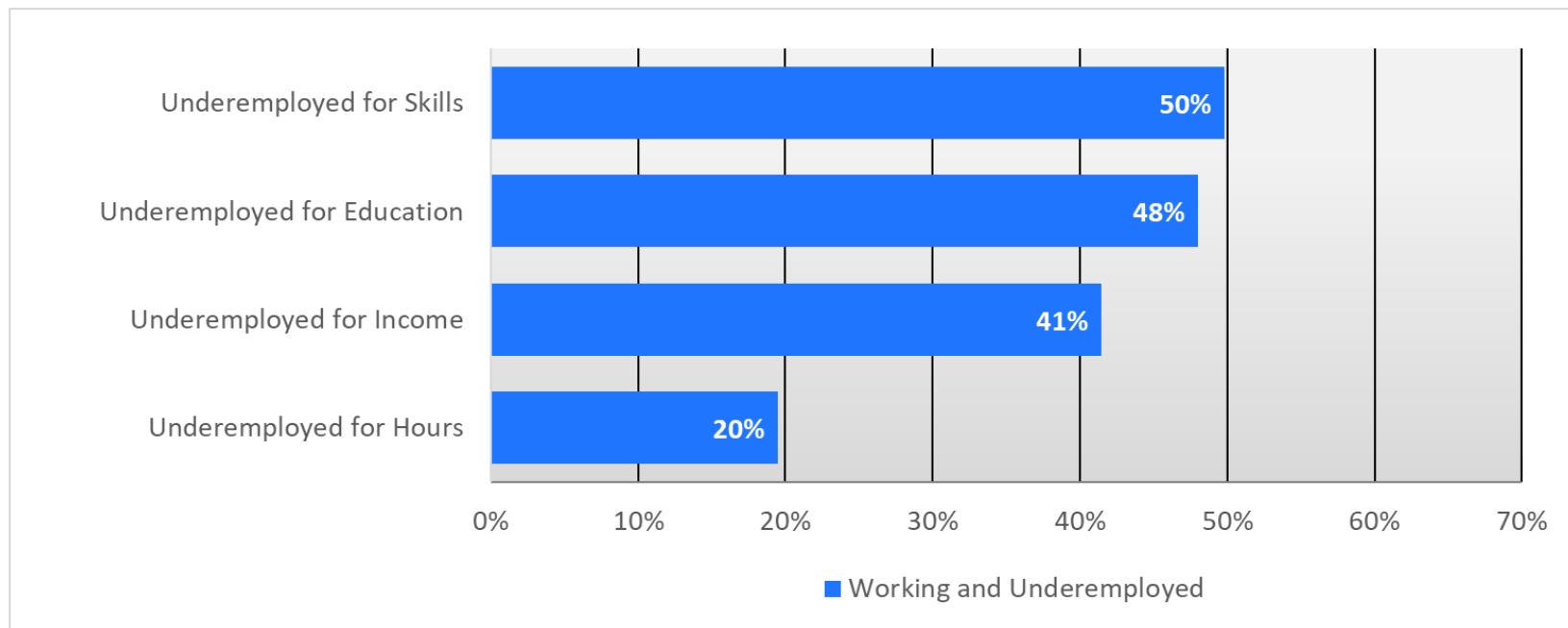


Figure 19. Reasons for Underemployment

Table 7 (next page) shows some characteristics of the underemployed members of the Pool. The table shows the average age is 43 (mean) and 45 (median) years old, and 55.8% are female. Almost half (45.7%) hold at least bachelor's degrees, 60.9% hold at least associate's degrees, and all (100%) have high school diplomas.

Table 6: Characteristics of Underemployed Workers

Age Information	Age in 2025
Range	26 to 70
Mean Average	43
Median Average	45

Gender	Number	Percent
Male	2,582	37.6
Female	3,835	55.8
Other Identity	168	2.4
Prefer Not to Say	284	4.1
Total	6,869	100

Highest Level of Education	Number	Percent	Cumulative Percent
Doctoral Degree	747	10.9	10.9
Master's Degree	1,344	19.6	30.4
Bachelor's Degree	1,045	15.2	45.7
Associate's Degree	1,045	15.2	60.9
Some College	1,195	17.4	78.3
High School Diploma	1,493	21.7	100
Total	6,869	100	

Figure 20 shows the distribution of underemployed workers by occupational sector. The largest share of the underemployed are service sector workers (47%), while semi-skilled laborers, highly skilled laborers, and professional employees follow with 34%, 10%, and 9%, respectively.

These percentages differ from those shown in Figure 2, which reflects all working members of the Available Labor Pool. In Figure 2, service-sector employees make up 43%, semi-skilled laborers represent 22%, highly skilled laborers provide 14%, and professional employees represent 21% of the working Pool.

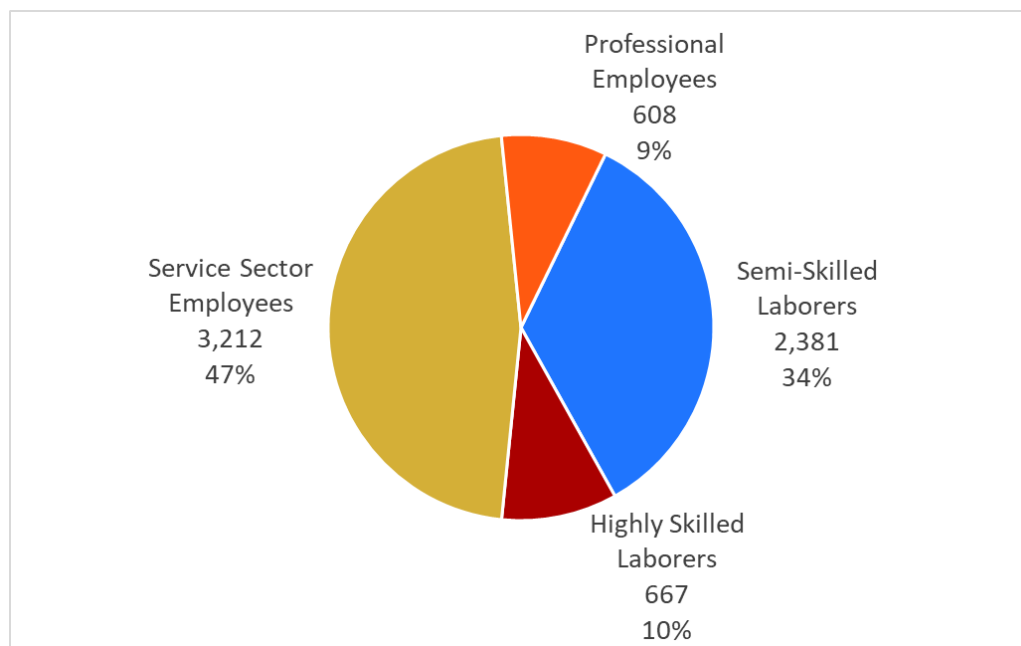


Figure 20. Occupational Sectors of Underemployed Workers

Regarding considerations for a new or different job, more than 90% of the underemployed workers rate good salary/hourly wage, good vacation benefits, sick leave, and flexible hours/flex-time as “very important,” as shown in Figure 21. More than 80% also consider good health benefits, on-the-job training (OJT) or paid training, and good retirement benefits to be “very important.”

Remote work, education assistance, and childcare assistance round out the bottom three benefits considered “very important” by underemployed Pool workers at 56%, 32%, and 22%, respectively.

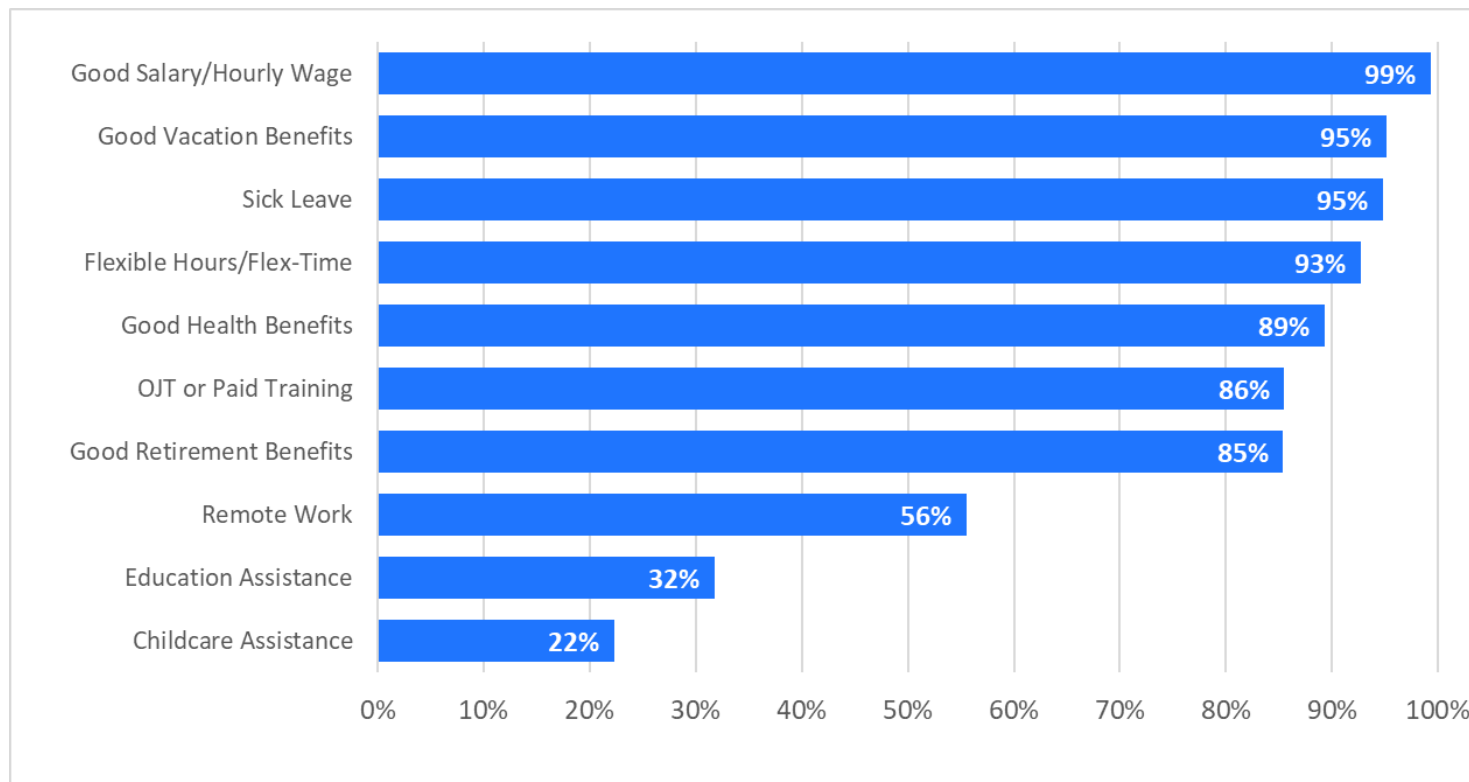


Figure 21. Benefits/Opportunities Very Important to Change Jobs (Underemployed Workers)

Figure 22 shows wage expectations by category for underemployed workers. The figure shows that 24% are available for wages ranging from \$15 to \$20 per hour, 47% are available for wages ranging from \$20 to \$25 per hour, and 80% are available for wages ranging from \$25 to \$30 per hour.

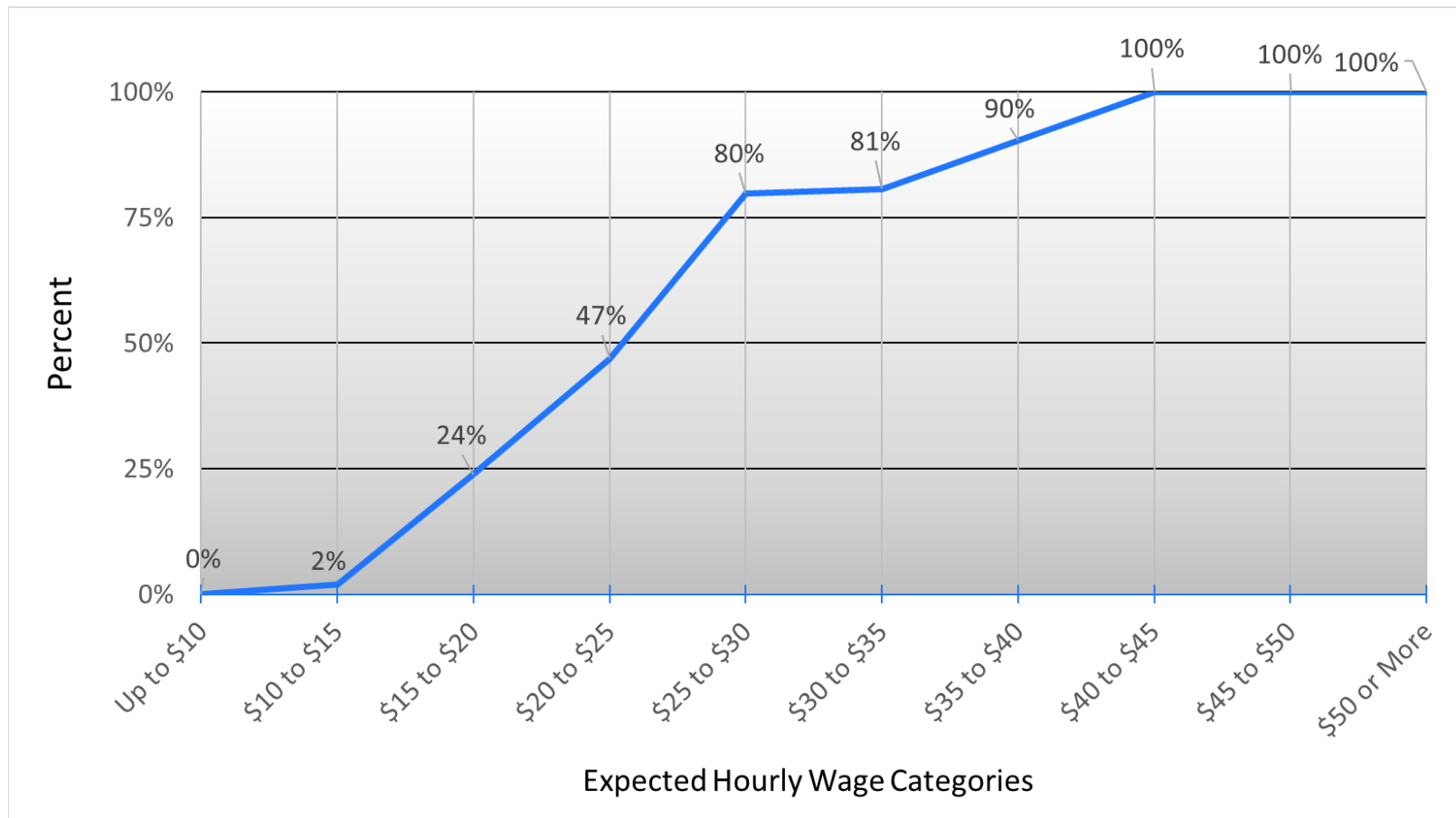


Figure 22. Wage Expectations of Underemployed Workers

Figure 23 shows that of underemployed Pool members, 39% are seeking new job opportunities to address their current underemployment status.

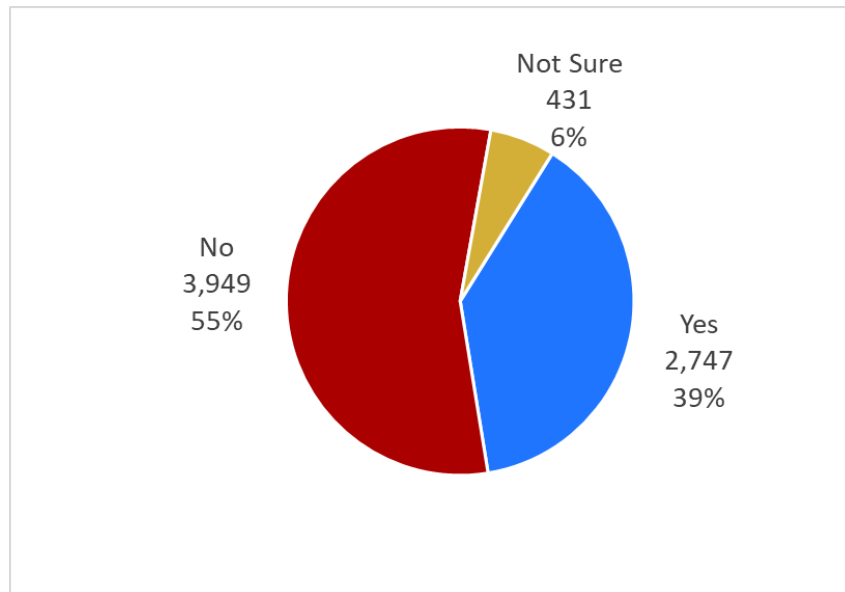


Figure 23. Seeking New Employment to Address Underemployment

Methods

The Chillicothe Labor Basin includes 13 counties in north central Missouri, each located within an hour's commute of the center of Livingston County, Missouri. The total population of the 13 counties is approximately 130,672, with 60,054 in the Civilian Labor Force, and 57,824 employed. The Docking Institute's analysis estimates that the Available Labor Pool within the labor basin includes 32,117 individuals.

Explaining the Civilian Labor Force

Traditional methods of assessing the dynamics of the labor force have concentrated on what the Bureau of Labor Statistics (BLS) calls the Civilian Labor Force. The Civilian Labor Force represents "the civilian non-institutional population, 16 years of age and over, classified as employed or unemployed." The BLS defines "non-institutional civilians" as those individuals who are not inmates in institutions and who are not on active duty in the Armed Forces; and "unemployed civilians" as civilians available for work and who had "made specific efforts to find employment" in the previous four weeks.

While a review of Civilian Labor Force statistics represents the starting point for understanding the labor force in the Chillicothe Labor Basin, there are some limitations associated with these statistics. These limitations occur because the Civilian Labor Force *excludes* individuals who may be willing and able to be gainfully employed but have not made specific efforts to find employment in the last four weeks. These individuals may include full-time students, homemakers, the unemployed who are no longer seeking employment, military personnel who may be leaving military employment soon, and retired individuals who may be available for work but have not been looking for work recently.

In addition, most new employers draw their workforce from those who are presently employed. Bureau of Labor Statistics data (such as the Civilian Labor Force) do not specifically address the possibility of workers moving from one industry to another in search of other employment opportunities.

Defining the Available Labor Pool

An alternative to the Civilian Labor Force is the "Available Labor Pool." The Available Labor Pool is composed of workers aged 18 and above, categorized as either 1) currently not working *and* looking for employment, 2) currently not working *but* might be interested in employment, 3) currently working *and* looking for other full-time employment, and 4) currently working and not looking *but* might be interested in different employment for the right opportunities.

There are two key differences between the Civilian Labor Force and the Available Labor Pool. First, the Available Labor Pool methodology expands the pool of potential workers by including workers excluded from the Civilian Labor Force. Secondly, the number of potential workers is then *restricted* to those working-age workers who indicate they are looking for work or who may be interested in new employment for the right opportunities. The advantage of this methodology is that it allows researchers to examine those members of the labor pool who have a propensity to consider a job opportunity given their employment expectations. Even with these restrictions, it should be noted that, in practice, not all members of the Available Labor Pool would apply for a new job opportunity. However, the Available Labor Pool figure for the basin reveals to current and potential employers better and more timely information about the quantity and quality of the labor pool than Civilian Labor Force data and unemployment statistics alone. The Available Labor Pool represents a substantial number of working-age workers and potential workers for employers to draw upon in the Chillicothe Labor Basin.

Description of Survey Research Methods

The primary data collection method used address-based sampling (ABS) and paper questionnaire booklets. The Institute purchased an ABS sample of households from a professional sampling vendor. Instructions asked that the adult in the household (age 18 or older) with the most recent birthday complete the survey. The self-administered booklet was designed to be sealed and mailed back upon completion, with the back cover printed as business-reply and pre-addressed to the Docking Institute. Respondents were also given the option to complete the survey online.

The initial booklets were sent to 12,001 area households on October 13, 2025, followed by a second wave to non-responding households on October 27. A postcard reminder was mailed to non-responding households on November 7. The cover letters for both booklets and the postcards included QR Codes and instructions completing the survey online. Email invitations asking members of non-responding households to complete the survey online were sent on November 15.

Booklets and postcards returned to the Institute as undeliverable totaled 881, with each unique address counted only once, leaving 11,120 viable addresses.

The combined mailings and online surveys resulted in 649 interviews, although 28 were incomplete. The remaining 621 provide a response rate of 5.6%. Assuming no response bias, the sample's margin of error is $\pm 3.93\%$, meaning we can be 95% confident that the survey results are within 3.93 percentage points of the true values we would obtain if the entire population were surveyed.

From Labor Basin to Available Labor Pool

The Available Labor Pool (Pool) consists of working-age individuals interested in new or different employment. As such, survey respondents aged 67 and older and retired and not interested in new employment were not asked the entire battery of survey questions and are not included in the analysis presented in this report. The remaining 391 respondents (comprising employed and non-employed individuals) represent the eligible sample. Of these, 49% (or 191 people) expressed interest in pursuing another job or exploring new employment opportunities under the right conditions. This group constitutes the Available Labor Pool for the Chillicothe Labor Basin. The margin of error for this subgroup is $\pm 7.09\%$.

The study sponsors and Institute personnel agreed upon the survey items used, with the former identifying the study objectives and the latter developing items and methodologies that were valid, reliable, and unbiased. Question wording and design of the survey instrument are the property of the Docking Institute.⁷

⁷ A detailed summary of the method of analysis used in this report can be found in Joseph A. Aistrup, Michael S. Walker and Brett A. Zollinger, "The Kansas Labor Force Survey: The Available Labor Pool and Underemployment." *Kansas Department of Human Resources*, 2002.

Glossary of Terms

Chillicothe Labor Basin – The labor basin encompasses Caldwell, Carroll, Chariton, Daviess, Grundy, Harrison, Linn, Livingston, Macon, Putnam, Ray, and Sullivan counties in north central Missouri. Each selected county lies within a 60-minute, one-way commute to the center of Livingston County.

Civilian Labor Force – The Civilian Labor Force represents “the civilian non-institutional population, 16 years of age and over, classified as employed or unemployed.” The Bureau of Labor Statistics defines “non-institutional civilians” as those individuals who are not inmates in institutions and who are not on active duty in the Armed Forces, and “unemployed civilians” as civilians available for work and who had “made specific efforts to find employment” in the previous four weeks.

Available Labor Pool – The Available Labor Pool is composed of workers and potential workers categorized as either 1) currently non-employed *and* looking for employment, 2) currently non-employed *but* interested in a new job given the right opportunities, 3) employed *and* looking for other employment, and 4) currently employed and not looking, *but* interested in different employment given the right opportunities.

Expected Wage – The hourly wage that a respondent would expect to earn at a new or different job given the right opportunities. If a respondent offers a yearly salary instead of an hourly wage, an hourly wage is computed by dividing the salary by 2,080.

Underemployment – Individuals who perceive themselves as possessing skills and/or training levels that exceed the responsibilities of their current job, have educations that exceed those necessary for their current job, have earned a higher salary/hour wage for a previous but similar job, or are unable to work as many hours as desired at their current job.

Occupational Sectors – “Occupational Sectors” include the following (with examples shown):

Semi-Skilled Labor includes occupations such as cleaning, construction, delivery, and maintenance.

Highly Skilled Labor includes occupations such as police, firefighter, postal worker, welder, high-skilled mechanics, computer technician, and lab technician.

Service Sector includes occupations such as clerical worker, server, retail salesclerk, bookkeeper, paraprofessional, certified nurse's assistant, nurse, teacher, and small business manager.

Professional Sector includes occupations such as administrator, business executive, professional salesperson, doctor, lawyer, professor, and engineer.

Appendix: Hourly Wage to Annual Salary Conversion Chart

Table 7: Hourly Wage/Annual Salary

Hourly Wage	Annual Salary	Hourly Wage	Annual Salary	Hourly Wage	Annual Salary
\$5.00	\$10,400	\$23.00	\$47,840	\$40.50	\$84,240
\$5.50	\$11,440	\$23.50	\$48,880	\$41.00	\$85,280
\$6.00	\$12,480	\$24.00	\$49,920	\$41.50	\$86,320
\$6.50	\$13,520	\$24.50	\$50,960	\$42.00	\$87,360
\$7.00	\$14,560	\$25.00	\$52,000	\$42.50	\$88,400
\$7.50	\$15,600	\$25.50	\$53,040	\$43.00	\$89,440
\$8.00	\$16,640	\$26.00	\$54,080	\$43.50	\$90,480
\$8.50	\$17,680	\$26.50	\$55,120	\$44.00	\$91,520
\$9.00	\$18,720	\$27.00	\$56,160	\$44.50	\$92,560
\$9.50	\$19,760	\$27.50	\$57,200	\$45.00	\$93,600
\$10.00	\$20,800	\$28.00	\$58,240	\$45.50	\$94,640
\$10.50	\$21,840	\$28.50	\$59,280	\$46.00	\$95,680
\$11.00	\$22,880	\$29.00	\$60,320	\$46.50	\$96,720
\$11.50	\$23,920	\$29.50	\$61,360	\$47.00	\$97,760
\$12.00	\$24,960	\$30.00	\$62,400	\$47.50	\$98,800
\$12.50	\$26,000	\$30.50	\$63,440	\$48.00	\$99,840
\$13.00	\$27,040	\$30.50	\$63,440	\$48.50	\$100,880
\$13.50	\$28,080	\$31.00	\$64,480	\$49.00	\$101,920
\$14.00	\$29,120	\$31.50	\$65,520	\$49.50	\$102,960
\$14.50	\$30,160	\$32.00	\$66,560	\$50.00	\$104,000
\$15.00	\$31,200	\$32.50	\$67,600	\$50.50	\$105,040
\$15.50	\$32,240	\$33.00	\$68,640	\$51.00	\$106,080
\$16.00	\$33,280	\$33.50	\$69,680	\$51.50	\$107,120
\$16.50	\$34,320	\$34.00	\$70,720	\$52.00	\$108,160
\$17.00	\$35,360	\$34.50	\$71,760	\$52.50	\$109,200
\$17.50	\$36,400	\$35.00	\$72,800	\$53.00	\$110,240
\$18.00	\$37,440	\$35.50	\$73,840	\$53.50	\$111,280
\$18.50	\$38,480	\$36.00	\$74,880	\$54.00	\$112,320
\$19.00	\$39,520	\$36.50	\$75,920	\$54.50	\$113,360
\$19.50	\$40,560	\$37.00	\$76,960	\$55.00	\$114,400
\$20.00	\$41,600	\$37.50	\$78,000	\$55.50	\$115,440
\$20.50	\$42,640	\$38.00	\$79,040	\$60.00	\$124,800
\$21.00	\$43,680	\$38.50	\$80,080		
\$21.50	\$44,720	\$39.00	\$81,120		
\$22.00	\$45,760	\$39.50	\$82,160		
\$22.50	\$46,800	\$40.00	\$83,200		