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Labor Supply Report of Great Falls MSA, Montana

Prepared for Great Falls Montana Development Authority

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> ### About Chmura Economics & Analytics
>
> We have a data-driven culture. We are a group of published scientists contributing to innovations with big data analytics on the forefront of applied economics and technology solutions. We have a very diverse team of people with backgrounds such as PhD economists, statisticians, computer scientists, and transformation strategists. We serve a cross section of decision makers from the defense, government, public, and private sectors.
>
> As data scientists, we help our clients quickly answer big data questions. We provide a reliable picture of economic trends on both a macro and micro level. Our clients rely on the historical, current, and predictive market reports we provide to cut through the confusing information they receive on a daily basis from the media, politicians, and industry resources.
>
> Our clients view us as trusted economic advisors because we help them mitigate risk and prepare for growth by understanding the why, the how, and the what about their local economy. As the nation's preferred provider of labor market data, we help our clients understand both the demand for and the supply of available data. Our clients benefit from our expertise by better understanding their own bottom line costs, sustainability issues, and associated risks.

1. Executive Summary

The mission of the Great Falls Development Authority (GFDA) is to grow and diversify the Great Falls regional economy, create higher wage career opportunities, and improve market competitiveness. GFDA engaged Chmura Economics & Analytics (Chmura) to conduct a study to understand the labor supply in the Great Falls MSA in Montana.[1]

In this study, labor supply is defined to include the adult population (16 and over) that is not retired. The labor supply is further segmented into those who are currently employed, and those who are not employed (Figure 1.1). The currently employed labor supply includes both civilian and military employees.[2] The not-employed labor supply is segmented into unemployed and out-of-the-workforce individuals, while the civilian employed workers include a segment of the underemployed. Combining both not-employed and underemployed workers gives rise to the definition of the underutilized labor supply in the region. Currently non-underemployed workers are divided into full-time and part-time and self-employed workers by choice. This report will first discuss the characteristics of the overall labor supply, before a more in-depth analysis of both the underutilized and currently employed labor supply in the Great Falls MSA.

Figure 1.1: Segments of the Labor Supply[3]
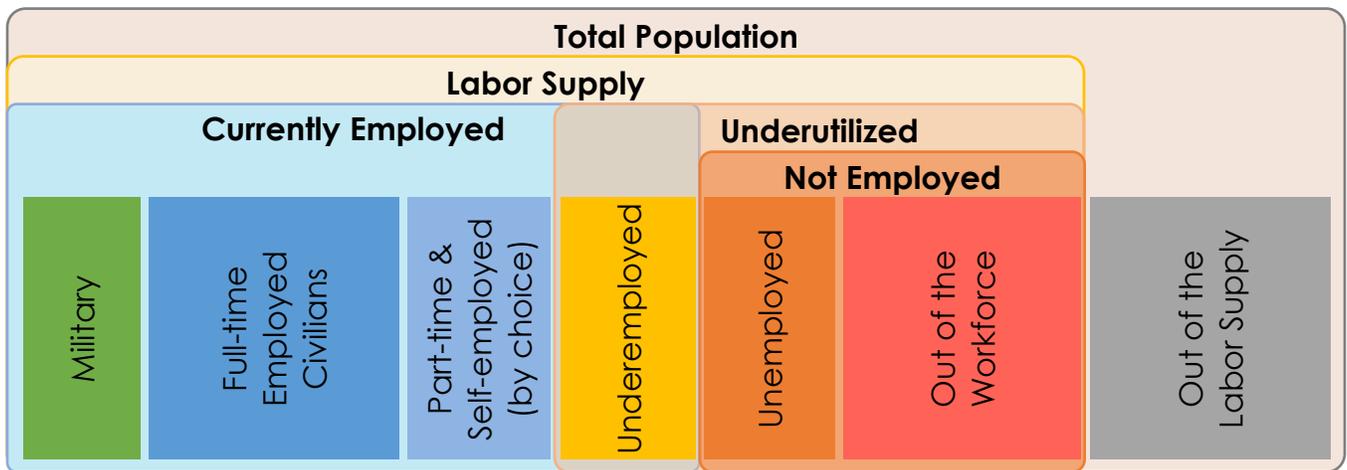
Source: Chmura Economics & Analytics

Chmura conducted a household survey and collected 502 complete survey responses for a 4.5% overall margin of error. The sample's responses are weighted by educational attainment, age, industry, and occupation to more accurately reflect the region's population. The major findings of this study are summarized below.

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[1] The Great Falls MSA includes Cascade County, Montana.

[2] For the employed workers, Chmura also analyzed characteristics of full-time, part-time, and self-employed workers.

[3] The size of the segment in Figure 1.1 is not to scale. Please see Section 4 for a detailed definition and the estimated number of individuals associated with each segment.

In the first half of 2017, Chmura estimates the total labor supply labor pool in Great Falls at 54,055, including 36,467 employed civilians.

- The potential labor force includes an estimated 13,318 individuals who are currently out of the workforce, but can possibly be utilized. This group is comprised mostly of homemakers as well as disabled workers, students, and marginally attached workers.
- The Great Falls region is highly educated, with over 60% of the region's labor force attaining a post-secondary education.
- The demographics of Chmura's survey sample—measured by age, gender, and race—are in line with, or within the margin of error of publicly available data from either the U.S. Census or the Bureau of Labor Statistics.

The Great Falls region has a mature, experienced, and skilled workforce.

- On average, employed workers have 23.6 years of experience and the unemployed have 18.4 years of work experience.
- For general work-related skills, on average, over 90% of the labor supply have general work skills, as well as thinking and organizational skills. Over 70% have management skills.
- In terms of computer skills, nearly two-thirds of the regional labor supply have word-processing skills, and over half have data entry and spreadsheet skills. Nearly half of the labor supply have database skills and over one-third have desktop publishing skills.
- For occupation skills, over three-quarters of the regional labor supply have customer service skills, and half have retail or sales skills.
- About one-quarter of the regional labor supply have an industry-recognized credential, the most common of which is in the health field. Other common credentials are skilled trade, business, and personal service certifications.

In the first half of 2017, Chmura estimates that there is an underutilized labor supply of 16,134 individuals in the Great Falls MSA, many of whom are currently not working due to family needs or disability barriers.

- Nearly half of this supply is comprised of homemakers, the majority of whom are women that would work if they were not staying at home caring for their family.
- One-quarter of the underutilized labor supply are disabled, most with varying degrees of barriers to overcome for workforce entry.
- There are over 1,200 workers in the Great Falls MSA currently in part-time jobs who are willing and able to work full-time jobs. These workers predominantly work in the retail and personal service industries.
- Unemployed and underemployed men outnumber unemployed and underemployed women in Great Falls, but over 70% of those out-of-the-workforce are women.
- Regional underutilized workers have significant work experience.
  - When compared to the regional average, underemployed workers have more experience (27.5 years), mostly due to the older age demographic makeup of the region's underemployed.
  - Unemployed workers are closely connected to the labor market. Over half of the region's unemployed individuals worked in the past six months, and over three-quarters of them worked in the past year.

- Regional underutilized workers have various types of workforce skills.
    - Compared to the overall workforce, unemployed and underemployed workers have similar work-related skills, while those out-of-the-workforce require training programs for success upon re-entry into the labor market.
    - Unemployed workers generally have more computer skills compared to the region's underemployed and out-of-the-workforce population.
    - While the unemployed and underemployed also have more occupational skills compared to those out-of-the-workforce, large proportions of out-of-the-workforce individuals are skilled in retail/sales and customer service, indicating a workforce readiness in occupations requiring those skills.

- Slightly over one-quarter of the regional labor supply have some form of industry-recognized certification. Most of these certifications are in a skilled-trade, personal service, business, or health field.

Employed workers in Great Falls have significant experience in their current occupations and are mostly content with their current jobs or employers.

- The employed workforce consists of individuals with different employment arrangements.
    - While three-quarters of the employed workforce in Great Falls work full-time jobs, about 22% of workers are employed in part-time jobs, and 14% are self-employed.
    - On average, workers in the region spend 38.3 hours working per week.
    - Part-time and self-employed workers in the region are more likely to be older, female, and have lower educational attainment compared to full-time workers.

- The region's largest sectors by employment include public administration and the military (16%), healthcare and social assistance (14%), retail (11%), accommodation and food service (9%), and construction (9%).
    - Regional part-time workers are concentrated in retail (19%), accommodation and food services (11%), healthcare and social assistance (9%), administrative and support and waste management and remediation services (8%), and agriculture (8%) industries.

- Full-time workers in the region take home an average annual income of $46,157 compared to $34,586 for part-time workers.
    - Over two-thirds of employed workers in the region receive benefits such as health insurance plans (61%), retirement plans (52%), and life insurance plans (30%). Only 36% of part-time workers receive any benefits.

- The employed workforce in the Great Falls MSA is mostly content with their current jobs and employers.
    - On average, employed workers in the Great Falls region have been working in their current occupation for over 13 years, compared with less than 5 years nationally.
    - Most employed workers consider themselves to be in experienced or management roles.

- Nearly one-quarter of currently employed workers consider themselves overqualified for their current job.
- One-third of currently employed workers in the region are interested in changing jobs, most commonly citing an increase in pay as their primary reason. Of these potential job-changers, one-third of them have applied for other jobs in the past three months.
- Regarding career development, more than 75% of currently employed workers are intent on staying with their current jobs, current companies, or are waiting for retirement. Less than 20% of the employed expect to change companies or occupations.

2. Background

The city of Great Falls is situated on the Missouri River in Central Montana. The city is the county seat of Cascade County and is the third-largest city in Montana. The city is also the principal city of the Great Falls Metropolitan Statistical Area (MSA).[4]

The Great Falls region has an abundance of natural and recreational resources for residents and visitors alike, including rivers for fishing and river sports, and miles of trail systems for hiking and jogging. The region also offers multiple cultural activities such as art museums and events related to Native American culture.[5] In addition to being a great place to live and visit, Great Falls is also a great place to do business. The region has an educated and skilled workforce, and secondary and post-secondary education systems to assist with workforce training. The region also boasts a low cost of doing business.

The population and employment base in the Great Falls MSA has changed little in the past few years. According to the 2010 Census, the population stood at 81,327. Six years later, the estimated population inched up to 81,755. Population growth in the Great Falls MSA averaged 0.05% per year in the past six years, much lower than the state average of 0.85%.[6] Similarly, total employment of the region declined from 38,138 in 2010 to 37,723 in 2016, while statewide employment has expanded 1.1% per year since 2010.[7]

The Great Falls Development Authority (GFDA) is a public/private economic development partnership with the mission to grow and diversify the Great Falls regional economy, create higher wage career opportunities, and improve market competitiveness.[8] To achieve its vision and provide excellent service, GFDA engaged several studies to provide a deeper understanding of the region's workforce and business communities. In 2003 and 2009, there were two labor surveys conducted in the Great Falls area, which proved to be beneficial for GFDA to attract and retain major employers.[9] In 2015, GFDA also commissioned a labor demand study that focused on businesses in the Great Falls MSA.

In 2017, GFDA received a Community Development Block Grant from the City of Great Falls to conduct a household labor supply survey and produce an analysis of the survey results. This report details the results of this study. The remainder of this report is organized as follows:

- Section 3 briefly describes the study objectives and the Chmura methodology to undertake this study.

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[4] The study region is defined as the Great Falls MSA, which includes Cascade County. This region is also referred to as the Great Falls region, the Great Falls area, or Cascade County.

[5] Source: Great Falls Montana Development Authority.
http://www.gfdevelopment.org/pages/p34/live_visit_and_play.php.

[6] Source: U.S. Census.

[7] Source: Labor & Wage Trends, JobsEQ.

[8] Source: Great Falls Montana Development Authority.
http://www.gfdevelopment.org/pages/p33/why_great_falls.php.

[9] Source: Great Falls Development Authority Labor Survey, April 2003. Great Falls Region Defense Diversification Project, Labor Market Assessment, 2009.

- Section 4 provides a general profile of the workforce in the Great Falls region, such as its size, age and gender distribution, and educational attainment.
- Section 5 provides an in-depth analysis of labor supply characteristics, focusing on work experience, skills, and certifications.
- Section 6 focuses on the underutilized labor force in the Great Falls region, including unemployed, underemployed, and those outside the workforce that may seek entry.
- Section 7 summarizes the characteristics of the currently employed workforce, with analysis on work status, compensation, and career pathways.
- Section 8 presents a summary and conclusion.
- The Appendix contains the survey instrument.

3. Methodology

3.1. Study Objectives

There are three broad objectives to be achieved from this labor supply survey:

- Provide labor supply data to enable GFDA to work with existing companies, startup entrepreneurs, attraction prospects, and site selection consultants to secure private sector investment that creates high-wage, primary sector jobs;

- Provide labor supply characteristics of underemployed, unemployed, and out-of-the-workforce working-age residents that would help GFDA attract private investment that creates job opportunities, particularly for low- and moderate-income residents;

- Provide labor supply characteristic data that would help GFDA in updating its economic development strategic priorities, including workforce apprenticeships, internships, and education and training initiatives to provide pathways to higher-wage and high-benefit jobs, particularly for low- and moderate-income residents.

3.2. Chmura's Survey

Chmura conducted a household survey to understand the labor supply characteristics of the Great Falls MSA. The geographic scope of the survey is Cascade County, Montana.

Prior to survey design and implementation, Chmura communicated with GFDA to understand the challenges and concerns of the regional leaders. Chmura worked closely with GFDA and the City of Great Falls to design the survey instrument, ensuring that the three study objectives were covered by the survey instrument. More specifically, the survey instrument included questions regarding the following:

- Basic labor supply characteristics. The survey included questions on demographic characteristics such as age, gender, educational attainment, and employment status of working adults in the Great Falls MSA.

- In-depth labor supply characteristics. The survey contained questions regarding skills, experience, certifications, training, and apprenticeships obtained by workers in the Great Falls MSA.

- Characteristics of the underutilized labor force. The survey gathered information identifying individuals who are unemployed, underemployed, or out of the workforce. The survey also probed barriers to employment for this group of individuals, including availability and affordability of child care, transportation, and other factors.

- Characteristics of currently employed workers. For employed workers, the survey included questions regarding their current work status, compensation, and career pathways.

The survey was launched on May 17, 2017 and lasted until June 1, 2017. Chmura collected 502 total complete responses, with an overall margin of error of 4.5%. Chmura restricted the survey sample to individuals of working age (18 years of age and over and not retired).[10]

3.3. Weighting Methodology

Since Chmura will rely primarily on the household survey to analyze workforce characteristics, it is imperative that Chmura's sample represent the age, educational attainment, industry, and occupation composition for the existing workforce of the Great Falls region. Despite the best efforts by the Chmura survey contractors, the resulting sample indicates that it over-represents older, highly-skilled, and more experienced workers while underrepresenting younger, low-skilled, and inexperienced workers. This oversampling is also reflected in the industry and occupation representation of the area. For example, the sample has low representation of industries such as retail and food service where many low-skilled workers find employment. On the other hand, the survey has high representation of professional and technical services industries which tend to have a high share of highly-skilled workers.

After detailed analysis comparing the survey sample and other major demographic and economic indicators of the region, Chmura developed a weighting scheme for each observation in the survey.[11] This weighting was applied systematically throughout the analysis. After weighting, the education, age, industry, and occupation mix of the survey sample were generally within the margin of error of the survey. All ensuing data analysis is based on the weighted response.

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[10] The margin of error will be larger when data are presented for a sub-group of all respondents, such as demographic or industry sub-groups.

[11] This technique is widely used in public polling and surveys, including political and business surveys.

4. General Labor Supply Profile

4.1. Size and Employment Status of the Labor Supply

Using data from Chmura's survey, the Bureau of Labor Statistics (BLS), and the U.S. Census, Chmura estimated the labor supply in the Great Falls MSA. In this study, the total labor supply (also called the labor pool) of the Great Falls area refers to the non-retired adult (16 years of age and over) population.[12] Using this definition, the labor supply is larger than the size of the labor force. This is because the BLS labor force definition only includes those employed and unemployed. Moreover, the BLS definition of an unemployed person is very narrow, including only those without jobs who are actively seeking work—excluding students, homemakers, disabled workers, marginally attached workers, and others. While labeling them "out-of-the-workforce," Chmura considers homemakers, students, and disabled individuals part of the labor supply or labor pool. In contrast, the labor pool in this analysis includes not only those in the labor force, but also potential labor force participants such as homemakers, students, disabled persons, and marginally attached individuals.[13]

Figure 4.1: Segments of the Labor Supply
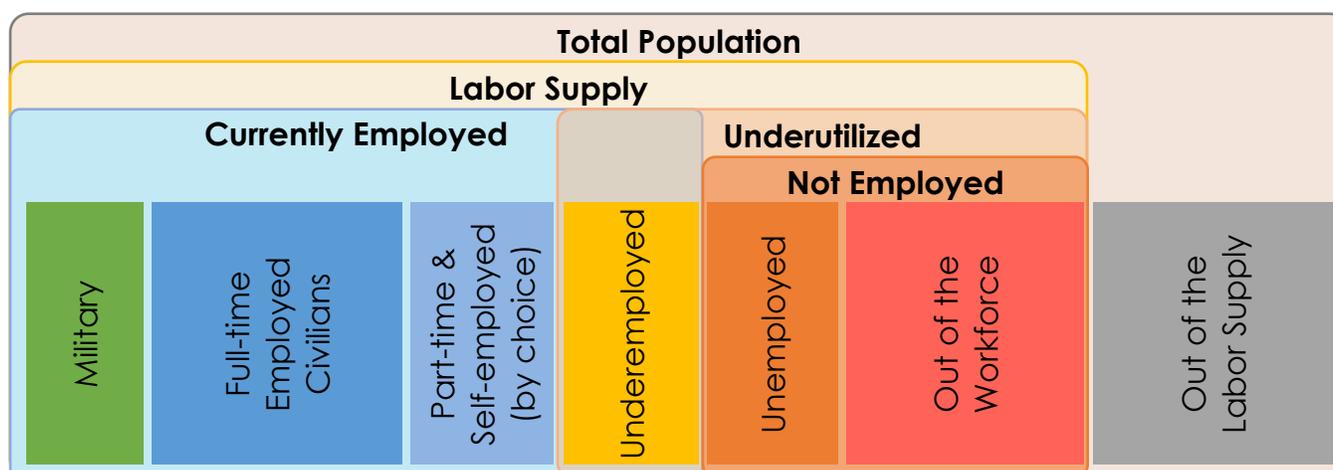
Source: Chmura Economics & Analytics

In this report, additional terminologies are also used. In Sections 4 and 5 where total labor supply characteristics are analyzed, Chmura includes surveyed respondents in the total labor pool, but distinguishes between currently employed (including employed military and civilian workers), and all those currently not employed (including unemployed and those out-of-the-workforce). In Section 6, where Chmura analyzes the underutilized labor force, it includes not only unemployed and out-of-the-workforce individuals, but also underemployed workers. Underemployed workers are those currently working part-time who both desire and are available to work full-time jobs. Finally, in Section 6, the

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[12] Due to survey guidelines, Chmura was not able to survey residents age 16 or 17.

[13] The out-of-the-workforce population in this study is different from individuals not participating in the labor force as defined by BLS, as it does not include retired persons.

analysis focuses on the currently employed workforce, and Chmura compares full- and part-time (self-employed) workers. There are multiple ways of segmenting the labor pool in the Great Falls MSA. Chmura's classification is based on widely accepted convention including the BLS's definition, as well as the needs of Great Falls community leaders.

The latest population estimate by the Census indicates that the population in the Great Falls MSA was 81,755 in 2016. Chmura estimates that in the first half of 2017, the total labor pool of the region was 54,055, excluding children under 16 and retirees. In the total labor pool, there were an estimated 2,704 military personnel and 51,351 civilians.

Table 4.1: Estimated Available Labor Pool in Great Falls MSA-2017

Total Population (2016 Census Estimate)	81,755
Total Labor Supply	**54,055**
Military	2,704
Civilian Labor Supply	51,351
In Labor Force	38,033
Employed	36,467
Underemployed	1,251
Unemployed	1,566
Out-of-the-Workforce	13,318
Homemaker	6,905
Student	1,774
Disabled	4,230
Marginally Attached	352
Other	56

Source: Chmura

Among the civilian labor supply, 38,033 individuals are in the civilian labor force, as defined by BLS. There are 36,467 currently employed and an estimated 1,566 unemployed. The implied unemployment rate is 4.1%, which is consistent with the official unemployment rate of 4.1% for the first quarter of 2017, published by BLS.[14] Among currently employed workers, Chmura estimates that 1,250 were underemployed in the first half of 2017.

The number of the out-of-the-workforce individuals was estimated to be 13,318 in the first half of 2017. Among those, the largest segment is comprised of homemakers—individuals staying home to take care of family members or for other reasons. In addition, there are 4,230 disabled workers in the potential workforce.[15] The student population is estimated to be 1,774. Finally, it is estimated that 352 persons are

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[14] Source: https://www.bls.gov/eag/eag.mt_greatfalls_msa.htm. This is the average of the first quarter of 2017.
[15] Based on Chmura's JobsEQ database, 11.9% of individuals between 18 and 64 years old in the Great Falls MSA have some form of disability.

marginally attached workers—individuals who are not working and are not actively seeking work for various reasons.[16]

Figure 4.2: Labor Supply in Great Falls MSA, 2017
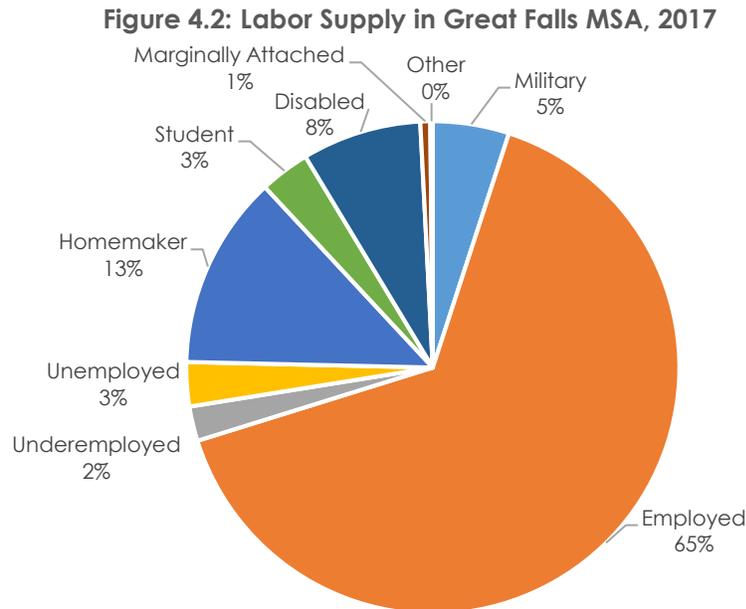
Source: Chmura, Census, and BLS

Figure 4.2 provides a graphic representation of the labor supply in the Great Falls region. In the civilian sector, 67.5% are employed (including 2.3% underemployed). Military workers comprise 5.0%. Of the available labor supply, 27.5% are not working—including unemployed individuals and those out of the workforce.

Chmura's estimates are consistent with other official labor market statistics, when such comparisons are feasible. For the first three months of 2017, the unemployment rate was 4.1%, which is consistent with the unemployment rate estimated based on Chmura's survey. The number of individuals officially in the labor force (and employed) is consistent with data published by BLS and labor market data from Chmura's JobsEQ database.[17]

4.2. Age

Based on Chmura's survey, it is estimated that the average age of all people in the labor supply in the Great Falls MSA is 45.9. This is higher than the median age of the MSA at 38.9.[18] This is reasonable as the

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[16] A portion of those classified as marginally attached workers are discouraged individuals, who have given up searching for work because they do not believe jobs are available.

[17] Chmura's JobsEQ shows employment of 37,641 for the Great Falls MSA in the 1st quarter of 2017. JobsEQ's employment count is based on the place of work, while Chmura's survey counted employment based on the place of residence. The Great Falls MSA has more in-commuters than out-commuters. As a result, employment based on place of work is larger than employment based on place of residence.

[18] Source: Demographic Profile, JobsEQ.

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survey only gathered information from adults that are 18 years old or older. The median age of the Great Falls MSA (38.9) is slightly younger than the Montana state median age of 39.8.

Figure 4.3 presents the age structure of the labor supply in the Great Falls region. It is estimated that 41.9% of the labor pool are in the 35-54 age group, while 30.3% are in the 18-34 age group, and 27.8% are individuals over 55 years old.

Compared with the age distribution of all adults in the Census's American Community Survey (ACS 2011-2015), it appears that the Census ACS has a higher percentage of individuals over 55 years old. The driving force for this difference is that the labor supply population in the Great Falls MSA excludes retirees, which are concentrated in the 55+ age group in the ACS data, leading to a lower percentage of 55+ age groups in the labor supply in Chmura's survey.

Figure 4.3: Age Distribution of the Labor Supply, 2017

N=500
Source: Chmura & Census
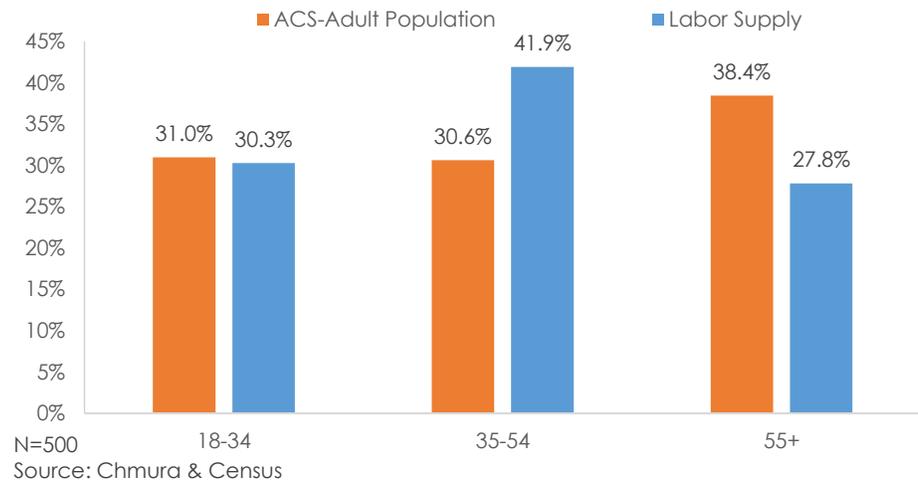
4.2. Gender

In terms of gender in the Great Falls labor supply, females slightly outnumber males. The population is estimated to be 52.8% female and 47.2% male (Figure 4.4). Compared with gender distribution of the adult population in the area, the at-large gender distribution is almost split evenly between males and females. However, the difference between gender distribution in the survey and in the regional adult population is within the margin of error.

Figure 4.4: Gender Distribution of the Labor Supply, 2017

N=502
Source: Chmura & Census
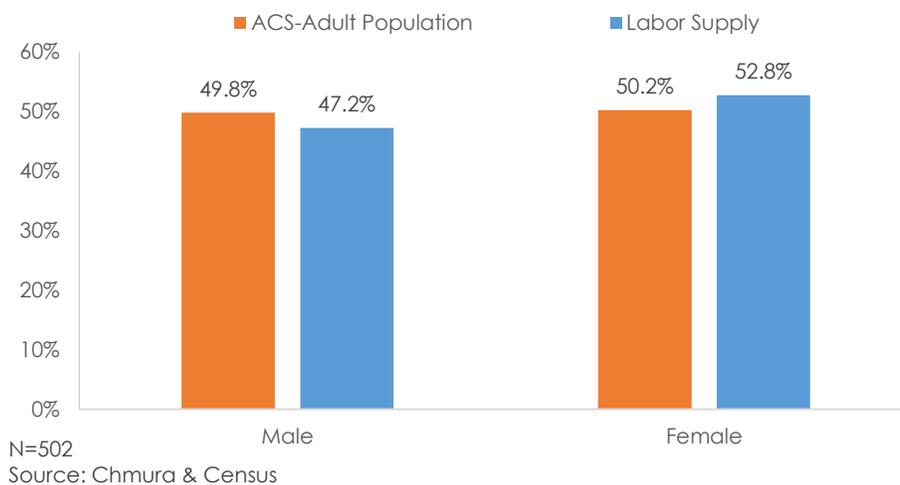
4.3. Race

As Figure 4.5 shows, in terms of race, the survey indicates 89.3% of the labor pool in the Great Falls MSA is white, with

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a very small percentage of minorities. The largest minority group is "other" (other races and two or more races), followed by American Indian and Alaska Native. The racial mix of the labor pool closely resembles the overall racial mix of the population in the area, based on data from the latest American Community Survey.[19] It is worth mentioning that the percentage of American Indians and Alaska Natives in the overall population is larger than what is represented in the sample, but the difference is within the margin of error of the survey.

Figure 4.5: Race Distribution of the Labor Supply, 2017

N=482
Source: Chmura & Census
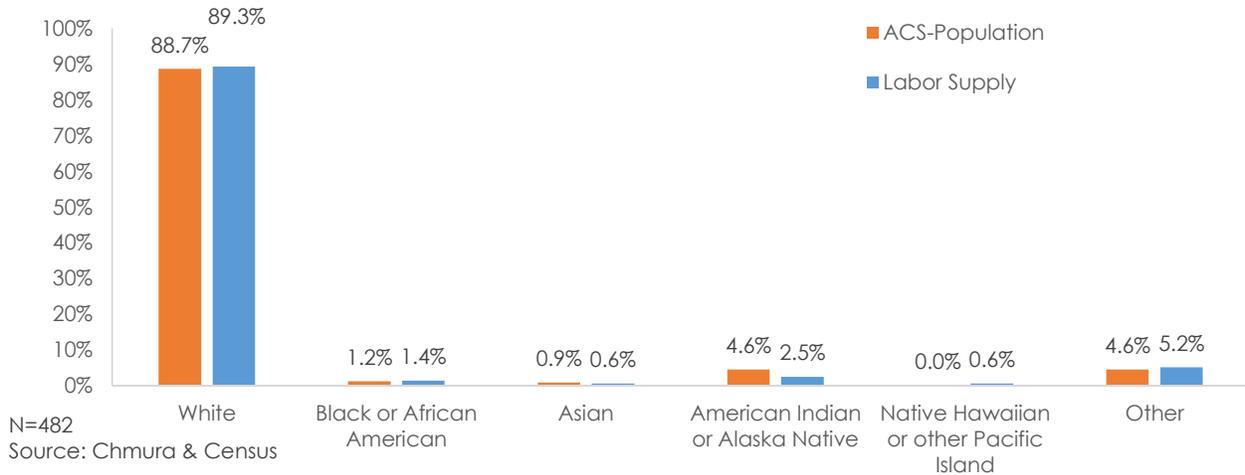
4.4. Educational Attainment

Figure 4.6 estimates the educational attainment of the labor supply in the Great Falls region. The region has a well-educated workforce, with more than 65% of the labor supply attaining post-secondary education. There are 28.7% with a bachelor's degree

Figure 4.6: Educational Attainment of the Labor Supply, 2017

N=496
Source: Chmura & Census

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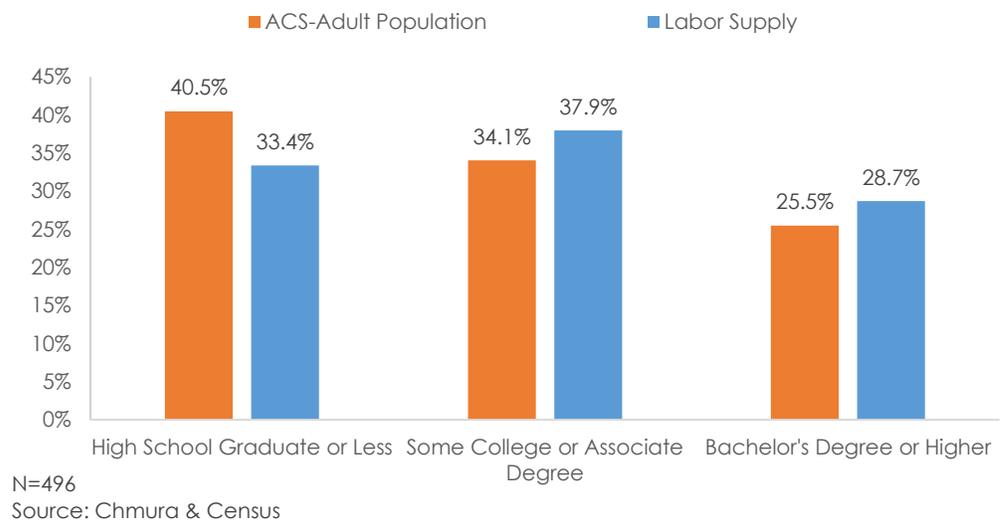
[19] Data on the adult population's racial mix are not available. Therefore, Chmura compares it with the overall population, and it is likely that the adult distribution is similar.

or higher, and 37.9% with some college or an associate degree. In addition, an estimated 33.3% of the labor supply have a high school diploma or less. Compared with the educational attainment for all adults reported by the Census's American Community Survey (2011-2015), it appears the labor pool has a higher percentage of individuals with a bachelor's degree or higher. The driving force for this difference is retirement. The Census's ACS educational attainment data include all adults over 25 in the Great Falls MSA, including all retirees. On the other hand, the survey population only includes non-retired adults. Older and retired individuals have lower educational attainment in general, driving down the percentage of individuals with a bachelor's degree or higher in the general population. Compared with the Montana state average, data from ACS show that the Great Falls MSA has a slightly lower percentage of individuals with bachelor's degrees or higher.

5. Labor Supply Characteristics

5.1. Experience

Great Falls has a mature workforce in terms of experience. On average, an individual in the Great Falls MSA labor supply has 22.0 years of experience (Figure 5.1). Average experience for currently employed workers is 23.6 years.[20] Even those who are currently not employed have an average of 18.4 years of work experience. Some of them are unemployed and looking for work. In addition, some of those who are not currently employed are homemakers, or are disabled but have prior work experience. The implication is that the significant experience of the not-employed workforce in the region can be a great asset for economic development.

Figure 5.1: Average Years of Experience

N=467
Source: Chmura
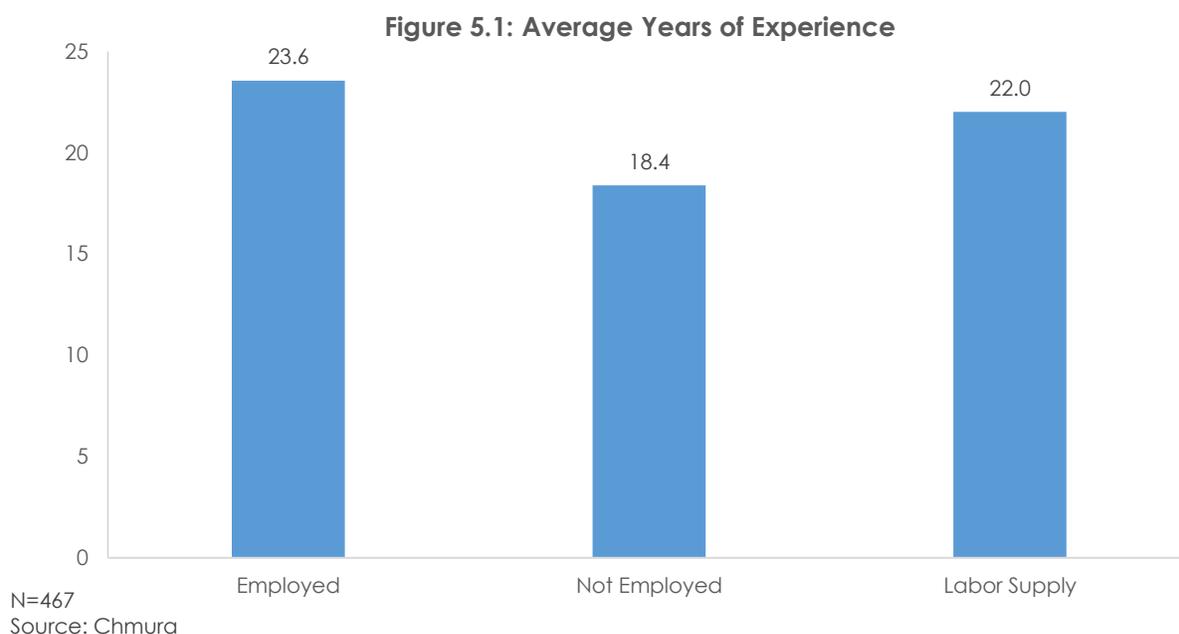
5.2. Skills

5.2.1. Work-Related Skills

Chmura's survey asked about seven categories of work-related skills (Table 5.1). Among those, 96.6% of the regional labor supply reported that they have general work skills such as reading, writing, and basic mathematical skills. Approximately 92.8% of the labor supply possess thinking and organization skills (which also include problem solving and time management skills). In addition, 89.0% of the labor supply have interpersonal skills, such as communication and conflict resolution skills.

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[20] Experience for the employed workforce is estimated based on their age and educational attainment.

Table 5.1: Work-related Skills of the Regional Labor Supply

Skill Category	Not Employed	Employed	Labor Supply
General	92.4%	98.4%	96.6%
Product/Sales	45.2%	56.2%	52.9%
Interpersonal	83.2%	91.5%	89.0%
Thinking/Organizational	89.4%	94.2%	92.8%
Quality Improvement	69.0%	89.0%	83.0%
Safety	68.8%	89.6%	83.4%
Management	55.8%	76.3%	70.1%

Source: Chmura

Outside the top three work-related skills, the other four skill categories are related to specific professions and experiences. Therefore, a relatively lower percentage of the labor supply have those skills. For example, 83.0% and 83.4% of the labor supply have quality improvement and safety skills, respectively. Among the more specialized skills, 70.1% have management skills and 52.9% have product and sales skills (which include marketing skills).

Overall, currently employed workers are more skilled than those who are not working. The differences in skill levels are more pronounced concerning more specialized skills. For example, 76.3% of employed workers have some management skills, compared with only 55.8% for people not working. On the other hand, for skills such as interpersonal and general work skills, the gaps between the employed and not employed are fairly narrow.

5.2.2. Computer Skills

Overall, a large majority of the regional labor supply have some computer skills (Table 5.2). The Chmura survey asked questions about eight categories of computer skills. Among those, word processing is the most popular—62.2% of the regional labor force have this skill. For other computer skills, 59.0% possess data entry skills, while 50.9% and 48.6% have some spreadsheet and database skills, respectively.

Table 5.2: Computer Skills of the Regional Labor Supply

Skill Category	Not Employed	Employed	Labor Supply
Word Processing	44.9%	69.6%	62.2%
Data Entry	49.5%	63.0%	59.0%
Spreadsheet	37.1%	56.8%	50.9%
Database	35.8%	54.1%	48.6%
Desktop Publishing	30.6%	41.0%	37.9%
Computer Hardware	11.8%	31.2%	25.4%
Computer Programming	8.7%	22.4%	18.3%
Web Programming (HTML)	9.2%	22.6%	18.6%

Source: Chmura

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As computer skills become more advanced, a relatively lower percentage of the regional labor supply are skilled in such areas. For example, 37.9% of the labor supply have skills in desktop publishing, and 25.4% are skilled in computer hardware maintenance—including setting up networks, installing updates, and routine maintenance. In addition, 18.3% of the workforce have skills in computer programming, including languages such as C++, Python, JavaScript, and SQL. An estimated 18.6% are skilled in web programming languages such as HTML.

Overall, currently employed workers have a higher level of computer skills than those who are not working. Of those currently not working, the most popular skill is data entry, followed by word processing and spreadsheet skills. About 10.0% of non-working individuals have some skills in computer hardware, programming, and HTML.

5.2.3. Occupation Skills

Among 13 categories of occupation skills, the most popular is customer service, with 83.6% of the regional labor supply having this skill (Table 5.3). Retail and sales are also popular, with over 50.0% of the workforce possessing those skills. In addition, 38.3% of the workforce have executive and professional skills. Highly specialized skills are not as common, such as legal being reported by 15.0% of the workforce, and 24.0% of the regional labor supply with metal working skills.

Table 5.3: Occupation Skills of the Regional Labor Supply

Skill Category	Not Employed	Employed	Labor Supply
Machine Operation	21.1%	52.7%	43.2%
Welding	10.7%	29.7%	24.0%
Carpentry	27.2%	40.9%	36.8%
Mechanical	25.5%	46.8%	40.4%
Metal Working	8.9%	28.4%	22.6%
Electrical	14.6%	33.8%	28.1%
Medical/Healthcare	39.4%	27.3%	30.9%
Legal	8.2%	17.9%	15.0%
Executive/Professional	30.1%	41.8%	38.3%
Retail/Sales	45.1%	53.0%	50.6%
Commercial Driving	13.1%	32.6%	26.8%
Customer Service	72.4%	88.4%	83.6%
Other	41.0%	28.3%	32.1%

Source: Chmura

Over 40% of the regional labor supply possess occupation skills related to construction, skilled trades, manufacturing, and transportation. For example, 43.2% of the labor supply are skilled in machine operation, 40.4% have mechanical, 36.8% have carpentry, 24.0% have welding, and 26.5% have commercial driving skills.

Similar to other work-related and computer skills, currently employed workers are more skilled than those who are not working. The exception is for those with medical or healthcare skills, where 39.4% of those not employed have such skills. This is compared with 27.3% for currently employed workers. It is likely that

some homemakers acquire such skills before they choose to stay at home, or some are students who are currently studying in the healthcare field, but have not yet entered the labor market.[21]

5.3. Certification, Apprenticeship, and Training

5.3.1. Certification

Overall, Chmura's survey finds that 25.4% of the regional labor supply have some form of industry-recognized certification (Table 5.4). For individuals with certifications, they have an average of 1.3 certifications. The most popular are in the health field, as 8.0% of the regional labor supply have such certifications. Some of these health certifications are in nursing, emergency medical technician (EMT), TIPS (Training for Intervention ProcedureS), first aid, and medical assisting. Certifications in skilled trades are also popular with 5.0% of the regional labor supply having those. Skilled-trade certifications are held by electricians, auto mechanics, and welders. Many of those workers are Journeyman-certified carpenters, electricians, and pipefitters. After health and skilled trades, 3.7% and 3.6% of the regional labor supply have personal service and business certifications, respectively. Examples of business certifications include certified accountant and real estate agent, while personal service certifications consist of cosmetology and massage therapy, among others.

Table 5.4: Workforce Certification of the Regional Labor Supply

Certification Category	Not Employed	Employed	Labor Supply
Business	2.8%	4.0%	3.6%
Computer	0.0%	1.8%	1.3%
Education	0.0%	2.1%	1.5%
Health	9.3%	7.4%	8.0%
Occupation Safety	5.6%	1.6%	2.8%
Other	1.7%	1.0%	1.2%
Personal Service	3.3%	3.8%	3.7%
Security	0.2%	1.0%	0.8%
Skilled Trades	1.0%	6.7%	5.0%
No Certification	78.6%	72.8%	74.6%

Note: An individual with two types of certifications was counted in both categories.

Source: Chmura

Multiple certifications usually occur in the areas of skilled trades, as workers are potentially certified in multiple areas such as welding, forklift operation, and electricity. Many people also have multiple healthcare-related certifications—for example, individuals certified as a health aide are often also certified in first aid.

While a higher percentage of currently employed workers have a certification when compared to those not employed, the difference is not dramatic. Of the currently non-employed labor supply, 21.4% also

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[21] Data in Section 6 show that in the Great Falls MSA, a higher percentage of individuals who are out-of-the-workforce have medical/healthcare skills when compared to the general labor supply.

have some type of certification, compared with 27.2% for employed workers. Specifically, higher percentages of those not employed than currently employed have health and occupation safety-related certifications.

5.3.2. Apprenticeship

In comparison to certifications, participation in apprenticeship programs is much less common, as only 3.9% of the regional labor supply have participated in apprenticeship programs (Table 5.5). Also, among apprenticeship programs, skilled trades are the most common, accounting for three-quarters of all apprenticeship participants. Examples of those are carpenters, plumbers, and electricians. This is not surprising, as skilled-trade jobs require hands-on training. Many of these job skills cannot be taught in a formal education setting.

Table 5.5: Participation in Apprenticeship Programs

Apprenticeship Category	Not Employed	Employed	Labor Supply
Business	0.0%	0.2%	0.1%
Education	0.0%	0.2%	0.1%
Health	0.4%	0.0%	0.1%
Other	0.0%	0.9%	0.7%
Personal Service	0.0%	0.3%	0.2%
Security	0.0%	0.2%	0.2%
Skilled Trade	0.0%	3.5%	2.4%
No Apprenticeship	99.6%	94.7%	96.1%

Source: Chmura

Most individuals who have participated in an apprenticeship program are employed, as very few not-employed workers have apprenticeship experience. In addition, no survey respondents reported that they went through multiple apprenticeship programs.

5.3.3. Other Training

Outside formal education, workers and potential workers also receive various other training, either through their employers or of their own volition. Overall, almost 30% of the regional labor supply received additional training (Table 5.6). On average, those with additional training participated in an average of 1.5 training programs. Similar to certifications, health, skilled trade, and businesses are some of the most popular training areas for the regional labor supply.

The military base is a great asset for workforce training. Due to the presence of the military in the Great Falls region, a sizable portion of the workforce received training from the U.S. military. Based on the survey responses, the U.S. military not only provided military-related training such as piloting or shooting, but also training in computer and security skills. These skills can help military personnel transition into the civilian workforce when they exit military service.

Table 5.6: Participation in Other Training Programs

Training Category	Not Employed	Employed	Labor Supply
Business	0.0%	4.5%	3.2%
Computer	0.0%	2.0%	1.4%
Education	0.0%	1.3%	0.9%
Health	14.1%	5.6%	8.1%
Military	2.7%	4.4%	3.9%
Occupation Safety	0.5%	1.1%	0.9%
Other	3.5%	3.3%	3.4%
Personal Service	7.6%	2.8%	4.2%
Security	2.6%	1.9%	2.1%
Skilled Trade	14.0%	4.9%	7.6%
No Additional Training	64.1%	73.5%	70.7%

Note: An individual with two types of trainings was counted in both categories.

Source: Chmura

For individuals with multiple trainings, the survey also shows that business is a popular secondary training option for many people in skilled trades or healthcare. As people further their career paths, some might take on a leadership role in their field, making training in business and administration necessary.

There is a higher percentage of the not-employed labor supply than those who are employed with additional non-formal training. This is primarily driven by the high percentage of healthcare training received by those currently out-of-the-workforce. Many homemakers and current students reported that they received first aid or cardiopulmonary resuscitation (CPR) training, even though it may not be directly related to their future careers.[22]

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[22] Please see Section 6 for more details.

6. Underutilized Labor Supply

6.1. Size of the Underutilized Labor Supply

The underutilized labor supply includes unemployed, underemployed, and out-of-the-workforce individuals. As Table 6.1 shows, the total underutilized labor supply in the Great Falls MSA is estimated to be 16,134 in the first half of 2017. Of those, 1,566 are not working but are actively looking for work, which also means they are included in the official BLS definition of unemployed. Some of those actively looking for work are currently homemakers, students, or disabled individuals. In addition, some could be laid-off workers or those who have quit their jobs and are looking for other opportunities.

Table 6.1: Snapshot of the Underutilized Labor Supply

	Currently Working	Actively Looking	Entry within One Year	Entry without Barrier	Entry under certain Circumstances	Not Interested	Total
Underemployed	1,251	0	0	0	0	0	**1,251**
Out-of-work Labor	0	888	138	73	0	141	**1,240**
Homemaker	0	406	921	4,421	348	1,224	**7,311**
Student	0	151	1,774	0	0	0	**1,925**
Disabled	0	121	269	3,462	0	499	**4,352**
Other	0	0	0	28	28	0	**56**
Total	**1,251**	**1,566**	**3,102**	**7,975**	**376**	**1,865**	**16,134**

Source: Chmura

Chmura's survey indicated that 19.2% (3,102) of the underutilized workforce, while they are not actively looking, may enter the workforce within a year. The majority are students who will finish school and be available to work in one year. A sizable number of homemakers may become available in one year as well, in addition to some disabled and marginally attached workers. The survey indicates that there are no discouraged workers in the sample, even though there might be some in reality.[23]

Close to half (49.4%) of the underutilized workforce indicated that they may be interested in working if not for barriers such as disability, child-care costs, and home care needs. This segment is dominated by homemakers and disabled individuals. From the perspective of policy makers, the cost of overcoming those barriers can vary for different people. Employment barriers will be discussed in more detail later.

Finally, 2,241 underutilized workers, or 13.9%, are not interested in working. Among those, 376 of them said they would consider working under certain circumstances, such as a great job or a job with good pay. An estimated 1,865 individuals stated that they do not want to work under any circumstances.

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[23] The sample size of the underutilized workforce is relatively small. When comparing this group with other workforce groups, Chmura will focus only on significant differences.

Another category of the underutilized workforce is underemployed workers. To estimate the size of this population, Chmura uses the definition from BLS and includes those workers currently in part-time positions, but are available for full-time work. These workers are not in full-time positions due to difficulty finding full-time work, or for other economic reasons.[24] It is estimated that there were 1,251 underemployed workers at the time of the survey, and these workers are concentrated in the retail and personal service industries. This number is consistent with underemployed workers implied by the BLS report.[25]

6.2. Demographic Characteristics of the Underutilized Labor Supply

6.2.1. Age

Figure 6.1 presents the age distribution of the underutilized labor supply in the Great Falls MSA, as compared with the region's overall labor supply. For underemployed workers, the percentage over 55 years old is significantly larger than the overall labor supply, at 44.5%. Some underemployed workers reported that they could not find full-time work or they felt their skills were inadequate for full-time work. It is likely that those are older individuals who find it difficult to acquire new skills for full-time positions. On the other hand, a higher percentage of underemployed workers are in the age group 18-34, which suggests that those part-time workers are in an early stage of their career and may take part-time jobs while searching for full-time work.

Figure 6.1: Age Distribution of the Underutilized Labor Supply

N=500
Source: Chmura
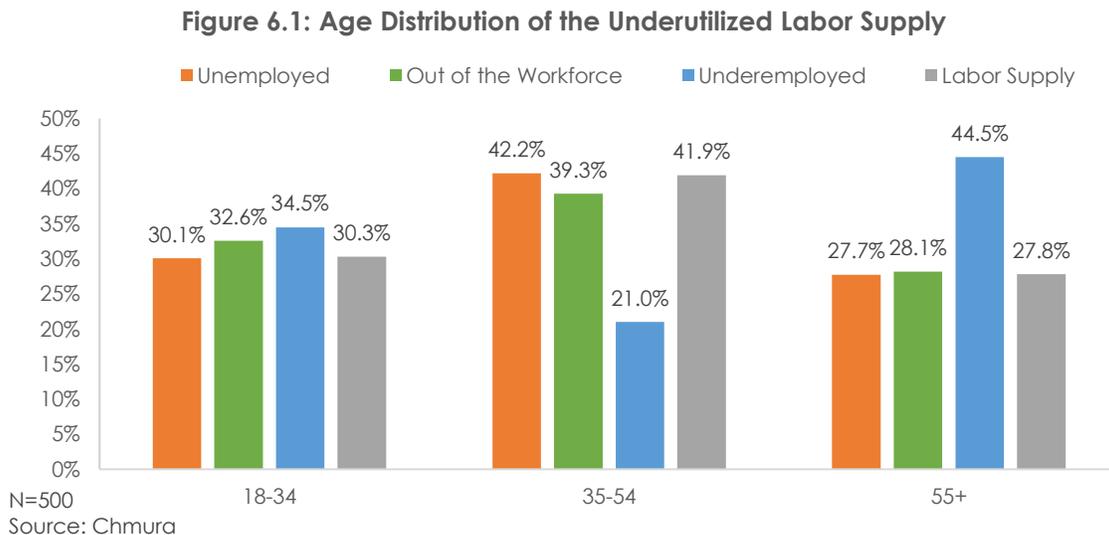
The out-of-the-workforce group, when compared to the overall labor supply, has a slightly higher percentage of younger individuals (age 18-34). The composition of this group is homemakers, students, and disabled individuals. A majority of students and over 40% of homemakers are in the age group of 18-34. Many homemakers stay home to take care of young children, so it is not surprising that they tend to

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[24] Source: Bureau of Labor Statistics, available at: https://www.bls.gov/lau/stalt.htm.
[25] Ibid.

be in the younger age group. On the other hand, disabled persons tend to be older, and very few of them are 18-34.

For currently unemployed workers, 30.1% are in the age group of 18-34, and 42.2% of them are in the age group of 35-54. This pattern seems to be consistent with people in Montana who filed for unemployment insurance. Data from BLS shows that in recent years (2015 to 2017), 33% of those in the state filing claims for unemployment insurance were under 35 years old and 42% were between 35 to 54 years old.[26]
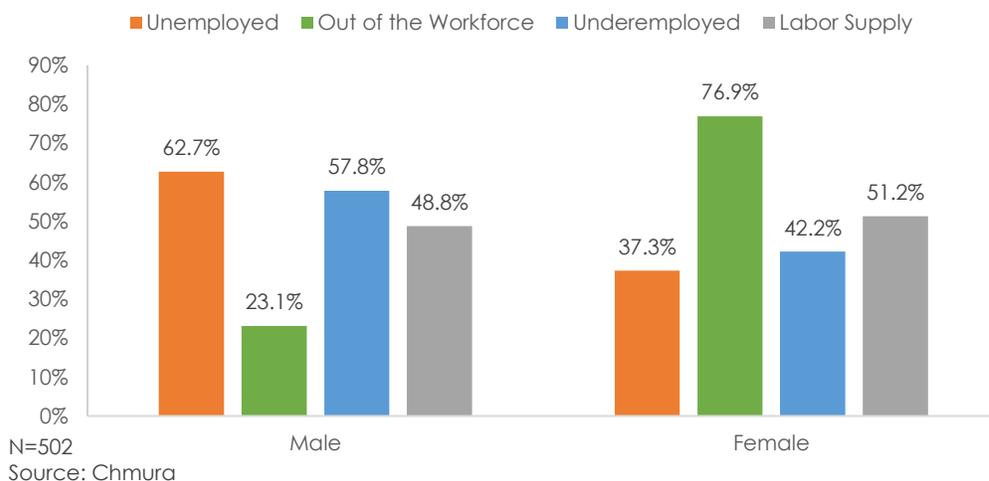
6.2.2. Gender

Figure 6.2 presents the gender distribution among different groups of the underutilized labor supply. For out-of-the-workforce individuals, 76.9% are female. Over half of the out-of-the-workforce individuals are homemakers, and Chmura's survey shows that homemakers are primarily female. In addition, a majority of students and disabled persons in the survey are women as well, which contributes to the high percentage of out-of-the-workforce individuals being female.

For unemployed workers, males outnumbered females at the time of survey. Of unemployed workers, 62.7% were men and only 37.3% were women. This pattern seems to

Figure 6.2: Gender Distribution of the Underutilized Labor Supply

Legend: ■ Unemployed ■ Out of the Workforce ■ Underemployed ■ Labor Supply

Male: Unemployed 62.7%, Out of the Workforce 23.1%, Underemployed 57.8%, Labor Supply 48.8%

Female: Unemployed 37.3%, Out of the Workforce 76.9%, Underemployed 42.2%, Labor Supply 51.2%

N=502
Source: Chmura

be consistent with the number of individuals in Montana who filed for unemployment insurance. Data from BLS show that in recent years (2015 to 2017), 68% of those in the state filing claims for unemployment insurance were men.[27] In addition, BLS data show that those filing for unemployment insurance in Montana are concentrated in construction and transportation occupations, which traditionally contain a high percentage of male workers.

Similarly, for underemployed workers, men outnumber women as well, with 57.4% of underemployed workers being male. One possible explanation is that due to typically having fewer family obligations, more men in part-time jobs want and are available to work full-time than female part-time workers.

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[26] Data for Montana's unemployment insurance claimants can be found at BLS, https://oui.doleta.gov/unemploy/DataDownloads.asp. Similar data on the Great Falls MSA are not available. In addition, not all currently unemployed workers are eligible for unemployment insurance.
[27] Ibid.

6.2.3. Educational Attainment

The survey found that all groups in the underutilized labor supply tend to have a lower percentage of college graduates than the regional labor supply at large (Figure 6.3). The survey indicates that only 17.4% of unemployed individuals have bachelor's degrees or higher, as well as only 22.0% of both out-of-the-workforce and underemployed workers. This is not surprising as labor economics theory indicates educational attainment is positively associated with labor market access. People with higher educational attainment tend to have both lower unemployment and higher labor force participation.

Figure 6.3: Educational Attainment of the Underutilized Labor Supply

N=494
Source: Chmura
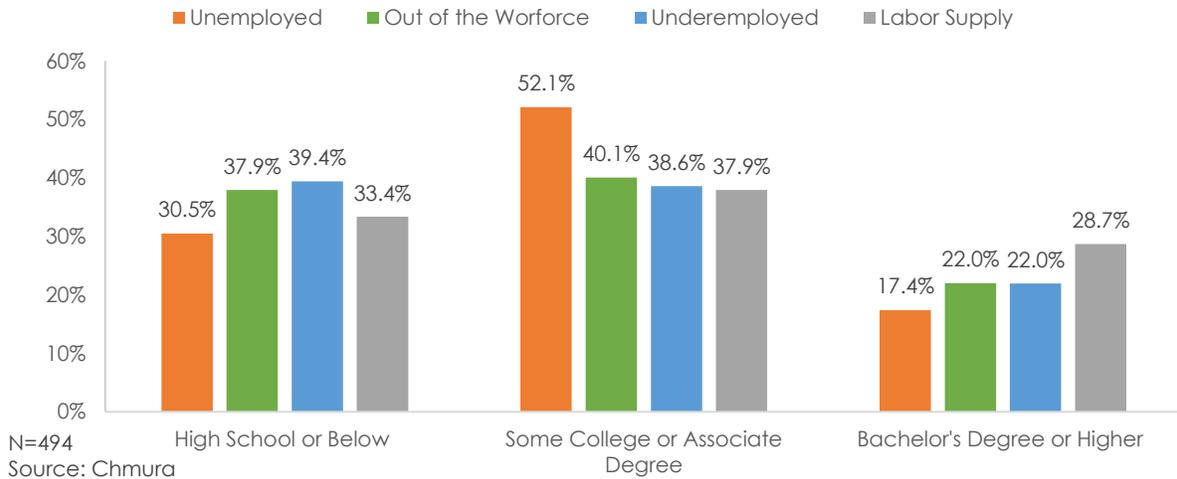
In addition, some of those out-of-the-workforce persons are full-time students, and most of them have not yet completed their college degrees. These factors contribute to the lower rates of bachelor's or higher degrees for out-of-the-workforce individuals.

6.3. Experience and Skills

6.3.1. Experience

Compared with the overall regional labor force, underemployed workers have an estimated 27.5 years of experience, higher than the regional average of 22.0 years (Figure 6.4). As explained in Section 6.2, the underemployed workforce has a high concentration of older workers (55+), and with older age often comes more work experience.

Figure 6.4: Average Years of Experience of the Underutlized Labor Supply

N=467
Source: Chmura

CHMURA
Economics & Analytics
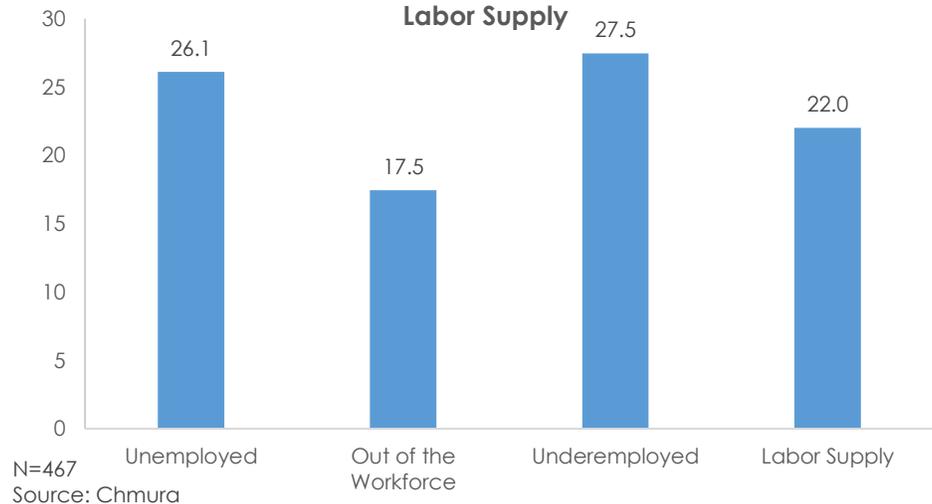
Currently unemployed individuals have an estimated 26.1 years of prior work experience, which is also higher than the overall labor supply's average work experience.

For out-of-the-workforce individuals, they have an average of 17.5 years of prior work experience. Two of the main groups of out-of-the-workforce individuals, homemakers and students, tend to be younger and have slightly fewer years of experience.

Chmura's survey indicates that all unemployed and out-of-the-workforce individuals have worked before, even though they were not working at the time of the survey in May 2017 (Figure 6.5).[28] But the timing of the latest employment data varies greatly. For unemployed workers, more than half (51.5%) of them worked within the last 6 months, and 25.5% worked between the last 6 months to one year. Only a small number of unemployed persons had their most recent job more than one year ago. This pattern is different from out-of-the-workforce individuals, where over 70% had their last job more than two years ago, and only 10.7% worked within the last 6 months. There is a danger of their skills being obsolete, so some refresher trainings may be necessary for them to gain employment.

Figure 6.5: Prior Work Experience of the Underutlized Labor Suply

N=67
Source: Chmura
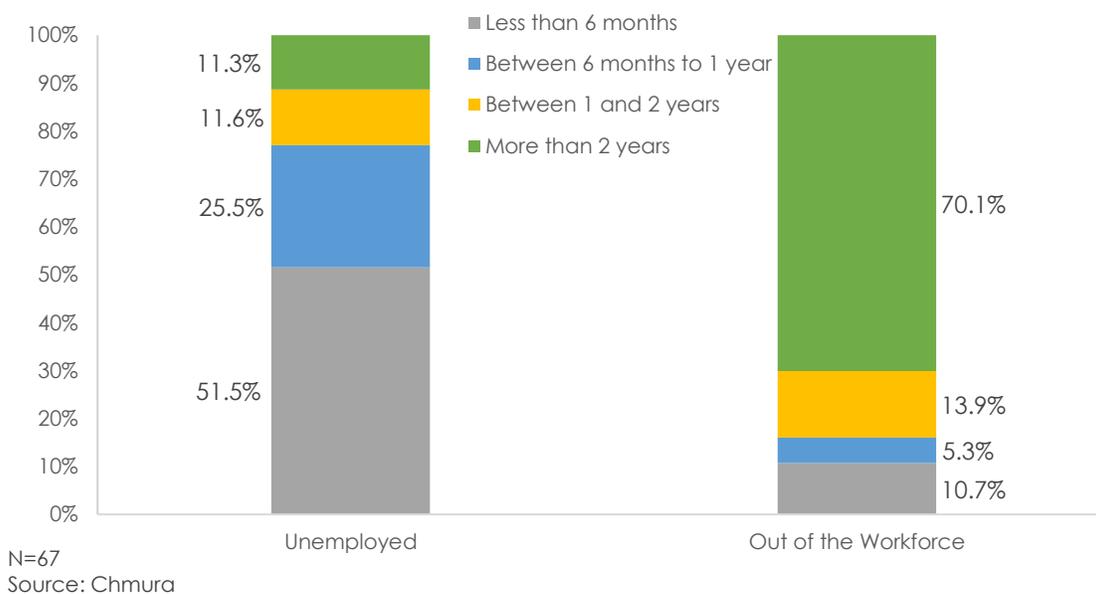
6.3.2. Skills

When compared to the overall labor supply, currently unemployed and underemployed individuals have similar levels of work-related skills (Table 6.2). For unemployed workers, a larger percentage has product/sales skills compared with the overall labor supply.

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[28] This question was not asked of underemployed workers.

Table 6.2: Work-related Skills of the Underutilized Labor Supply

Skill Category	Unemployed	Out of the Workforce	Underemployed	Labor Supply
General	100.0%	91.5%	90.2%	96.6%
Product/Sales	73.7%	41.9%	66.1%	52.9%
Interpersonal	91.2%	82.2%	80.8%	89.0%
Thinking/Organizational	89.8%	89.3%	82.2%	92.8%
Quality Improvement	82.4%	67.4%	85.9%	83.0%
Safety	79.9%	67.5%	84.9%	83.4%
Management	70.1%	54.1%	77.2%	70.1%

Source: Chmura

The out-of-the-workforce labor supply has lower skill levels than the regional labor supply across all skill areas. This is especially true in the areas of product/sales, safety, quality improvement, and management skills. Those skills are typically acquired with the accumulation of work experience and on-the-job training, an area in which out-of-the-workforce individuals are lacking. However, the out-of-the-workforce labor supply possess comparable skills in several categories such as general workforce skills (reading and writing), interpersonal, and thinking and organization skills. Despite this, they would need training to accumulate skills in products, management, quality, and safety to be more successful in the labor market.

For computer skills, regional unemployed workers have skill levels comparable to the currently employed workforce, indicating that they are ready to work without additional training (Table 6.3). It is not surprising that unemployed individuals have a higher level of skills than out-of-the-workforce individuals in all skill categories. In many cases, the difference is significant, especially in the areas of computer programming, computer hardware, and desktop publishing skills. Those skills should be the focus of workforce training if community leaders want to prepare people outside the labor market to enter the workforce. In addition, unemployed workers also have a higher level of computer skills than underemployed workers, especially in more advanced areas such as computer hardware maintenance, computer programming, and web programming.

Table 6.3: Computer Skills of the Underutilized Labor Supply

Skill Category	Unemployed	Out of the workforce	Underemployed	Labor Supply
Word Processing	69.0%	42.1%	62.4%	62.2%
Data Entry	74.6%	46.6%	52.4%	59.0%
Spreadsheet	55.1%	35.0%	66.5%	50.9%
Database	53.8%	33.7%	54.1%	48.6%
Desktop Publishing	53.1%	28.0%	45.2%	37.9%
Computer Hardware	46.1%	7.8%	15.4%	25.4%
Computer Programming	38.1%	5.2%	26.0%	18.3%
Web Programming (HTML)	32.5%	6.4%	22.9%	18.6%

Source: Chmura

The same pattern also holds for occupation skills. Unemployed and underemployed individuals both have higher skill levels than out-of-the-workforce individuals across the board (Table 6.4). This does not come as a surprise as people tend to obtain occupation skills through work experience, on-the-job training, and apprenticeships. The difference is especially pronounced in occupation skills associated with skilled-trade jobs, such as machine operation, carpentry, metal work, and electrical work. However, for those out of the workforce, a high percentage have skills in customer service and retail/sales, implying that they are ready for those types of jobs without additional training.

Table 6.4: Occupation Skills of the Underutilized Labor Supply

Skill Category	Unemployed	Out of the workforce	Underemployed	Labor Supply
Machine Operation	51.0%	17.6%	68.1%	43.2%
Welding	17.2%	10.0%	31.1%	24.0%
Carpentry	47.1%	24.9%	47.3%	36.8%
Mechanical	51.8%	22.4%	43.6%	40.4%
Metal Working	35.7%	5.8%	21.1%	22.6%
Electrical	34.4%	12.3%	31.4%	28.1%
Medical/Healthcare	52.2%	37.9%	38.7%	30.9%
Legal	19.6%	6.9%	19.6%	15.0%
Executive/Professional	43.1%	28.5%	47.5%	38.3%
Retail/Sales	67.5%	42.5%	63.3%	50.6%
Commercial Driving	26.6%	11.5%	31.2%	26.8%
Customer Service	95.2%	69.7%	92.7%	83.6%
Other	55.2%	39.3%	20.7%	32.1%

Source: Chmura

6.3.3. Certifications and Training

Overall, about 25.4% of the regional labor supply have some form of industry-recognized certification (Table 6.5). This percentage is generally lower for unemployed workers, as 22.4% of them have certifications. For the unemployed, popular certifications are skilled trade, personal service, business, and health. For underemployed persons, 21.3% have certifications, with health and skilled trade certifications being the most popular. For out-of-the-workforce individuals, healthcare is the most common. However, due to the small size of these groups in the sample, those results should be interpreted in broad terms.

Table 6.5: Workforce Certifications of the Underutilized Labor Supply

Certification Category	Unemployed	Out of the workforce	Underemployed	Labor Supply
Business	4.9%	2.8%	0.0%	3.8%
Computer	0.0%	0.0%	0.0%	1.3%
Education	0.0%	0.0%	0.0%	1.5%
Health	3.8%	10.1%	17.6%	8.1%
Occupation Safety	4.9%	5.5%	0.0%	2.7%
Other	0.0%	1.9%	0.0%	1.3%
Personal Service	4.3%	3.1%	0.0%	3.7%
Security	0.0%	0.3%	0.0%	0.8%
Skilled Trade	9.2%	0.0%	10.1%	4.9%
No Certification	77.8%	78.4%	72.3%	74.3%

Note: An individual with two types of certifications was counted in both categories.

Source: Chmura

Due to the relatively small size of different groups in the underutilized labor supply, there are few conclusions that can be made from the survey, except that apprenticeships are very rare among the underutilized labor supply in the Great Falls MSA (Table 6.6). It is not surprising as apprenticeships are usually associated with work experience, and those not in the workforce are less likely to participate in them. For the underemployed labor supply, since many are part-time workers, it is possible that businesses do not offer them apprenticeship opportunities. Apprenticeships represent a significant investment for businesses, and they may only be willing to devote resources to full-time workers. Another reason for low apprenticeship involvement for the underemployed is that apprenticeships are sought-after credentials, and when individuals participate in those programs, they become more likely to obtain full-time work.

**Table 6.6: Participation in Apprenticeship Programs
of the Underutilized Labor Supply**

Apprenticeship Category	Unemployed	Out of the workforce	Underemployed	Labor Supply
Business	0.0%	0.0%	0.0%	0.1%
Education	0.0%	0.0%	0.0%	0.1%
Health	4.0%	0.0%	0.0%	0.1%
Other	0.0%	0.0%	0.0%	0.7%
Personal Service	0.0%	0.0%	0.0%	0.2%
Security	0.0%	0.0%	0.0%	0.2%
Skilled-trade	0.0%	0.0%	0.0%	2.4%
No Apprenticeship	96.0%	100.0%	100.0%	96.1%

Source: Chmura

Overall, more than 30% of the underutilized workforce received additional training outside formal schooling (Table 6.7). A higher percentage of out-of-the-workforce individuals have additional training when compared to the unemployed and underemployed. This is primarily driven by healthcare training received by those currently out of the workforce. Chmura's survey shows that many homemakers and current students have first aid or CPR training, even if they are not in the market looking for work. For unemployed workers, popular training programs are other, health, and security. For underemployed workers, the top three are health, business, and occupation safety. However, due to the small size of those groups in the sample, the results should be interpreted in broad terms.

Table 6.7: Additional Training of the Underutilized Labor Supply

Training Category	Unemployed	Out of the workforce	Underemployed	Labor Supply
Business	0.0%	0.0%	7.3%	3.2%
Computer	0.0%	0.0%	0.0%	1.4%
Education	0.0%	0.0%	0.0%	0.9%
Health	7.7%	14.9%	12.1%	8.1%
Military	4.0%	2.5%	0.0%	3.9%
Occupation Safety	4.6%	0.0%	7.3%	0.9%
Other	11.3%	2.5%	3.8%	3.4%
Personal Service	3.3%	8.1%	0.0%	4.2%
Security	8.4%	1.9%	0.0%	2.1%
Skilled Trade	4.0%	15.2%	5.6%	7.6%
No Additional Training	65.1%	64.0%	71.1%	70.7%

Note: An individual with two types of training was counted in both categories.

Source: Chmura

6.4. Barriers to Full Participation in the Labor Market

6.4.1. Out-of-the-workforce Individuals

For individuals outside the workforce, Chmura's survey probed the barriers to their entry into the labor market. Due to the small sample size, a precise comparison is less meaningful, but some broad implications can still be drawn from the survey results.

Most students chose their full-time status as the reason they are not in the labor market (Figure 6.6). Strictly speaking, this is not a barrier as all students in the survey indicated that they will be in the market within a year. Local leaders do not need to come up with a policy remedy to encourage this group of individuals to enter the labor market.

Figure 6.6: Barriers for Out-of-the-Workforce Labor Supply

N=43
Source: Chmura
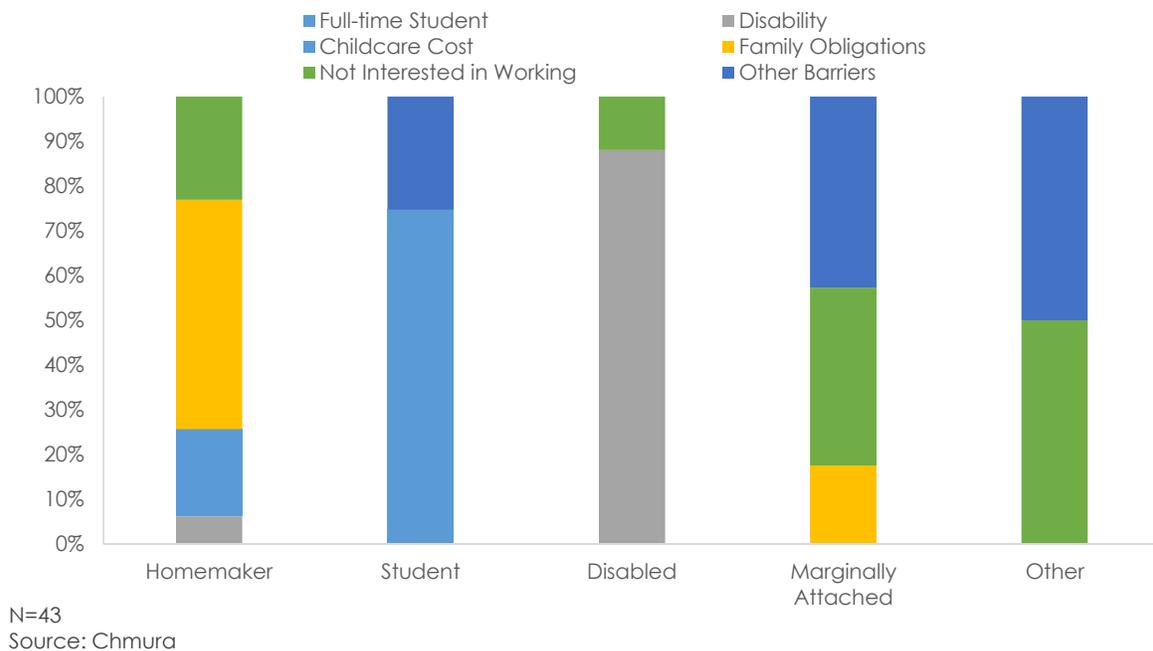
Not surprisingly, for homemakers, the chief reasons for not being in the labor market are childcare costs and other family obligations such as taking care of other family members. This is also the largest segment where potential workers can be recruited. Affordable child care or elder care can help attract some of this group into the labor market.

For disabled individuals, most cite disability as a barrier to work. Since this survey did not probe further details of disability, it is difficult to recommend a policy solution to reduce such a barrier. Some disabilities may be temporary, so sufficient medical care could restore their work capability. Others may require physical accommodations for their workplace, which may impose significant costs for businesses.

Finally, some marginally attached workers mentioned family obligations, and some were not currently interested in work. Some also mentioned other reasons, such as the pay is not high enough. Compared with other groups, this segment is relatively small.

6.4.2. Part-time Workers Desiring Full-time Work

For individuals currently working a part-time job but desiring full-time employment, the survey followed up with additional questions on the reasons why they were not working full time (Figure 6.7). The most common reason was that they cannot find full-time work, with 29.4% of them choosing that as a reason. There were 18.0% who reported they could not take full-time positions due to family obligations, and 16.2% due to schooling, as they were not available to work full time. Other reasons include needing more skills, and seasonal workers who cannot work full time as they need to commit to working full-time during a particular season.

Figure 6.7: Reasons for Part-time Workers not Working Full-time

Other 19%
Cannot find full-time job 29%
Seasonal work 16%
Need more skills 2%
Family obligations 18%
School 16%

N=21
Source: Chmura
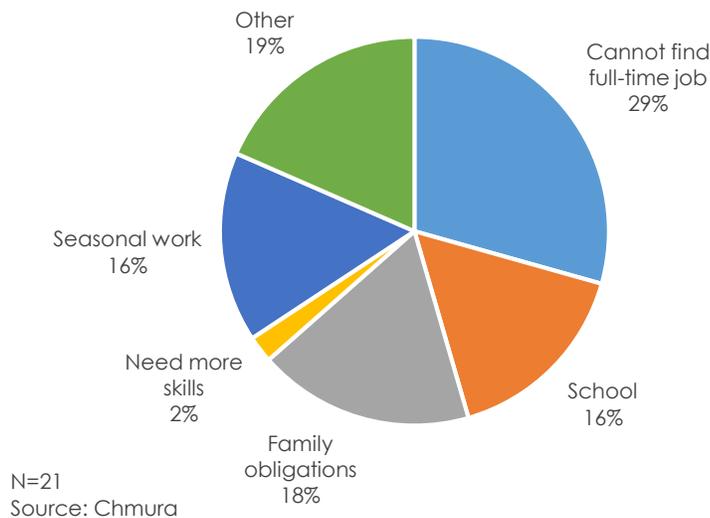
Part-time workers who desire full-time work, especially those available for full-time work, may join the labor market should demand rise. As stated before, underemployed workers tend to be older, and they may lack certain workforce or advanced computer skills. Some underemployed individuals just entering the workforce may also be lacking certain skills as well. Additional training in those areas may help them successfully obtain full-time positions.

7. Currently Employed Workforce

7.1. Work Status and Schedule

7.1.1. Work Status

While full-time employment composes most of the workforce in the Great Falls MSA, part-time jobs are still key for a significant portion of the working population. According to Chmura's survey, of all employed workers, over three-quarters have a full-time job and 22.1% work part-time (Table 7.1). Part-time workers often work multiple jobs with the average part-time employee working 1.4 part-time jobs. In addition, 14.4% of employed workers are self-employed, with the average number of jobs being 1.1.

Table 7.1: Full-time and Part-time Work Status

	Percent of Employed	Average Number of Jobs
Full-time	75.9%	1.04
Part-time	22.1%	1.36
Self-employed	14.4%	1.14

Note: The sum of the percentage of the employed is greater than one, as some full-time workers also have part-time jobs or have their own businesses.

Source: Chmura

One of the key objectives of this study is to identify the underutilized workforce in the Great Falls region, and one segment of underutilized workers is the underemployed. Based on the definition by the Bureau of Labor Statistics, underemployed workers are currently working in part-time positions, but are available for full-time work. These workers may not be working full-time due to difficulty finding full-time work or for other economic reasons.[29]

Chmura asked respondents without full-time work (but still working part-time and/or self-employed) whether they are interested in full-time work. As Figure 7.1 shows, about 24.9% of them are interested in full-time jobs. However, they have barriers to obtaining full-time employment. These barriers are similar to the barriers for out-of-the-workforce respondents, with common reasons being school or taking care of family. Of the respondents wanting to work full-time, 25.5% reported that they could not find full-time work. Excluding respondents who cannot work full-time due to non-economic reasons (school and family obligations), the remaining respondents can be classified as underemployed.

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[29] The characteristics of underemployed workers were analyzed in Section 6.

Figure 7.1: Interest in Full-time Work for Part-time and Self-employed Workers

No Response
2%

Yes
25%

No
73%

N=105
Source: Chmura
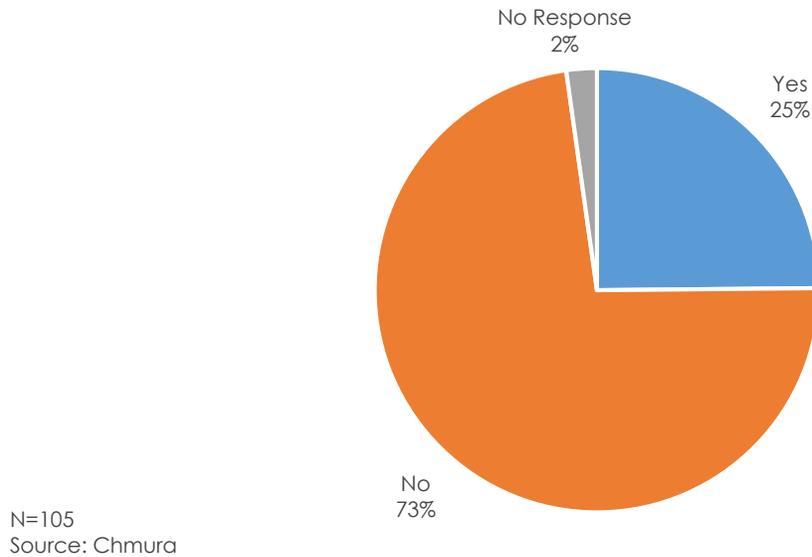
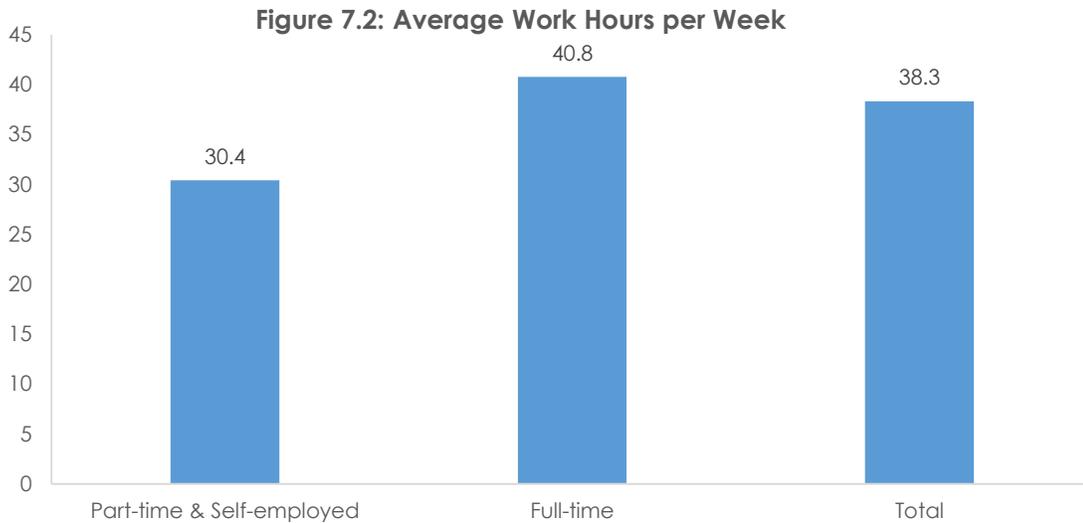### 7.1.2. Work Hours and Schedule

The survey indicates that on average, workers log 38.3 hours per week. Full-time workers reported working 40.8 hours per week while part-time workers average 30.4 hours per week (Figure 7.2).[30]

The latest BLS news release suggests that per worker, average hours worked in the United States is 34.4 per week in May 2017.[31] At first glance, it seems that Chmura's survey value is slightly higher than national work hours. However, the difference can be partially explained by the fact that BLS data is based on a survey of business establishments whose working hours are based on positions rather than individuals. For people who work two or more jobs, BLS would consider each job separately, while Chmura's survey asked individuals to report the combined weekly hours of all jobs. As a result, it is not surprising that average work hours per individual is higher than work hours per position. In fact, a 2015 report published by the Montana Department of Labor and Industry showed that the average work week in Montana is 32.8 hours on a per-job basis, but when multiple jobs and self-employment are considered, the average in the state is 38.1 work hours per week.[32] This is consistent with Chmura's estimate for the Great Falls MSA.

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[30] This is weighted data. The time reported in the survey is a few hours longer, since individuals tend to overestimate their hours during surveys. Chmura corrected possible overestimation in computing this statistic. Source: The overestimated workweek revisited, by John Robinson, Steven Martin, Ignace Glorieux, and Joeri Minnen. Monthly Labor Review, June 2011, available at: https://www.bls.gov/opub/mlr/2011/06/art3full.pdf.

[31] Source: Average Weekly Hours and Overtime of all Employees on Private Nonfarm Payrolls. https://www.bls.gov/news.release/empsit.t18.htm.

[32] Source: Examining Montana's Wages, by Barbara Wagner, Montana Economy at a Glance, December 2015. http://lmi.mt.gov/portals/135/publications/lmi-pubs/articles/2015/1215-examiningmtswages.pdf.

CHMURA
Economics & Analytics
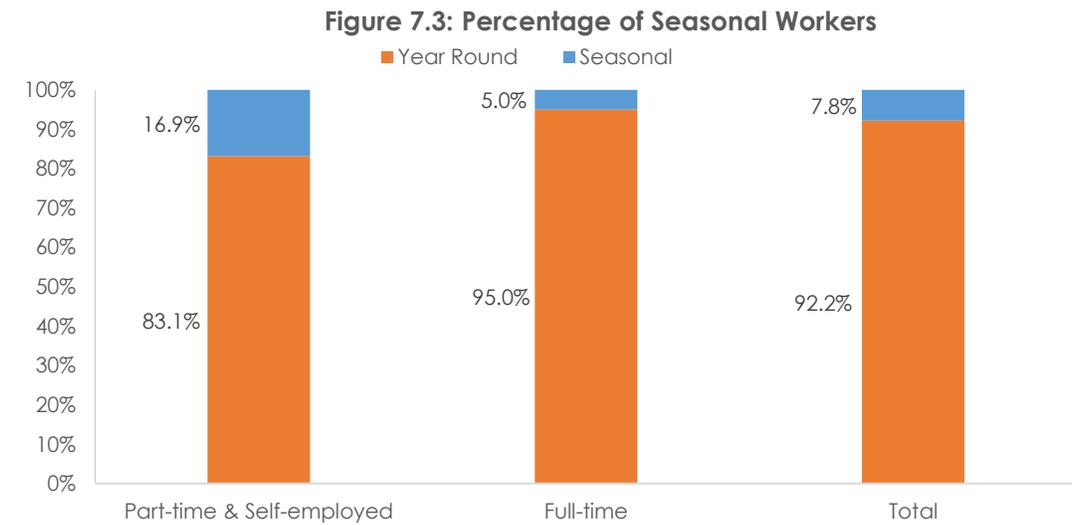
Figure 7.2: Average Work Hours per Week

N=414
Source: Chmura

Chmura's survey discovered that 7.8% of the currently employed are seasonal workers (Figure 7.3). Part-time and self-employed workers have a higher rate of seasonal employment, as 16.9% of jobs are seasonal according to Chmura's survey. On the other hand, only 5.0% of full-time workers are seasonal employees. Drilling down for more information, seasonal workers are concentrated in the following four industries: education, accommodation and food service, retail, and construction. Teachers work for three seasons a year, and may account for the majority of full-time seasonal workers. Other sectors, such as retail and construction, are often associated with part-time and seasonal work.

On average, seasonal workers in the Great Falls MSA work 2.3 seasons per year. Overall, spring has the highest percentage of seasonal workers with 61.3% working during spring. This is followed by fall, when 60.2% are employed (Figure 7.4). Winter and summer have the lowest unemployment across all seasonal workers. However, the differences are not lopsided, since different industries have their own peak and slow

Figure 7.3: Percentage of Seasonal Workers

N=434
Source: Chmura

seasons. For example, winter is the slow season for construction workers, while summer is the slow season for teachers.

Figure 7.4: Percentage of Seasonal Workers Employed in Each Season

N= 35
Source: Chmura
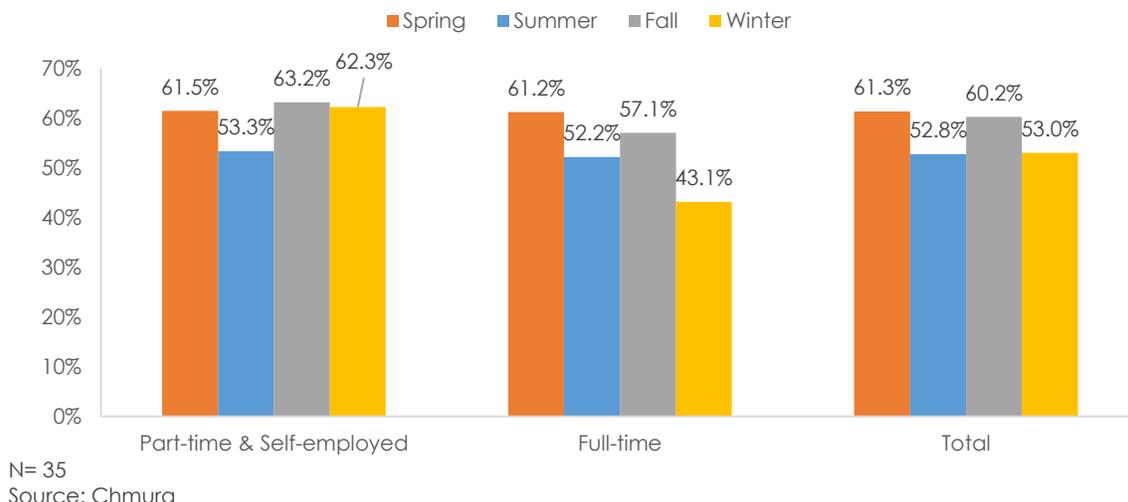
7.2. Industry and Occupation

At the major sector level of the Northern American Industry Classification System (NAICS), the industries represented by the labor force in the Great Falls region are similar to the regional industry mix from Chmura's JobsEQ technology platform, which is a national database emphasizing labor market data. Chmura's survey shows that in the first half of 2017, government and military was the largest sector in the area, accounting for 15.5% of regional employments (Table 7.2). The region is home to Malmstrom Air Force Base, a large employer in the area. Healthcare and social assistance is also a significant industry, hosting 14.3% of employed workers in the region. Other large sectors are retail, accommodation and food service, and construction.

Table 7.2: Industrial Mix of the Labor Force in Great Falls MSA

Industry	Part-time & Self-employed	Full-time	Total
Agriculture, Forestry, Fishing and Hunting	7.9%	1.5%	3.0%
Mining, Quarrying, and Oil and Gas Extraction	0.0%	0.7%	0.5%
Utilities	0.0%	0.3%	0.3%
Construction	5.0%	10.5%	9.1%
Manufacturing	2.1%	2.7%	2.5%
Wholesale Trade	2.2%	0.5%	0.9%
Retail Trade	19.3%	8.9%	11.4%
Transportation and Warehousing	3.7%	5.3%	4.9%
Information	1.6%	1.2%	1.3%
Finance and Insurance	3.4%	3.4%	3.4%
Real Estate and Rental and Leasing	2.6%	1.2%	1.5%
Professional, Scientific, and Technical Services	4.8%	5.2%	5.1%
Management of Companies and Enterprises	0.0%	0.4%	0.3%
Administrative and Support and Waste Management and Remediation Services	8.3%	2.4%	3.8%
Educational Services	7.4%	6.4%	6.6%
Health Care and Social Assistance	9.1%	15.9%	14.3%
Arts, Entertainment, and Recreation	3.2%	1.3%	1.7%
Accommodation and Food Services	11.0%	9.0%	9.4%
Other Services (except Public Administration)	6.3%	3.5%	4.2%
Public Administration & Military	2.1%	19.7%	15.5%

Source: Chmura

Not surprisingly, part-time and self-employed workers are concentrated in sectors with many small and consumer-service industries. For example, Chmura's survey showed that 19.3% of regional part-time and self-employed workers are in retail and 11.0% are in accommodation and food services. Part-time workers are also found in large numbers in healthcare and social services, administrative and support and waste management and remediation services, and agriculture, forestry, fishing, and hunting industries. On the other hand, very few part-time workers are found in management of companies and enterprises, public government and military, or utilities.

The occupation mix of the region resembles the industrial structure (Table 7.3). The top occupation groups are office and administrative services, sales and related, military, management, and healthcare practitioners. These jobs are prevalent in the government and military, education and health, and retail industries. Part-time workers are concentrated in occupations such as sales and related, office and administrative support, and management. The relatively large number of part-time and self-employed workers in management occupations is due to the fact that many self-employed workers in the agricultural industry consider themselves farmers and ranchers, which are classified by the BLS as management occupations.

Table 7.3: Occupation of the Labor Force in Great Falls MSA

Occupation	Part-time & Self Employed	Full-time	Total
Management	12.6%	7.2%	8.5%
Business and Financial Operations	2.2%	4.8%	4.1%
Computer and Mathematical	0.0%	1.8%	1.4%
Architecture and Engineering	1.4%	1.3%	1.3%
Life, Physical, and Social Science	0.0%	0.3%	0.2%
Community and Social Service	3.1%	2.3%	2.5%
Legal	1.1%	1.3%	1.2%
Education, Training, and Library	1.6%	4.7%	3.9%
Arts, Design, Entertainment, Sports, and Media	4.3%	0.7%	1.6%
Healthcare Practitioners and Technical	4.4%	8.1%	7.2%
Healthcare Support	2.0%	2.7%	2.6%
Protective Service	0.7%	3.4%	2.8%
Food Preparation and Serving Related	9.5%	5.1%	6.2%
Building and Grounds Cleaning and Maintenance	6.5%	2.7%	3.6%
Personal Care and Service	4.1%	3.5%	3.6%
Sales and Related	18.3%	7.2%	9.8%
Office and Administrative Support	12.6%	9.8%	10.5%
Farming, Fishing, and Forestry	0.7%	0.7%	0.7%
Construction and Extraction	5.4%	8.3%	7.6%
Installation, Maintenance, and Repair	0.8%	5.1%	4.1%
Production	4.0%	2.9%	3.2%
Transportation and Material Moving	4.8%	4.6%	4.6%
Military	0.0%	11.5%	8.8%

Source: Chmura

7.3. Compensation

7.3.1. Wages

The survey indicates that the average annual wage of employed workers in the MSA is $43,500 per year (Figure 7.5). Full-time workers average $46,157 per year while part-time workers average $34,586 per year.

According to JobsEQ[33] data, through the first quarter of 2017, the average industry wage for all workers was $39,307 per year. The wages reported in Chmura's survey are higher because respondents were asked to report their annual income from all jobs, which include wages from multiple positions for part-time workers. JobsEQ industry wages are estimated based on the Quarterly Census of Employment and Wages (QCEW), among other factors. Also, wages are calculated for each job, without considering that people may hold additional jobs in other firms.

Figure 7.5: Average Annual Wages

N=368
Source: Chmura

Based on the survey, the reported wages by occupations are listed in Table 7.4. Occupations with the highest wages are legal, computer and mathematical, healthcare practitioners and technical, business and financial, and management. The lowest-earning occupations are concentrated in food preparation and serving related and personal care and service occupations.

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[33] Source: Industry Snapshot, 2017Q1, JobsEQ.com.

Table 7.4: Average Wages of Employed Workers by Occupation

| Occupations	Wages ($)
Management	$59,082
Business and Financial Operations	$61,854
Computer and Mathematical	$69,689
Architecture and Engineering	$56,318
Community and Social Service	$35,285
Legal	$91,895
Education, Training, and Library	$42,284
Arts, Design, Entertainment, Sports, and Media	$31,734
Healthcare Practitioners and Technical	$69,022
Healthcare Support	$25,825
Protective Service	$52,144
Food Preparation and Serving Related	$19,015
Building and Grounds Cleaning and Maintenance	$33,864
Personal Care and Service	$21,518
Sales and Related	$34,830
Office and Administrative Support	$32,505
Farming, Fishing, and Forestry	$27,643
Construction and Extraction	$41,175
Installation, Maintenance, and Repair	$56,976
Production	$41,720
Transportation and Material Moving	$36,197
Overall	$43,500

Source: Chmura

7.3.2. Benefits

Overall, 68.5% of employed workers in the Great Falls MSA have some fringe benefits from their work, including healthcare, retirement, and life insurance. However, for part-time workers, only 36.0% have at least one benefit, compared with 78.8% of full-time workers who have at least one benefit. Workers with benefits enjoy an average of 2.9 types of benefits. On average, full-time workers with benefits have 3.0 benefits, and part-time workers have 2.2 benefits.

As Figure 7.6 shows, the most common fringe benefit is health insurance,[34] with 61.3% of regional workers receiving health insurance from their work. This is followed by retirement, which includes both defined-benefit plans such as pensions and defined-contribution plans such as 401Ks. Over half (52.0%) of employed workers enjoy such benefits. Over 30% of workers have life insurance or disability insurance.

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[34] It is assumed that dental and vision plans are part of the health benefits.

Less common benefits are child care and other benefits, which include time off, company discounts, flexible schedules, gym memberships, and company vehicles.

Figure 7.6: Benefit of Employed Workers in Great Falls MSA

N=435
Source: Chmura
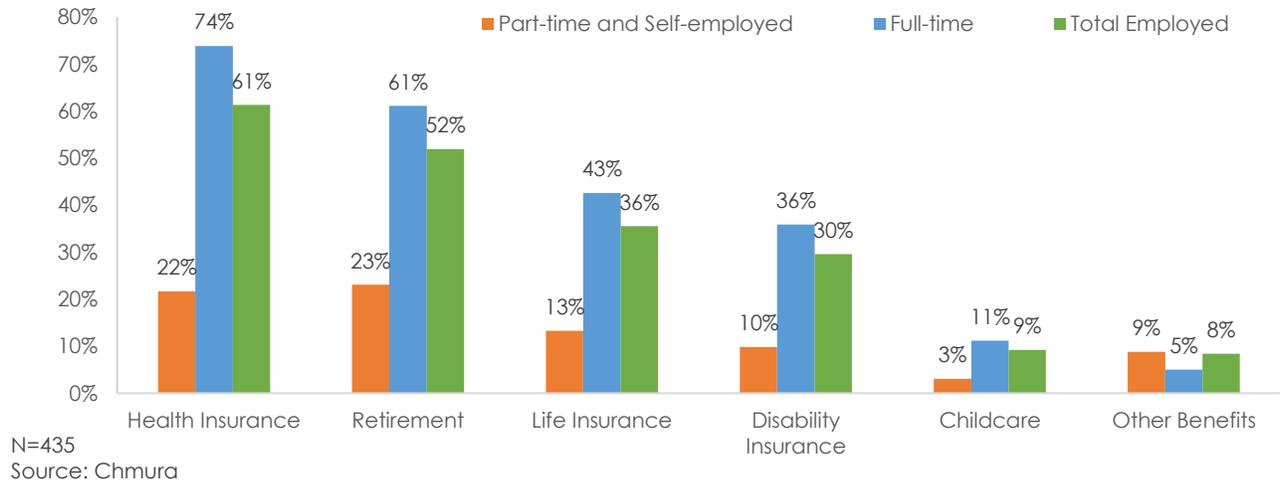
Across the board, a much lower percentage of part-time and self-employed workers enjoy work-related benefits; while 73.9% of full-time workers have health benefits, only 21.7% of part-time and self-employed workers receive such benefits from their employers. Similarly, 61.1% of full-time workers receive retirement benefits, compared with only 23.1% for part-time and self-employed workers.

7.4. Experience and Qualifications

7.4.1. Current Career & Experience

Employed workers in the Great Falls MSA are experienced and tend to stay in their current jobs. On average, Chmura's survey shows that they have been in their current positions for 13.5 years (Figure 7.7). Part-time and self-employed workers have remained in their current occupation for a little over 13.9 years. As a comparison, data from the Bureau of Labor Statistics indicate that average American workers stay in the same job for only 4.2 years.[35]

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[35] Source: Employee Tenure in 2016, Bureau of Labor Statistics, September 2016, available at: https://www.bls.gov/news.release/pdf/tenure.pdf.

Figure 7.7: Average Years of Experience in Current Occupation
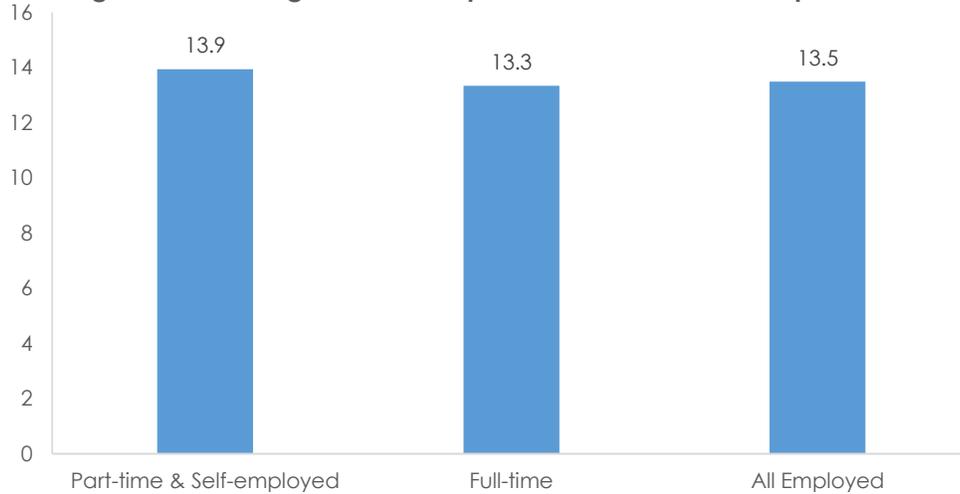
N=429
Source: Chmura

Since average workers keep their current jobs for more than ten years, it is not surprising that many of these workers have advanced their careers to either experienced or management levels. As Figure 7.8 shows, 37.1% of employed workers in the region consider themselves to be non-managerial experienced workers. Ten percent are entry-level workers and 10.7% are mid-career workers. Over 40% of currently employed workers report that they are in management roles, with 21.2% in middle management and 21.0% in senior management. The percentage of respondents who report to be in senior management appears to be high. One possible explanation is that a large percentage of self-employed workers consider themselves to be senior managers, pushing the overall percentage higher.

Figure 7.8: Career Stage of Employed Workers
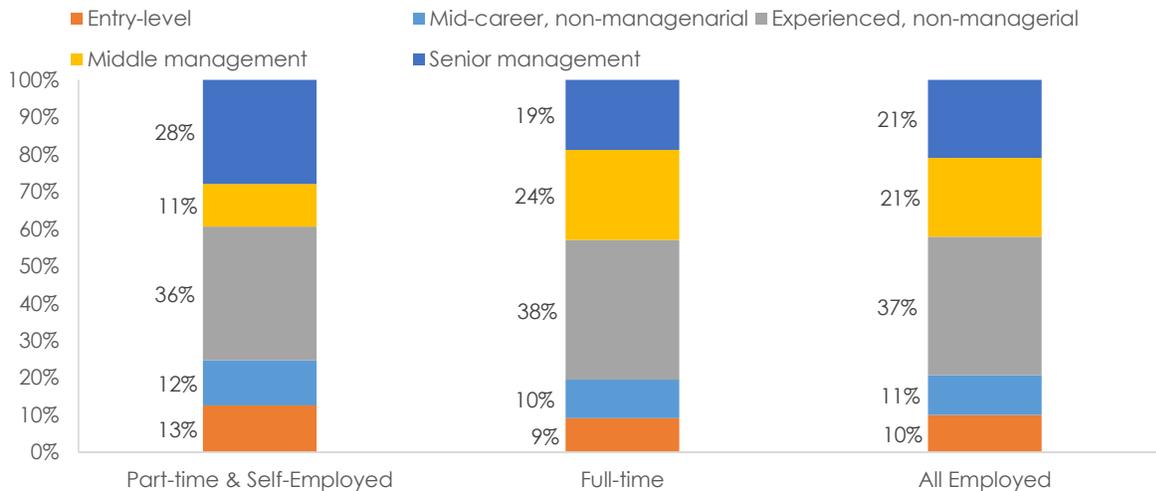
N=421
Source: Chmura

7.4.2. Skills, Certification, and Training

In terms of skills and training, Section 5 has provided sufficient information on work-related skills, computer skills, and occupation skills for employed workers in the area. Chmura's analysis did not find significant differences between full-time and part-time and self-employed workers for those skill types.[36]

In terms of certifications, a higher percentage of full-time employees have certifications than do part-time and self-employed workers (Table 7.5). For part-time and self-employed workers, 21.4% received some type of certification—lower than 29.0% of full-time workers. But a higher percentage of part-time and self-employed workers have certifications in the health field.

Table 7.5: Workforce Certifications of Currently Employed Workers

Certification Category	Part-time and Self-employed	Full-time	Labor Supply
Business	3.0%	4.3%	3.6%
Computer	1.1%	2.0%	1.3%
Education	1.9%	2.2%	1.5%
Health	8.9%	6.9%	8.0%
Occupation Safety	0.0%	2.1%	2.8%
Other	0.7%	1.1%	1.2%
Personal Service	1.9%	4.4%	3.7%
Security	0.0%	1.3%	0.8%
Skilled Trade	4.6%	7.4%	5.0%
No Certification	78.6%	71.0%	74.6%

Note: An individual with two types of certifications was counted in both categories.

Source: Chmura

Similarly, a higher percentage of full-time employees than part-time and self-employed workers received additional training (Table 7.6). For part-time and self-employed workers, 20.2% received some type of certification—lower than 28.5% of full-time workers. Businesses tend to invest more resources in and subsequently more training for full-time employees.

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[36] Those tables are not presented here.

Table 7.6: Additional Training of Currently Employed Workers

| Training Category	Part-time and Self-employed	Full-time	Labor Supply
Business	6.2%	4.0%	3.2%
Computer	1.8%	2.1%	1.4%
Education	0.8%	1.5%	0.9%
Health	5.7%	5.5%	5.6%
Military	1.5%	5.3%	4.4%
Occupation Safety	1.3%	1.0%	1.1%
Other	2.2%	3.7%	3.3%
Personal Service	2.0%	3.1%	2.8%
Security	0.0%	2.5%	1.9%
Skilled Trade	4.0%	5.1%	4.9%
No Additional Training	79.8%	71.5%	70.7%

Note: An individual with two types of trainings was counted in both categories.

Source: Chmura

7.4.3. Overqualification

The survey found that over 22.8% of currently employed workers consider themselves to be overqualified (Figure 7.9). A higher percentage of part-time and self-employed workers than full-time workers (26.5%) self-identify as overqualified. As discussed before, about a quarter of part-time and self-employed workers desire full-time positions, and some may think they are overqualified for current part-time jobs.

Figure 7.9: Employees Self-identifying as Overqualified
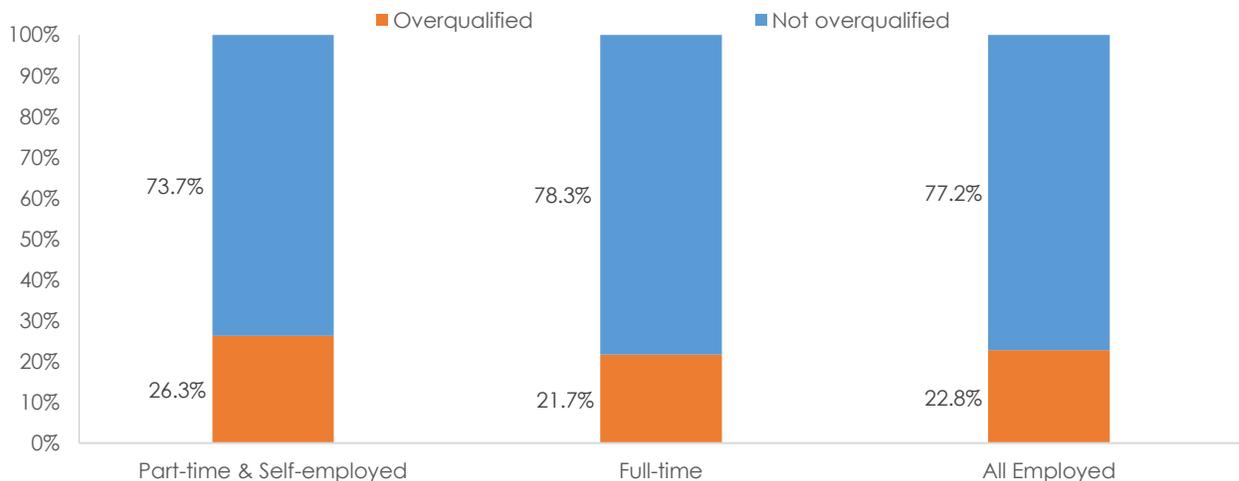
N=427
Source: Chmura

Further analysis by Chmura indicates that there does not appear to be a positive correlation between educational attainment and workers who self-identified as overqualified. While one may hypothesize that with higher educational attainment, it is more likely one may feel overqualified; however, that is not supported by the survey data. Similarly, there does not appear to be any correlation between experience level and the feeling of being overqualified.
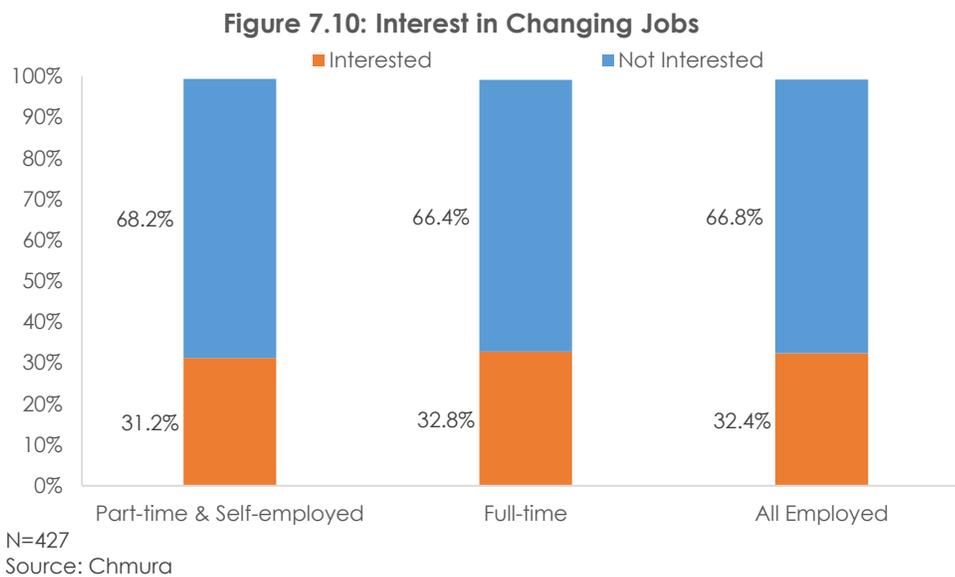
Theoretically, overqualification can potentially serve as another indicator of an underutilized workforce for a region. Overqualified workers represent a potential skilled labor pool that can be tapped into by businesses. Unlike measures such as unemployment or underemployment, it is difficult to get an objective measure of overqualification. Estimating the number of overqualified workers based on the response from surveys tends to be subjective. For that reason, Chmura did not include overqualified workers as part of the underutilized workforce in this study.

7.5. Career Pathways

7.5.1. Changing Jobs

For currently employed workers, the survey also inquired about career pathways. The questions included whether they are interested in changing jobs, how serious they are about changing jobs, and what the main reasons are if they want to change jobs.

About two-thirds (66.8%) of regional employed workers are content with their current jobs (Figure 7.10). On average, 32.4% of currently employed workers are interested in changing jobs. This percentage is similar for both full-time workers and part-time and self-employed workers.

Figure 7.10: Interest in Changing Jobs

Interested ■ Not Interested

	Part-time & Self-employed	Full-time	All Employed
Not Interested	68.2%	66.4%	66.8%
Interested	31.2%	32.8%	32.4%

N=427
Source: Chmura

Merely expressing an interest in changing jobs does not mean those workers are serious about it. To detect that trend, Chmura asked respondents whether they have undertaken any job search-related activities in the last three months. The activities ranged from those associated with mild interest—such as updating a resume, discussing with someone about a job change, or attending a job fair—to more serious interest, such as sending out resumes and applying for jobs.

For those who expressed interested in changing jobs, 68.8% engaged in at least one job search-related activity in the past three months (Table 7.7). The most common was discussing a job change with someone, with 52.7% engaging in this activity. In addition, 35.9% updated their resume.

Table 7.7: Job Search Activities of Interested Workers

	Part-time & Self-employed	Full-time	All Employed
Update Resume	30.5%	37.5%	35.9%
Discussion with Someone	55.5%	51.9%	52.7%
Attend Job Fair	4.1%	5.4%	5.1%
Contact with Recruiter	17.1%	11.2%	12.6%
Send out Resume	24.7%	25.8%	25.5%
Asked for Referral	25.3%	14.3%	16.8%
Applied for Other Jobs	33.5%	32.8%	33.0%
Any Action	72.4%	67.8%	68.8%
Actively Looking	**46.2%**	**40.0%**	**41.4%**

Source: Chmura

Among those interested in job change, 41.4% have done a more active job search in the past three months, defined as sending out resumes, asking for referrals, and applying for other jobs. A higher percentage of part-time and self-employed workers (46.2%) are actively looking for other jobs.[37]

Workers that are looking to change jobs can be a potential labor pool for new businesses. But unlike the underutilized workforce, it should not serve as the main recruiting pool for new or expanding businesses as this practice will disrupt current businesses in the area and may result in bidding wars in certain circumstances. For example, current employers of these workers will be compelled to search for replacements. This might not be an issue in areas with either a high level of an underutilized workforce or in-migration. However, if there is not a sufficient idle labor pool to draw from, businesses may be forced to raise wages or leave positions vacant. Both options are less than ideal, as they inflate business costs, can disrupt business operations, and reduce productivity.

For workers interested in changing jobs, Chmura's survey discovered that an increase in pay is the most popular reason, with 49.0% selecting this (Table 7.8). For part-time and self-employed workers, this percentage is even higher at 57.1%. Career advancement and better benefits are other popular reasons for workers to change jobs, but far fewer workers select these as primary reasons compared with an increase in pay. Some respondents select other reasons for changing jobs, including moving to other places and fearing they might lose their current job due to businesses closure.

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[37] Combining those interested in changing jobs and those who are looking, it is estimated that about 13% of the currently employed workers in the region are actively looking to change jobs. This percentage is lower than other national or international studies. For example, a recent survey by LinkedIn implies that 30% of the international workforce is actively searching for a new job. Source: https://business.linkedin.com/content/dam/business/talent-solutions/global/en_us/c/pdfs/global-talent-trends-report.pdf.

Table 7.8: Reasons for Changing Jobs

	Part-time & Self-employed	Full-time	All Employed
Increase in Pay	57.1%	46.6%	49.0%
Increase in Benefits	6.7%	7.6%	7.4%
Improvement in Working Conditions	2.2%	5.6%	4.8%
Career Advancement	9.7%	11.1%	10.8%
Underutilized	0.0%	1.2%	0.9%
More Prestige	0.0%	1.7%	1.3%
Flexible Hours	4.8%	7.2%	6.6%
Less Commute	6.5%	2.3%	3.3%
Other	13.0%	16.7%	15.9%

Source: Chmura

7.5.2. Future Pathways

When asked about what was next in their career, 40.2% of currently employed workers stated that their next step is retirement (Table 7.9). Since 27.8% of employed workers in the area are in the age range of 55+, this percentage is not too surprising. Labor economics theory implies that older workers have less incentive to change jobs or acquire additional skills. Many workers under 55 might start thinking of retirement as well. Of employed workers, 21.2% see the next step as a promotion with their current company, and 14.7% reported they do not expect any changes in their careers. Combined, more than 75% of currently employed workers are intent on staying with their current jobs or current companies, or are waiting for retirement.

Table 7.9: Next Career Steps for Employed Workers

	Part-time & Self-employed	Full-time	All Employed
Promotion within Current Company	9.7%	24.8%	21.2%
Change job to Different Company	7.9%	5.5%	6.1%
Change to Different Occupation	4.5%	4.5%	4.5%
Further Training in Same Occupation	3.2%	4.3%	4.0%
Further Training in Different Occupation	7.0%	2.1%	3.3%
Retirement	42.3%	39.5%	40.2%
No Change	20.1%	13.0%	14.7%
Other	5.3%	6.2%	6.0%

Source: Chmura

The survey also found that the percentage of workers looking to change companies, change occupations, or pursue additional training is between 3.0% and 6.0%. There appears to be a lack of mobility among currently employed workers as only a fraction of them are looking for change.

There are several possible explanations for the relatively staid workforce. As mentioned earlier, the Great Falls MSA experienced limited growth in population and employment. As a result, there might be limited opportunities for workers to change. Workers in the area, therefore, may be more interested in keeping their jobs than seeking more opportunities.

7.6. Demographics

This final section provides some observations on the demographic characteristics of the employed workforce, in terms of age, gender distribution, and educational attainment, focusing on the differences between different segments of employed labor supply.

For age distribution, the survey data show that there is a higher concentration of older workers (55+) in the part-time and self-employed group (Figure 7.11). Some may be older workers who choose to ease out of work before their pending retirement. They may cut their hours or seek more flexible work toward the end of their career. Some older workers are underemployed, but find it challenging to obtain full-time jobs, possibly due to lack of skills or training.

Figure 7.11: Age Distribution of the Employed Workforce


N=500
Source: Chmura
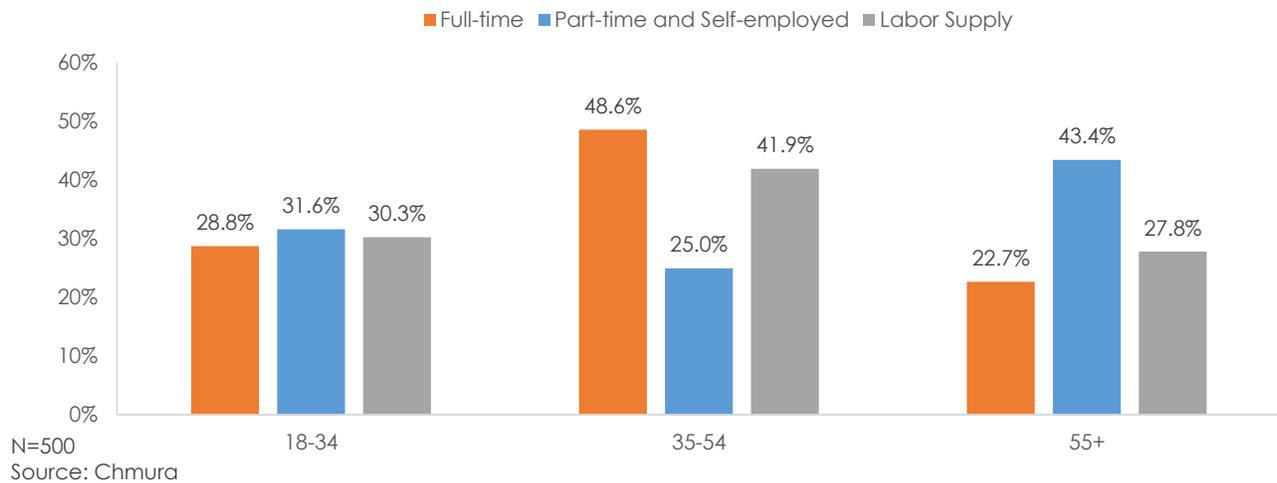
The survey also found that a higher percentage (47.3%) of part-time and self-employed workers are female, compared with 40.4% for full-time workers (Figure 7.12). A possible reason is that women are more likely than men to seek part-time positions, as those jobs offer more time for them to manage family obligations such as child care.

Figure 7.12: Gender Distribution of the Employed Workforce

■ Full-time ■ Part-time and Self-employed ■ Labor Supply

N=502
Source: Chmura
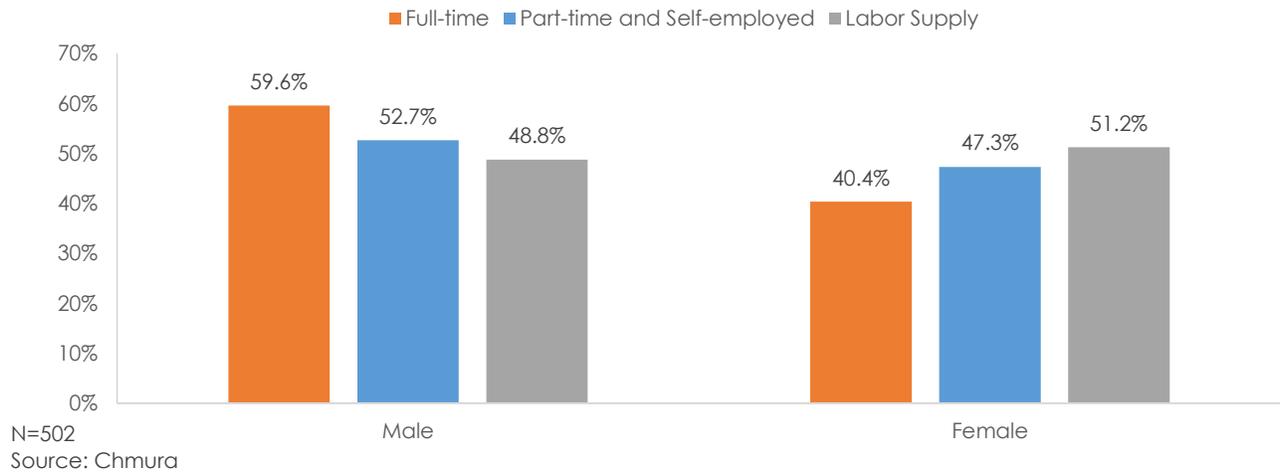
Part-time and self-employed workers have a lower level of educational attainment than full-time workers. One-quarter (25.1%) of them have a bachelor's degree or higher, compared with 33.9% for those with full-time positions (Figure 7.13). Similarly, a slightly lower percentage of part-time and self-employed workers have some college or an associate's degree, compared with full-time workers. Those patterns are consistent with labor economics theory that higher educational attainment is associated with better access to the labor market, including the full-time job market.

Figure 7.13: Educational Attainment of the Employed Workforce

■ Full-time ■ Part-time and Self-employed ■ Labor Supply

N=494
Source: Chmura

CHMURA
Economics & Analytics
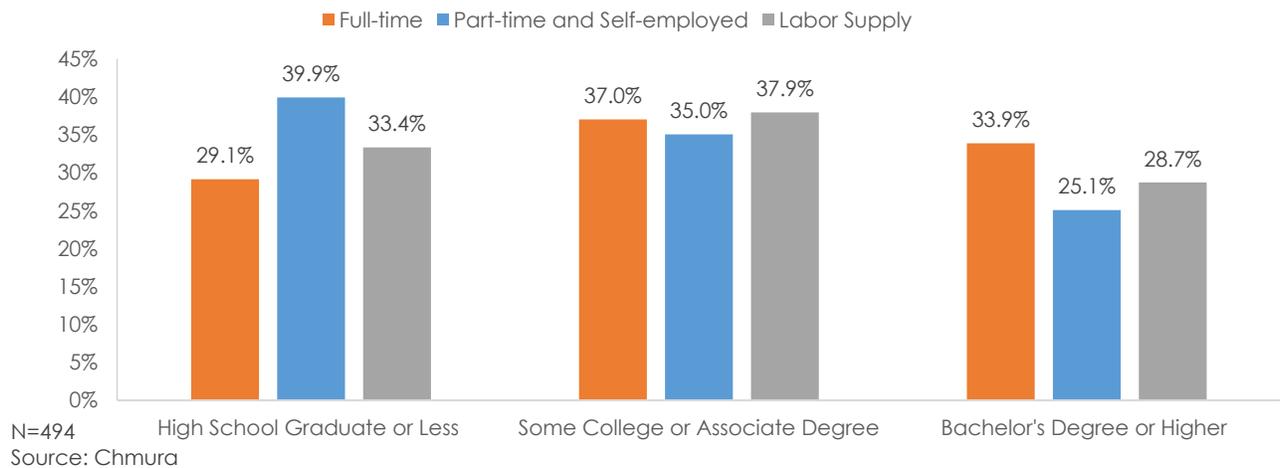
8. Conclusion

Overall, the region has a mature, experienced, and skilled workforce. A high percentage of workers have work-related skills, and many have certifications and additional training.

The survey data show that even though individuals in the underutilized workforce have lower educational attainment, compared with the employed workforce, they are well-experienced and have only a slightly lower level of skills. Among different segments of the underutilized workforce, the currently unemployed have comparable skills to employed individuals, and they are employment-ready.

Underemployed workers, however, are different. They tend to be either younger and just entering the workforce, or older with fewer skills. Older workers are challenging to train or upskill for full-time work. They have some basic skills, but the challenge is to acquire more advanced skills, where there exists a large gap between them and employed workers.

Even those out-of-the-workforce have over 15 years of experience. They have good general experience, but lack experience acquired via on-the-job training. Different strategies are needed for homemakers, disabled individuals, or the underemployed to help them overcome barriers to be fully utilized. Half of the potential labor force is composed of homemakers, and the majority of them are women. For these individuals, the major barrier to work is juggling family obligations.

For currently employed workers in the Great Falls MSA, part-time and self-employed workers tend to have more female workers, and they have a lower percentage of those with a bachelor's degree or higher. However, part-time workers have a similar level of workforce, computer, and occupation skills.

There appears to be a lack of mobility for currently employed workers in the Great Falls MSA. Many of them have stayed in their current positions for over 10 years. A large percentage of these individuals are content to stay in their positions or companies until they retire. This contentment might be because regional employment has expanded slowly in the past few years, and opportunities for new jobs are limited in the region.

Finally, the military is a valuable asset for the Great Falls MSA. They provide training not only related to military functions, but also for computer, business, and other skill areas.

Appendix 1: Survey Instrument

Implementation Notes

- Implementation notes in [brackets]

Survey Instrument

Introduction

Hello, my name is [interviewer name] calling on behalf of the Great Falls Development Authority, an organization that promotes growth, diversification, and the creation of high wage jobs in Cascade County. We are conducting a research study on the region's labor supply to help improve job opportunities. You are invited to complete a short, less than fifteen-minute survey concerning employment and opportunities. Your opinions are very important to us. This is not a sales call and your answers will be kept strictly confidential.

Questionnaire

Screener

1. Are you 18 years old or older?

    a. Yes

    b. No → [if no, please ask for an adult or terminate if unavailable. Re-read introduction if new person comes to the phone]

2. In which county do you live? [Terminate if county is not Cascade]:

    a. Cascade County

    b. Other [thank & terminate]

3. Are you retired?
    a. Yes [thank & terminate]
    b. No
    c. DK/REF [thank & terminate]

4. Are you currently either working for wages or a salary, or self-employed?
    a. Yes [skip to EMPLOYED section]
    b. No
    c. DK/REF [thank & terminate]

Not Currently Employed

5. When was the last time you worked, either for wages or a salary, or self-employed? [do not read responses]
    a. Never [skip next question]

b. Less than 6 months ago
c. 6 months to 1 year ago
d. Between 1 and 2 years ago
e. More than 2 years ago
f. DK/REF

6. Adding all your prior work experiences, how many years have you worked?
   a. __ years [number]
   b. DK/REF

7. Are you currently… [read responses]
   a. A homemaker,
   b. A student,
   c. Disabled and unable to work, or
   d. Unemployed
   e. None of these [do not read], please specify_____
   f. DK/REF

8. Are you currently looking for a paying job?
   a. Yes [skip to Skills & Experience section]
   b. No
   c. DK/REF

9. Do you plan to look for work within the next year?
   a. Yes
   b. No
   c. DK/REF

10. What currently prevents you from looking for work? [do not read response options; categorize as well as possible (select all that apply); probe if necessary]
   a. Full-time student [skip to Skills & Experience section]
   b. Disability [skip to Skills & Experience section]
   c. Childcare costs/concerns [skip to Skills & Experience section]
   d. Stay at home to care for family [skip to Skills & Experience section]
   e. Transportation needs [skip to Skills & Experience section]
   f. Need new or more job skills [skip to Skills & Experience section]
   g. Don't think there are any jobs for me [skip to Skills & Experience section]
   h. Not interested in working
   i. Other, please specify: _____
   j. DK/REF

11. Is there any set of circumstances in which you would be interested in work?
   a. Yes
   b. No [skip next question]
   c. DK/REF [skip next question]

12. What are these conditions?
   a. _____

Skip to Skills & Experience section

13. How many full-time, part-time, and/or self-employed jobs do you currently work? [prompt if necessary]
    a. Work ___ full-time job(s) [A full-time job is defined as working 35+ hours at one job. Fill in with number. If ans>0, skip next two questions]
    b. Work ___ part-time job(s) [fill in with number]
    c. Work ___ self-employed job(s) [fill in with number]
    d. DK/REF [skip next question]

14. Would you prefer to work a full-time job now?
    a. Yes
    b. No [skip next question]
    c. DK/REF

15. What is the reason you are working part-time, even though you prefer a full-time job? [do not read response options; categorize as well as possible (select all that apply); probe if necessary]
    a. Cannot find a full-time job
    b. Need to go to school
    c. Childcare costs/concerns
    d. Need to care for family
    e. Need new or more job skills
    f. My work is seasonal and I will work full-time in-season
    g. Other, please specify: _____
    h. DK/REF

16. How many hours do you work in an average week?
    a. _____ [enter number; 99999=DK/REF]

17. Is your current job year-round or seasonal?
    a. Year-round [skip next question]
    b. Seasonal
    c. DK/REF [skip next question]

18. What season(s) do you typically work? [allow multiple selections]
    a. Spring
    b. Summer
    c. Fall
    d. Winter
    e. DK/REF

19. What type of industry do you currently work in? [If necessary, clarify that this is the employer's industry, not necessarily the respondent's job.]
    a. _____ (health care, retail, hotel, restaurant, government, construction, education, finance, professional services, transportation, etc.)
    b. DK/REF

20. What is the approximate income you receive from all jobs? [allow respondents to answer with average hourly OR total annual wage]
    a. $__.__ per hour   [OR]

b. $__,___ per year
c. DK/REF

21. What fringe benefits does your work provide you?
    a. Health insurance
    b. Retirement plan
    c. Life insurance
    d. Disability insurance
    e. Childcare
    f. Other, please specify: _____
    g. None
    h. Not applicable
    i. DK/REF

22. How long have you worked in your current occupation? [note: respondents could have worked in the same occupation across multiple employers]
    a. __ years [number]
    b. DK/REF

23. How would you describe your experience level?
    a. Entry-level
    b. Mid-career, non-managerial
    c. Experienced, non-managerial
    d. Middle Management
    e. Senior management
    f. DK/REF

24. Do you consider yourself overqualified for your current job?
    a. Yes
    b. No
    c. DK/REF

25. Even though you currently have a job (or are self-employed), would you be interested in changing jobs?
    a. Yes
    b. No [skip next two questions]
    c. DK/REF [skip next two questions]

26. In the past three months, have you… [yes or no for each response]
    a. Updated your resume
    b. Discussed a job change with someone
    c. Attended a job fair or similar event
    d. Been in contact with a recruiter
    e. Sent out your resume
    f. Asked for a referral
    g. Applied to another job

27. What would be the main factor influencing your decision to change jobs? [do not read responses; categorize as well as possible]
    a. Increase in pay

b. Increase in benefits
c. Improvement in working conditions
d. More career advancement opportunities
e. Because you feel you are underutilizing your skills
f. To gain more job status or prestige
g. More flexible hours
h. Reduce commute time
i. Other reason [do not read], please specify_____
j. DK/REF

28. What kind of work do you do, that is, what is your occupation? [encourage specifics]
   a. _____ (administrative support, sales, food preparation or serving, health care practitioner, transportation worker, management, educator, etc.)
   b. DK/REF

29. What do you see as the next step in your career? [do not read responses; select one; categorize as well as possible]
   a. Promotion within current company [skip next question]
   b. Change jobs to a different company with the same general occupation [skip next question]
   c. Career change to a different occupation
   d. Return to school or pursue other training for the same general occupation [skip next question]
   e. Return to school or pursue other training for a different occupation
   f. Retirement [skip next question]
   g. Content in current role [skip next question]
   h. Other [skip next question], please specify: _____
   i. DK/REF [skip next question]

30. What new role would this next step prepare for?
   a. _____
   b. DK/REF

Skills & Experience

31. Would you consider yourself to be skilled to very skilled in the following **work-related** skill areas? [Read each skill area, providing examples if necessary; yes or no for each skill area]
   a. General skills (reading, writing, basic math)
   b. Product – sales (marketing, sales training)
   c. Interpersonal skills (communication, conflict resolution)
   d. Thinking & organizational skills (problem solving, time management)
   e. Quality improvement (customer service & satisfaction)
   f. Safety (health or safety training)
   g. Management (supervising or managing workers)
   h. DK/REF

32. Would you consider yourself to be skilled to very skilled in the following **computer and technical** skill areas? [Read each skill area, providing examples if necessary; yes or no for each skill area]
   a. Word processing skills (MS Word, WordPerfect)

b. Data entry skills (typing skills, error-checking, CRM software)
c. Spreadsheet skills (MS Excel, Google Sheets)
d. Database skills (MS Access, MySQL)
e. Desktop publishing skills (Adobe InDesign, MS Publisher)
f. Installing computer hardware skills (computer and server assembly and maintenance)
g. Computer programming skills (Java, C++, Python, JavaScript, SQL)
h. HTML skills
i. DK/REF

33. Would you consider yourself to be skilled to very skilled in the following **occupational** skill areas? [Read each skill area; yes or no for each skill area]
    a. Machine operation with computer skills
    b. Welding
    c. Carpentry
    d. Mechanical
    e. Metal working
    f. Electrical
    g. Medical/healthcare
    h. Legal
    i. Executive/professional
    j. Retail/sales
    k. Commercial driving
    l. Customer service
    m. Other, please specify: _____
    n. DK/REF

34. Have you completed, or are in the process of completing, any industry-recognized certifications?
    a. Yes
    b. No [skip next question]
    c. DK/REF [skip next question]

35. Could you please list the certification(s)?
    a. _____
    b. DK/REF

36. Have you completed, or are in the process of completing, any registered apprenticeship programs?
    a. Yes
    b. No [skip next question]
    c. DK/REF [skip next question]

37. Could you please list the apprenticeship program(s)?
    a. _____
    b. DK/REF

38. Other than [previously listed certifications and/or apprenticeship programs], what, if any, other formal training have you received [to clarify, do not include formal schooling such as college or business schools]?
    a. _____
    b. None

Demographics

Finally, we have some questions for classification purposes only.

39. What is the last grade or highest level of education you've attained? [do not read responses]
    a. Less than high school
    b. High school graduate
    c. Some college (less than 2 years)
    d. Associate (2-year) degree
    e. Bachelor's (4-year) degree
    f. Graduate or professional degree
    g. DK/REF

40. How old are you?
    a. ____ years
    b. DK/REF

41. Do you consider yourself to be of Hispanic or Latino origin or descent?
    a. Yes
    b. No
    c. DK/REF

42. How would you describe your race?
    a. White
    b. Black or African American
    c. Asian
    d. American Indian or Alaska Native
    e. Native Hawaiian or other Pacific Islander
    f. Other
    g. DK/REF

43. Into which of the following ranges does your total annual household income fall?
    a. Less than $50,000
    b. $50,000 to $99,999
    c. $100,000 to $149,999
    d. $150,000 or more
    e. DK/REF

Thank and terminate

44. [Please fill in respondent's gender after finishing the call]
    a. Female
    b. Male
    c. DK/REF