A Study of the Disparity in Wages and Benefits Between Men and Women in Wyoming: Update 2018

Presented to the Joint Labor, Health, and Social Service Committee of the Wyoming Legislature in Casper, Wyoming, October 4, 2018, by Tony Glover, Manager, and Patrick Harris, Senior Economist, Research & Planning, Wyoming Department of Workforce Services
Research & Planning
http://doe.state.wy.us/LMI

OUR ORGANIZATION:
R&P is an exclusively statistical entity within DWS.

WHAT WE DO:
R&P collects, analyzes, and publishes timely and accurate labor market information (LMI) meeting established statistical standards.

OUR CUSTOMERS:
LMI makes the labor market more efficient by providing the public and the public’s representatives with the basis for informed decision making.
About this Project

- *A Study of the Disparity in Wages Between Men and Women in Wyoming: Update 2018*

- House Bill 0209 (2017)

About the Data
## Data Sources

<table>
<thead>
<tr>
<th>Agency</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWS</td>
<td>● Unemployment Insurance Wage Records&lt;br&gt; ● Job Skills Survey</td>
</tr>
<tr>
<td>WY Dept. of Health</td>
<td>● Marriages&lt;br&gt; ● Births&lt;br&gt; ● Deaths&lt;br&gt; ● Divorces</td>
</tr>
<tr>
<td>State Licensing Boards</td>
<td>● All Licensed Healthcare Boards (except Paramedics)</td>
</tr>
<tr>
<td>U.S. Bureau of Labor Statistics</td>
<td>● Quarterly Census of Employment and Wages</td>
</tr>
<tr>
<td>University of Wyoming</td>
<td>● University of Wyoming Enrollment and Graduation</td>
</tr>
<tr>
<td>WY Community College Commission</td>
<td>● Community Colleges Enrollment &amp; Graduation</td>
</tr>
<tr>
<td>WY Dept. of Education</td>
<td>● Secondary School Enrollment &amp; Graduation&lt;br&gt; ● School District Staffing</td>
</tr>
<tr>
<td>WY State Auditor</td>
<td>● State Employees</td>
</tr>
<tr>
<td>WYDOT</td>
<td>● Driver’s License</td>
</tr>
</tbody>
</table>
About the Data

Gender

Figure: Total Persons Working in Wyoming by Gender, 2016

Total = 272,385

Men
134,395
49.3%

Women
118,754
43.6%

Unknown
19,236
7.1%
Figure: Total Persons Working in Wyoming by Age, 2016

Total = 272,385
About the Data

Wyoming Driver’s License

Figure: Number of Years with a WY Driver’s License for Persons Working in Wyoming, 2016

Total = 272,385
Figure: Number of Persons Working in Wyoming in 2016 by Primary Lifetime Industry of Employment

*Excludes 19,236 with unknown gender.
Figure: Number of Persons Working in Wyoming in 2016 by Primary Lifetime Industry of Employment

- Total = 253,149*
- Men (N = 134,395)
- Women (N = 118,754)

*Excludes 19,236 with unknown gender.
Figure: Number of Persons Working in Wyoming in 2016 by Primary Lifetime Industry of Employment

*Excludes 19,236 with unknown gender.
Availability of Education Data

Figure: Availability of Education Data for Persons Working in Wyoming, 2016

Total = 272,385

- Education Data Not Available: 177,044 (65.3%)
- Education Data Available: 95,341 (34.7%)
Availability of Hours Worked

Figure: Persons Working in Wyoming in 2016 with Hours Attached to Wage Records

Total = 272,385

With Hours Attached
174,704
64.1%

Without Hours Attached
97,681
35.9%
Full-Time Equivalency

Figure: Persons Working in Wyoming in 2016 by Gender and Lifetime Percent of Full-Time Equivalency (FTE)

*Excludes 19,236 with unknown gender.
Figure: Persons Working in Wyoming in 2016 by Gender and Lifetime Percent of Full-Time Equivalency (FTE)

*Excludes 19,236 with unknown gender.
Figure: Persons Working in Wyoming in 2016 by Gender and Lifetime Percent of Full-Time Equivalency (FTE)

*Excludes 19,236 with unknown gender.
Availability of Occupation

Figure: Availability of Occupation Data for Persons Working in Wyoming, 2016

Total = 272,385

Without Occupation
- 209,212
- 76.8%

With Occupation
- 63,173
- 23.2%
Figure: Availability of Occupation Data for Persons Working in Wyoming by Gender, 2016

- **Women (N = 118,754)**
  - Occupation Unknown: 65.9%
  - Occupation Available: 34.1%

- **Men (N = 134,395)**
  - Occupation Unknown: 83.7%
  - Occupation Available: 16.3%

Total = 253,149*

*Excludes 19,236 with unknown gender.
### States with Enhanced Wage Records

<table>
<thead>
<tr>
<th>States with Hours</th>
<th>States with Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Minnesota</td>
<td>• Alaska (mandatory)</td>
</tr>
<tr>
<td>• Nebraska</td>
<td>• Louisiana (mandatory)</td>
</tr>
<tr>
<td>• Oregon</td>
<td>• Nebraska (voluntary)</td>
</tr>
<tr>
<td>• Rhode Island</td>
<td></td>
</tr>
<tr>
<td>• Washington</td>
<td></td>
</tr>
<tr>
<td>• Louisiana (pay rate)</td>
<td></td>
</tr>
</tbody>
</table>
Key Findings
Wyoming’s gender wage gap varies depending on the data source used and the limitations placed upon the data.

Examples

$0.68 on the dollar (Chapter 1)
- Full-time, year-round work in 2016
- Source: American Community Survey 5-year estimates

$0.74 on the dollar (Chapter 2)
- Worked at least two consecutive quarters in 2016
- Source: Wage Records, Research & Planning, WY DWS

$0.86 on the dollar (Chapter 3)
- Worked at least two consecutive quarters from 2005-2017
- Occupation data available
- Source: Wage Records, Research & Planning, WY DWS
Figure 2.1: Cents Women Earned on a Man’s Dollar by Selected Characteristics, 2016 … see page 17

Source: Custom extract from Wage Records and other Research & Planning administrative databases.
The gender wage gap varied by county.

Figure: Gender Wage Gap by Selected County of Employment in Wyoming, 2016 ...

Source: Custom extract from Wage Records and other Research & Planning administrative databases.
(i)(B) Data and Analysis According to Occupation

- Data on occupations are limited
- Occupation data not collected with wage records

**Occupation data available to R&P:**
- Department of Education
- Wyoming state licensing boards
- State auditor’s file
- New Hires Job Skills Survey

Source: Custom extract from Wage Records and other Research & Planning administrative databases.
Gender wage gap was narrower in many occupations in the educational services industry.

Figure 2.6: Gender Wage Gap for Selected Occupations in Educational Services in Wyoming, 2016 … see page 25

Source: Custom extract from Wage Records and other Research & Planning administrative databases.
(i)(B) Data and Analysis According to Occupation

228 Total Occupations
At least 5 men, 5 women

147: No Significant Difference
5: Women Made Significantly More
76: Men Made Significantly More

Source: Custom extract from Wage Records and other Research & Planning administrative databases.
Wyoming had one of the widest gender wage gaps in the country.

Full-time, year-round workers.
Source: American Community Survey 5-Year Estimates.
Key Findings: Age and Births

(i)(C) Comparative State Data with Other State and Federal Info.
Wyoming had a large proportion of women working in lower paying occupations.

Figure: Women as a % of Total Employment by Region and Selected Occupation, 2016

- Healthcare Support Occupations (SOC 31):
  - Wyoming: 81.5%
  - Denver-Aurora MSA: 85.7%
  - U.S.: 85.7%

- Office & Administrative Support Occupations (SOC 43):
  - Wyoming: 77.7%
  - Denver-Aurora MSA: 68.9%
  - U.S.: 71.0%

Full-time, year-round workers.
Source: American Community Survey 5-Year Estimates.
Key Finding

(i)(C) Comparative State Data with Other State and Federal Info. Wyoming had a small proportion of women working in some higher paying occupations.

Figure: Women as a Percent of Total Employment in Production Occupations by Region, 2016

- Wyoming: 10.2%
- Denver-Aurora MSA: 25.0%
- Montana: 18.4%
- Nebraska: 27.8%
- North Dakota: 19.4%
- Salt Lake City MSA: 30.5%
- Texas: 21.6%
- U.S.: 26.4%

Full-time, year-round workers.
Source: American Community Survey 5-Year Estimates.
(ii) The Causes of Any Wage and Benefit Disparities

Hours worked and industry of employment had the greatest influence on Wyoming’s gender wage gap.

Table: Percent Working in Wyoming in 2016 by Gender

... see page 12

<table>
<thead>
<tr>
<th></th>
<th>Men = 195,740</th>
<th>Women = 182,751</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worked in Past 12 Months</td>
<td>87.1%</td>
<td>78.5%</td>
</tr>
<tr>
<td>Hours Worked = 35+</td>
<td>86.0%</td>
<td>69.2%</td>
</tr>
<tr>
<td>Hours Worked = &lt;35</td>
<td>14.0%</td>
<td>30.8%</td>
</tr>
<tr>
<td>Did Not Work in Past 12 Months</td>
<td>12.9%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Worked Full-Time, Year-Round</td>
<td>61.5%</td>
<td>43.8%</td>
</tr>
<tr>
<td>Average Hours Worked per Week</td>
<td>44.0</td>
<td>36.0</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2016 American Community Survey 5-Year Estimates.
(ii) The Causes of Any Wage and Benefit Disparities

Hours worked and industry of employment had the greatest influence on Wyoming’s gender wage gap.

Total Number of Persons Working in Wyoming by Gender, Industry, and Average Hourly Wage, 2016

... see page 20
Chapter 1: Introduction

Primary data source: American Community Survey 5-Year Estimates
Wyoming women made $0.60 to $0.68 for each $1 paid to men, 2005-2016.

National average: $0.80 per $1

Wyoming ranked 51st in the nation, ahead of only Louisiana ($0.66 per $1)

Anti-discrimination laws

Possible solutions
Chapter 2: Factors that Influence the Gender Wage Gap

Primary data source: Wyoming administrative databases
Chapter 2: Factors that Influence the Gender Wage Gap

Highlights from the Chapter

The gender wage gap:

• varied by county and industry

• widened with age

• was narrower among individuals with a postsecondary degree

• widened with the number of births
Chapter 3: Occupations and Hourly Wages

Primary data source: Wyoming administrative databases
Chapter 3: Occupations and Hourly Wages

Highlights from the Chapter

**Women made more than men in 5 occupations:**
- Office & administrative support workers
- Lifeguards, ski patrol, & other recreational protective service workers
- Combined food preparation & serving workers

**Men made more than women in 76 occupations:**
- General & operations managers
- Accountants & auditors
- Physician assistants

**No difference in 147 occupations:**
- Human resource managers
- Educational, vocational, & school counselors
- Cashiers
Chapter 4: Regional Occupational Comparison

Primary data source: American Community Survey 5-Year Estimates
Chapter 4: Regional Occupational Comparison

Highlights from the Chapter

• Staffing patterns in Wyoming were often different from other regions and the national average.

• The gender wage gap varied by occupation and region.

• The proportion of women working varied by occupation and region.
Chapter 5: Predicting Gender Using Logistic Regression

Primary data source: Wyoming administrative databases
• 3 models

• Workers’ interaction with the labor force

• Wage was purposely excluded

• Accurately predicted gender 69.6% to 79.6% of the time

• 2008: Accurately predicted gender 72.2% of the time
Chapter 6: Breaking Down the Gender Wage Gap

Primary data source: Wyoming administrative databases

- Decomposition analysis
• Women made $0.72 for every dollar made by men
  • Leaving a $0.28 wage gap

• Able to explain $0.15 of the wage gap
  • Two main variables:
    • Hours worked: $0.09
    • Industry: $0.12

• $0.13 could not be accounted for
Chapter 7: Analysis of Benefits in Wyoming

Primary data sources:
- Wyoming New Hires Job Skills Survey
- American Community Survey 5-year estimates
• New Hires
  • Health insurance, retirement plan, paid time off
  • Greater proportion of men offered benefits than women

• ACS 5-Year Estimates
  • Ages 16-65
  • Slightly greater proportion of women (84.9%) covered by some insurance than men (82.1%)
  • Medicaid: greater proportion of women (9.4%) than men (6.6%)
Chapter 8: Benefits of Reducing Wage Disparities

Primary data source: Wyoming administrative databases

- IMPLAN modeling software
Scenario:
• Hourly wage of women was increased to the hourly wage of men
• Total number of hours worked unchanged

Results
• Increased labor income of $153 million
• Additional 604 jobs
• $22.2 million in additional labor income
• Over $80 million in output to the Wyoming economy

Note: Scenario is not entirely realistic
• Profits could decrease with increased labor costs
Possible Solutions and Actions Other States Have Taken

Please see page 7 of your publication.
Questions?

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