

Wyoming's Labor Exchange (Wyoming at Work) Utilization Analysis
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“In 2009, 13.9% of employers with New Hires acquired at least one New Hire from an association with the Wyoming at Work system. Of all the New Hires in 2009, 6.1% had viewed a job order posted to Wyoming at Work by the employer that would hire them.”

Brief Overview

This analysis is the first step in a discovery process initiated at the request of the Wyoming Workforce Development Council (WWDC) and the Department of Workforce Services (DWS). The specific genesis of the research is covered in the WWDC 2010-2012 Strategic Plan, Goal #1, Objective 3A which states “Identify businesses utilizing Department of Workforce Services’ services and programs by examining Wyoming@Work, the Workforce Development Training Fund, and Vocational Rehabilitation data in order to identify trends and to target efforts at increasing utilization.” In general, the questions are distilled to “Who (employers) uses the Wyoming’s Labor Exchange System? Who doesn’t? and Why?” This is an initial effort to answer the first two questions and is a precursor for future investigation of the third. The data captured in this report are the result of combining relatively large administrative databases. Administrative data when properly analyzed, within a social sciences framework, can provide answers to diverse labor force issues for a fraction of the cost compared to survey research, as well as, lay the foundation for focus groups, surveys, and other forms of research.

Wyoming’s Labor Exchange system is called Wyoming at Work (W@W) and it is one of several services provided by DWS. W@W has electronic tools to build resumes and research labor market information. Among the tools provided is the ability for employers to post job orders and recruit labor for open or anticipated positions in their firms. Additionally, the W@W system allows job seekers to browse and request the contact information of employers posting job orders. A **browse** is defined as a transaction that is captured by the W@W database whereby an individual job seeker looks at a job order posted by an employer. A **request** is a transaction where the job seeker takes the additional step of requesting the information from W@W enabling contact with the employer about a posted job order.

For this analysis we adopted a broad perspective which can later be narrowed. The research is liberal in identifying the scope of exposure that individuals gain from the W@W system in that it counts all job order browses and requests as equal for contact exposure by a job seeker with an employer.

Additionally, we do not restrict the browse/request to a limited temporal relationship with the employer. If an individual browsed/requested a job order posted by an employer three years prior to being hired by the employer they are counted as a New Hire that had an exposure to the employer through W@W. The browse/request activity of individuals is restricted to the time period of 2007 to 2009 due to database limitations of W@W.

DWS FY 2009 Annual Report for the period July 1, 2008 to June 30th, 2009 states that in FY 2009 there were 5,796 individuals successfully placed in employment out of 21,452 referrals (27.0%) to employers. In contrast to the Referral Rate published in the DWS Annual Report the current work presents a Market Penetration Rate and it is important to keep in mind how the data generated for this report differs from the data reported in the DWS Annual Report. Calculations based on the Unemployment Insurance (UI) Wage Records (WR) database during the same time period (2008q3 to 2009q2) indicate that there were a total of 190,162 New Hires in Wyoming's labor market during the same time period. A **New Hire** is an individual that has not worked for the employer measured by the UI account number previously (at least not in the last 18 years). Therefore, a Market Penetration Rate using placements as the numerator and total New Hires as the denominator generates a penetration rate of 3.1% or 5,796 placements out of the 190,162 New Hires during FY.

Again, our analysis is limited to the time period from 2007 to present for the data captured from W@W. This is due to the consistency of the data available from a Labor Exchange System that has undergone numerous revisions. We also restrict our analysis to total New Hires captured by analyzing the WR database. Our interest lies in the initial individual/employer interaction and the possible relationship between W@W exposure and hiring (other factors are involved with re-hiring such as human capital established during a period of prior work, knowing who to contact, etc.). A brief outline of the methodology follows. A more detailed description of the process is available upon request.

Methodology Brief

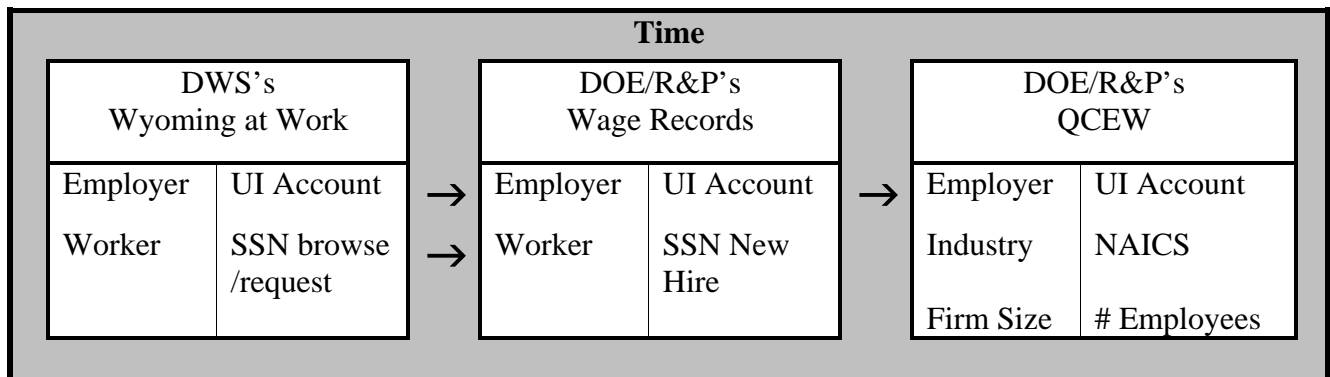
Wyoming at Work data was extracted to create a table of an individual’s (SSN basis) first browse/request with an employer (UI Account basis) in the W@W database. The first browse/request is the first date on which the individual browsed or requested information about a job order posted by the employer. The final table was created by extracting data from the W@W database for three data elements of importance to this analysis: SSN, UI Account, and First Contact date.

The second database used for this analysis is WYDOE/R&P’s, UI Wage Records (WR) which captures SSN, Wages, Year, and Quarter by UI account number for approximately 95% of employment in Wyoming. The only data extracted from WR for this analysis was the individual’s (SSN), a UI account, and the individual’s first appearance on the pay roll (year and Quarter) of the UI account. In other words only records where the individuals were New Hires were used to define the universe or context for the analysis of W@W market penetration.

The last database used was WYDOE/R&P’s Quarterly Census of Employment and Wages (QCEW). The QCEW contains summary data about employers and includes descriptive data such as the UI account number, industry, ownership, and location of employers’ offices.

The data were linked (see Figure 1) to create a single table that contained an SSN, UI Account, Year, Quarter, Wages and a field that designated whether the individual had ever browsed/requested a job order posted by the employer. We also added data from the QCEW as to the Industry and Firm Size (number of jobs) of the employer.

Figure 1: Linked Administrative Database Example



Analysis

After considerable analysis to determine how best to present the data to address the questions posed by the WWDC and DWS the results are shown in Tables 1 to 3 and Figures 2 to 5.

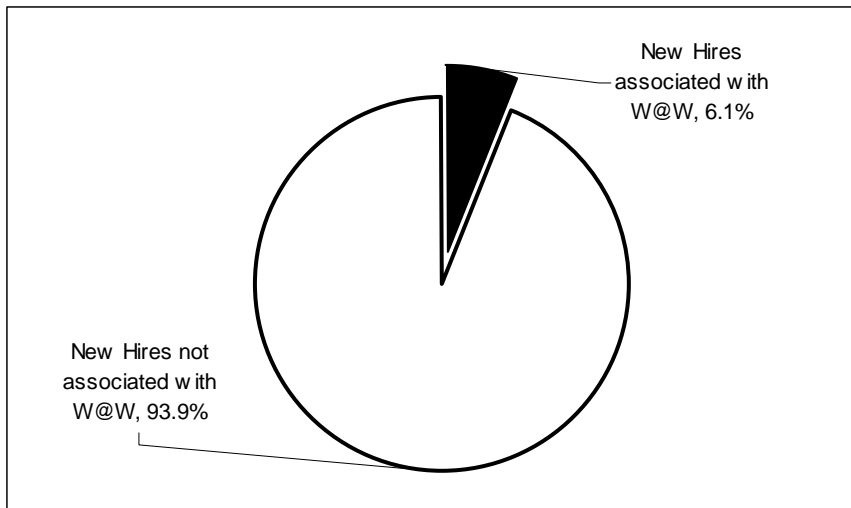
Table 1 describes the exposure of New Hires to the W@W system for two calendar years: 2007 and 2009. The two time periods were select to demonstrate differences in usage between a rapidly expanding economy in 2007, and the contracting economy of 2009. Additional operational definitions are as follows;

- 1) **UI Match** – The employer record from W@W was matched to an employer with a UI tax account number.
- 2) **Hiring** – The employer had at least one New Hire during the year based on WR regardless of whether or not the job seeker used W@W.
- 3) **Recruiting** – The employer had active job orders during the time period or hired at least one person that made initial contact through the W@W system.
- 4) **Ratio of Hires W@W to all New Hires**
 - a. **“Unknown Hires/Recruiting”** are employers which had job orders posted but R&P could not match the employer to a UI Account. Many of these appeared to be the first and last name of an individual posting a job order. Others could be new or startup employers w/o UI accounts or employers listing jobs from bordering states.
 - b. **“No Hires/Not Recruiting”** are employers that had no job orders posted and had no New Hires during the year (retained for completeness).
 - c. **“No Hires/Recruiting”** are employers that have job orders posted on W@W but do not hire any New Hires during the time period in WR.
 - d. **“0.0% Hired through W@W”** when combined with Recruiting = No refers to employers that had New Hires but did not post any job orders during the time period.
 - e. **“0.0% Hired through W@W”** when combined with Recruiting = Yes are employers that had New Hires and posted job orders but none of the New Hires came from a W@W contact.

- f. **“0.1% to 49.9% Hired through W@W”** are employers hiring less than 50% of their New Hires through W@W. An employer that had 100 New Hires and with 1 New Hire that had browsed a job order for the employer would be allocated to this category.
 - g. **“50.0% Plus Hired through W@W”** are employers hiring 50 percent or more of their New Hires through W@W. For example an employer with 100 New Hires and 50 or more of the job seekers had browsed a job order on W@W with the same employer.
- 5) **Employers** – The number of UI Accounts.
 - 6) **Total New Hires** – The number of New Hires.
 - 7) **Total New Hires with W@W** - The number of New Hires that were hired that had browsed/requested a job order posted by the employer.
 - 8) **Total New Hires without W@W** – The number of New Hires that were hired and did not browse/request a job order.
 - 9) **Browsers Not Hired** – unique browsers that did not result in a hire in WR.
 - 10) **Job Orders Active** – Total number of job orders open during the time period.
 - 11) **Positions Posted Active** – The total number of positions within job orders posted to the Labor Exchange System. One job order could list multiple positions.

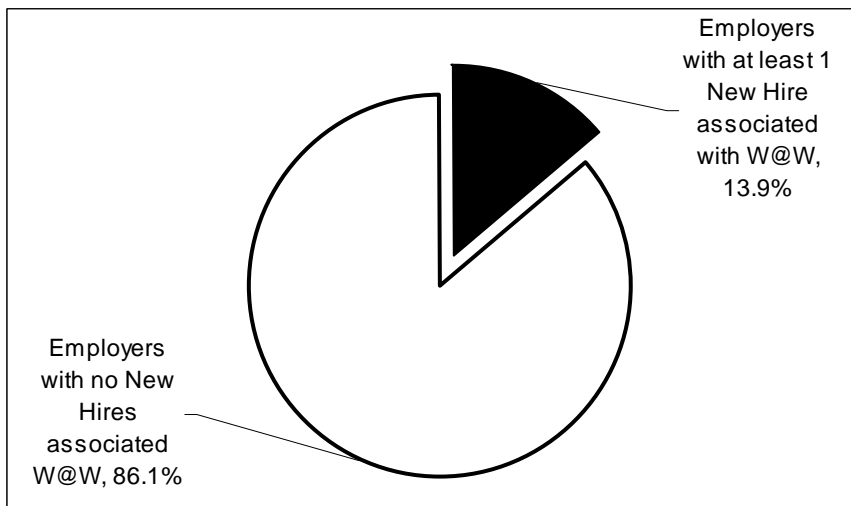
Focusing on the second panel of Table 1 for 2009 we show that even during a year with dramatic net employment loss, and increasing unemployment, there is a tremendous amount of hiring activity. There were 150,684 New Hires in 2009, of these 9,243 job seekers (6.1%) had browsed a job order on the W@W system and the remaining 141,441 (93.9%) were not associated with Wyoming’s Labor Exchange system (see Figure 2). There were an additional 515,587 browse/requests that were not associated with a job placement.

Figure 2: Percent of New Hires in 2009 that associated with a W@W Contact.



Assessing the second panel of Table 1 for 2009 we can also determine the extent to which employers are using the W@W system. We know that 1,966 or 13.9 percent of all employers with at least one New Hire (14,189) were recruiting, hiring, and acquired at least one employee associated with contact with W@W (see Figure 3).

Figure 3: Percent of Employers in 2009 with at least 1 New Hire from W@W.



The data presented to point gives a good idea of the overall utilization pattern of Wyoming’s Labor Exchange system. In Tables 2 and 3 we begin to answer the questions related to “Who uses W@W?” and “Who doesn’t?” R&P incorporated data from the QCEW related to the industry to which the

employer belongs based on UI Tax records. An indicator was also added to represent the employers' size based on number of SSNs that worked for the employer in the designated year. As demonstrated previously, of all the hiring activity occurring in the state only a small percentage of it is associated with the W@W system. Therefore, rather than dividing the employers into Users and Non Users of W@W we present data on users that hired at least one employee associated with W@W as a subset of all employers with New Hires during the same time period.

Table 2 distributes the employers on a crosstab of industry by employer size. An example of the correct usage of the data presented in Table 2 is to select the row "02-Construction (23)" which represents the industry and follow the line to the right until you are in the "0020to0049" column which represents an employer with 20 to 49 employees in 2009 (this box has bold borders and font). Once there we can state that 27 employers hired at least one New Hire associated with W@W out of 297 total employers with New Hires in that size class. Those 27 employers represent 9.1% of the total employers in this category having New Hires in 2009.

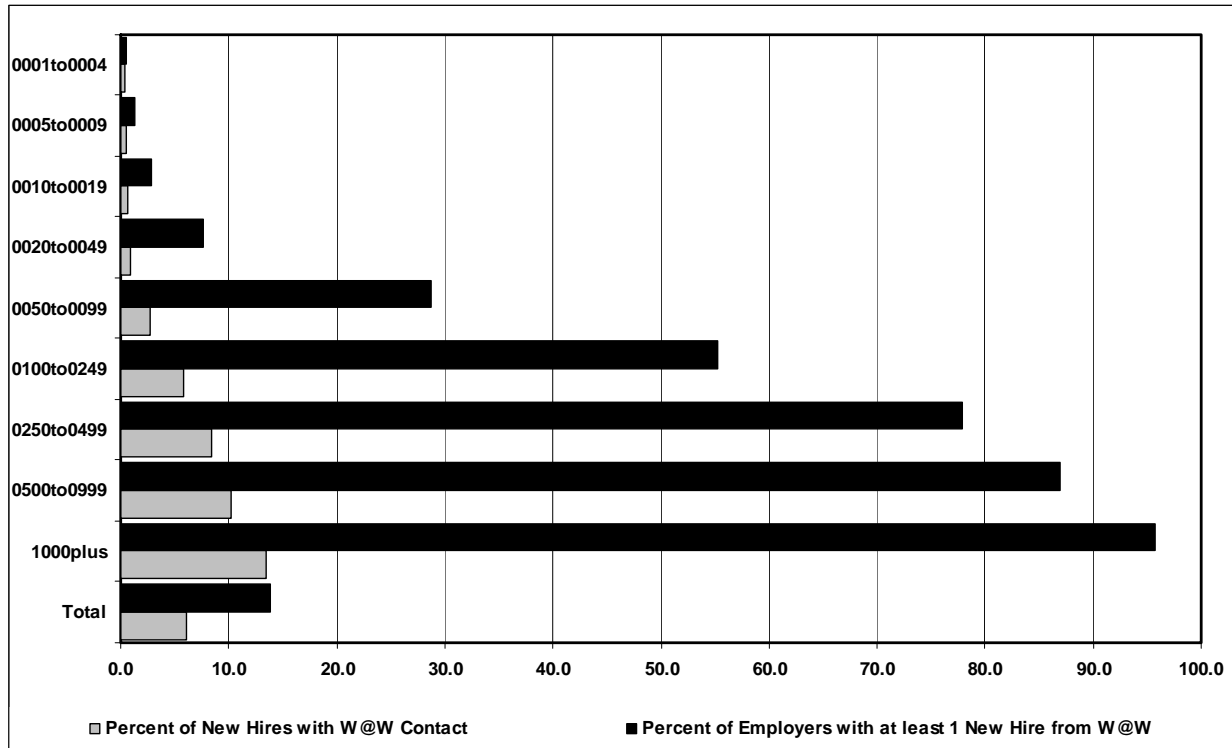
Table 3 distributes the New Hires on the same crosstab of industry by employer size. An example of the correct usage of the data presented in Table 3 is to select the row "02-Construction (23)" which represents the industry and follow the line to the right until you are in the "0020to0049" column which represents an employer with 20 to 49 employees in 2009 (this box has bold borders and font). We can state that 31 of the New Hires in 2009 were associated with a browse/request originated using W@W of the 3,366 total New Hires in 2009. Those 31 represent .9% of all New Hires in the construction industry by employer with 20 to 49 employees (see Figure 4).

Figure 4: Percent of Employers Within Industry with at least 1 New Hire from W@W and Percent of all New Hires Within Industry that are associated with a W@W Contact in 2009.



Table 2 demonstrates the distribution of employers hiring at least one employee that had browsed/requested a job order posted by the employer and Table 3 shows the volume of New Hires actually hired that had browsed/requested a job order posted by the employers. Reviewing the row titled Total of Table 2 it shows that 87.4% (799/914) of the employers with 250 plus employees acquired at least 1 New Hire from a W@W association. Reviewing the same cells for Table 3 demonstrates that even though these employers are aware of and using W@W they are only capturing 11.2% (7,076 / 63,209) of their New Hires from an association with W@W (see Figure 5).

Figure 5: Percent of Employers Within Employer Size Class with at least 1 New Hire from W@W and Percent of all New Hires Within Employer Size Class that are associated with a W@W Contact in 2009.



Future research

The next step may be to determine “Why the employers posting job orders used W@W?” to better understand “Why other employers do not use W@W.” Several avenues for future analysis present themselves as a result of this initial endeavor. Not the least of which is the quality, as measured by job retention and wage progression, of jobs associated with W@W New Hires compared to total New Hires.

- Analysis could examine the characteristics of the job seekers utilizing W@W compared the job seekers that do not. W@W users may be younger; less experienced, and have a higher volatility with regards to maintaining steady employment which makes them a less attractive New Hire.
- We briefly touched on the characteristics of employer using W@W and could expand the study to capture the hiring practices of employers that recruit with W@W compared other employers. Are they high turnover employers with extensive labor churn? Or are they employers that seldom recruit and retain workers for long periods of time?

- We could explore the industry and size characteristics by geographical region.
- The list is endless

References

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