Employment Trends Appendix

Description of the Data

Data for statistical analyses and the dashboards were pulled out of the County's human resource data management system, Workday. Information for all individuals employed by the county any time between July 1, 2019 and June 30, 2022 was included (FY 2020 – FY 2022) in statistical analyses.

Data were pulled in two different reports:

1. Employee demographic data was pulled on the last day of each quarter of the Fiscal Year--this is a snapshot of a specific point in time of our workforce.
2. Employment actions were pulled for the entire time period from July 1, 2019 through June 30, 2022.
    a. For statistical analyses, the data set includes all the actions that occurred throughout the 3-year period from July 1, 2019 through June 30, 2022.
    b. For the dashboards, employment actions are pulled from January 1, 2019 through the last date of the most recent quarter.

More detailed information about the data used in each report is outlined below:

1. **Employee Demographics Report** – Employees' demographics, including personal identity demographics (e.g., Race and Ethnicity, Disability, gender, Sexual Orientation, etc.) and employee attributes (e.g., department, employee type, etc.) were included in a special report based off of the MCR Flex Worker report from Workday.
    a. Information from this report was also used to calculate employees' Employee Level (based on Job Profiles; see Employee Level Groupings tab in the Employment Trends Appendix Spreadsheet), Generation (based on date of birth), tenure (based on length of service), and to estimate retirement eligibility (based on length of service, age, and whether employees are Police and Fire).
    b. Because there is constant employee movement and changes to the workforce, this report must be a "snapshot" of employees on a particular date.
    c. We chose to pull data on the last date of each quarter of the Fiscal Year.

2. **Employment Actions** – Employees' employment actions (e.g., separations, hires, promotions, reclassifications, etc.) were included in a special report based off of the MCR All Staffing Events report from Workday.
    a. This report shows all of the employment actions for all County employees during the three year Fiscal Year period from July 1, 2019 through June 30, 2022.
    b. If an individual experienced multiple different types of actions within a Fiscal Year (e.g., hired as a Regular Represented employee AND received a promotion during FY 2020), all of the actions were included in analyses.
    c. If an individual experienced multiple actions of the same type within a Fiscal Year (e.g., hired as a temporary worker two times during FY 2020), they were counted as only one instance for the purposes of these analyses.
    d. If an individual experienced multiple actions of the same type in different Fiscal Years (e.g., hired as a temporary employee in FY 2020 and then again in FY 2021), all of the actions were included in analyses.
    e. See the Workday Action Groupings tab in the Employment Trends Appendix Spreadsheet for information on how we defined employment actions based on Workday Type, Reason Category, and Reasons. These groupings were based on definitions from previous "HR Trends" analyses using SAP data, updated based on new Workday definitions and structure, and were reviewed and approved by the Workday Team in Central Human Resources.

Statistical Analysis Notes: Hiring, Separations, Promotions, and Other Employment Actions

For hires, separations, and promotions, we tested the likelihood of the action having changes in rate over time (i.e., between fiscal years) by disability, gender (both with the gender binary field and the more inclusive gender identity field), generation, race and ethnicity, sexual orientation, and veteran status groups, in addition to bargaining unit, employee level, and tenure groups.

For other employment actions, because they have fewer instances of occurring, instead of looking at the actions over each fiscal year, we combined them together into the three fiscal year period. For these analyses, we tested the likelihood of the action occuring during the three fiscal year period by disability, gender (both with the gender binary field and the more inclusive gender identity field), generation, race and ethnicity, sexual

orientation, and veteran status, in addition to bargaining unit, employee level, and tenure.

These analyses were done for each employee type (i.e., regular represented, regular non-represented, limited duration, temporary, on-call, intern, seasonal) at the countywide level, as well as within each department.

The relationship between the likelihood of an action having changes in rate over time or occuring during the three fiscal year period was tested using chi-square tests of independence. The chi-square test of independence tests whether an association exists between two variables by comparing the observed frequencies in a category (e.g. experienced the action or did not experience the action) with the frequency of cases in that category that would be expected if there were no association between the variables. To determine which groups had significant changes between fiscal years, we evaluated the significance level and the effect size of the overall chi-square test, as well as the standard residual, as follows:

1. Significance level: Significance was tested at the 95% confidence level ($p < .05$).
2. Effect size: The measure of effect size we used for these analyses was Cramer's V. The Cramer's V effect-size statistic indicates the magnitude (i.e., size) of the relationship between two variables (in this case, between HR action and demographic variables). We used Cohen's (1988) criteria for interpreting the strength of Cramer's V.
3. Standard residual: After we determined that a chi-square test was statistically significant and had at least a small effect size, we determined which groups were significantly different in which years by evaluating the standard residual for each group every year. A standard residual greater than +1.96 or less than -1.96 indicated that that group's likelihood of experiencing the action is significantly different than the countywide likelihood. A standardized residual greater than +1.96 indicated significantly greater likelihood for that group; a standardized residual less than -1.96, indicated significantly lower likelihood for that group.
4. Note about sample size of demographic groups: We conducted chi-square analyses including all demographic groups, even if a group had a small sample size, because chi-square analyses are relatively robust against small sample size.

We examined the following actions using the chi square approach (results are shown on the Employment Trends Appendix Spreadsheet tabs):

1. Hiring actions (likelihood of experiencing any hire) during each fiscal year.

2. Separation actions (likelihood of experiencing any separation or by separation types (Voluntary separation, involuntary separation, no fault separations, or retirements) during each fiscal year.
3. Promotion actions (likelihood of experiencing a promotion). Promotions were only analyzed for Regular employees (Represented and Non-represented) during each fiscal year.
4. Other employment actions (likelihood of experiencing a demotion, limited duration assignment, work out of class/temporary assignment, and reclassification)
    a. These other employment actions occur less frequently than hires, separations, and promotions, so analyses do not look at annual rates. Instead, analyses looked at the rate of these actions during the three year period of the report (FY 2020 through FY 2022) combined. Chi squared analyses do not look for differences across fiscal years, but rather differences across demographic variables when combined across three fiscal years.

Logistic regression was also performed to assess the impact of a number of factors on the likelihood that a person would experience a particular action (e.g., hired/not hired). We relied primarily on the chi square results to assess statistically significant findings, using logistic regression finding as a comparison to assess consistency. For this reason, full regression results are not included here. Employment actions were compiled into "dummy" variables with a value of one if a person experienced the outcome (hired) and a value of zero if the person did not experience that outcome (not hired). People with more than one instance of an outcome (e.g., someone who worked out of class more than once during the period) were also given a value of one, so each outcome is defined as "at least one instance" of the outcome. For example, the logistic regression for regular hires looks at the likelihood of having at least one regular hire over the time-period. Most people had only one instance of each outcome.

Demographics were also coded into "dummy" variables. Employees that identified with a specific demographic group were coded with a value of one and employees that did not identify with that particular demographic group were coded with a value of zero. Further, fiscal years were assigned values as follows: FY 2020 coded into a value of zero, FY 2021 coded into a value of one, and FY 2022 coded into a value of two. Each logistic regression model then modeled the dependent employment action variable with the independent variables (the demographic dummy variables and the fiscal year variables).

The interaction between these two independent variables allowed for examination for longitudinal trends between FY 2020 and FY 2022.

Please contact us for logistic regression results at eru@multco.us.

The Employment Trends Appendix Spreadsheet is available for County Employees on Multco Commons. If you are not a County employee and you would like access to the spreadsheet, please email eru@multco.us.

Equity Considerations in Analysis

The description of equity considerations included here is intended as an overview of the process we used to focus the work around equity. There may be additional detail that is not captured in this appendix. The description here describes the three phases of the project: planning, analysis, and interpretation.

We began the project-planning phase of this project with a series of questions specifically designed to explore and center equity in the work. These questions included:

1. For what purpose(s) is this evaluation being performed? Who does it serve (formally and informally)?
2. What type of evidence will be used for this evaluation? Are there any forms of evidence that are missing?
3. Who are the stakeholders and what are their viewpoints/priorities?
4. What are the foundational concepts/theories guiding this evaluation?
5. What groups (geographic, race/ethnicity, sexual orientation, gender, disability, etc...) may be positively or negatively affected by this evaluation? Both the process and outcome.
6. How are those affected groups being included and empowered in the evaluation? Risk of trauma?
7. How is this evaluation accounting for people's emotional and physical safety, productivity, and experience of being valued?
8. Where are the power imbalances and privileges that might affect this evaluation? Does this evaluation address these imbalances?
9. How can this evaluation build capacity and power within the county and within the community?

10. Who is accountable? (For the evaluation, for "owning" the results, and/or for "acting upon" the results)
11. What do you need to consider when reporting results?

These questions were developed in collaboration with the Office of Diversity and Equity and are based on the Equity and Empowerment Lens framework. Going through these questions highlighted many facets of equity. This included (a) an acknowledgement of who is and is not well represented by the current data, (b) the need for input from impacted communities from the beginning and during the process of interpretation, and (c) the importance of highlighting context and considering power in writing up the results.

Representation in the Data: During our review, we quickly identified that our data source (Workday) does not include accurate information for all aspects of identity. For example, disability status, sexual orientation, and the more inclusive gender identity field are all underreported in the Workday data (approximately 40% of employees have completed these questions). As a result, we relied more heavily on the data available, specifically, race and ethnicity, non-inclusive gender binary, and age. We acknowledge that although the non-inclusive gender binary field has fewer missing values, it may not accurately represent employees' gender identities and should be interpreted with caution.

Additionally, we recognize that the very action of grouping diverse peoples into categories is problematic in its own right. This assumes that this group of people has a shared experience, which may not be accurate. However, the groups available were created to reflect the social construction of race in the United States. The Census Bureau states, "The racial categories included in the census questionnaire generally reflect a social definition of race recognized in this country and not an attempt to define race biologically, anthropologically, or genetically" (https://www.census.gov/topics/population/race/about/faq.html). We believe that there is value in assessing differences in experience across these groups, despite the shortcomings of the groups themselves.

Input from Impacted Communities: Another aspect that was important to the work was the role of impacted communities throughout the process. The research questions included in this project were based on the research questions used in the 2015-2016 HR Trends Report. At the beginning of the process for the 2015-2016 HR Trends project, we

met with some of the stakeholders we identified as central to this work, including Human Resources, Office of Diversity and Equity, Employees of Color Employee Resource Group (ERG) and Managers of Color ERG. We provided each of these groups a list of research questions that we intended to answer during this project. We asked for feedback on these questions and integrated this feedback into the project. For example, the consideration of promotion levels came directly from feedback from the Employee of Color ERG. Some of the feedback could not be addressed using the data sources from this project; this feedback was documented but not included in this project.

Once we completed our initial analyses for the 2015-2016 HR Trends project based on the list of questions compiled from our initial list and the ERG feedback, we went back to the stakeholders. We presented the findings to the stakeholders along with basic descriptions. Stakeholders were asked to review the findings and descriptions in order to provide feedback and highlight ways in which the data resonated with them and did not resonate. This allowed us to make adjustments as needed and identify where findings were not congruent with particular experiences. We included these findings in the report, but highlighted the complexity in understanding them fully.

Context and Power: Another important element that emerged during our initial review as well as during our meetings with stakeholders was the importance of context and power. This included the context of the place (i.e., Oregon), national and local socio-political environment (e.g., the COVID-19 pandemic, social justice protests in communities), and the prior experiences of employees with this work. Power is an important element to consider, regardless of the context. We tried to acknowledge this context and power throughout the report.

For example, hiring compared to the community of Multnomah County showed that we were hiring people of color in higher proportions than their proportion of the county. However, stakeholders identified that this finding presented alone fails to acknowledge the historical context of Oregon in which the labor pool exists. Therefore, we present hiring findings along with a note about the historical context of racism and sexism that has helped shape this context. For additional information on this history, please refer to the following resources as a starting point:

1. Looking Back In Order to Move Forward – Oregon's racial, immigration, and educational history provided by the City of Portland (2010). (https://www.portlandoregon.gov/civic/article/516558)

2. Trudy Rice's Story: Nursing and Race in Oregon History – A narrative account of Trudy Rice, one of Oregon's first registered African-American nurses (Hancock 2013). (https://www.ohs.org/oregon-historical-quarterly/upload/04_hancock-and-rice_nurse-of-color.pdf)
3. Bleeding Albina: A History of Community Disinvestment, 1940 – 2000 – An accounting of the historical decisions and practices that led to community disinvestment in the Albina area of Portland (Gibson 2007). (https://kingneighborhood.org/wp-content/uploads/2015/03/BLEEDING-ALBINA_-A-HISTORY-OF-COMMUNITY-DISINVESTMENT-1940%E2%80%932000.pdf)
4. Making the Invisible Visible: Portland's Native American Community – A brief overview of the indigenous population in the Portland area. (Portland Indian Leader's Roundtable, 2009). (https://www.coalitioncommunitiescolor.org/s/MakingVisible_FINAL.pdf)

We also tried to acknowledge our own power in this process. The very act of analyzing and presenting quantitative data is itself powerful. Our hope is that these data and analyses can be seen as a trusted resource for our stakeholders to support their work. We know that many stakeholders will not feel that this report is complete, given the lack of available data for many identities. This is an issue that we hope to continue to work on by requesting more inclusive demographic information. At the time of these statistical analyses, the updated Gender Identity and Sexual Identity (SOGI) categories had not yet been implemented–the updated categories will be used in future analyses, which will hopefully increase our ability to report results for more inclusive groups in the future. The updated SOGI categories are currently being used in the Employment Trends dashboards.

Additional questions about the Employment Trends project can be sent to eru@multco.us.