Projected Industry Growth in Ohio vs. OOD Participant Goals

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INTRODUCTION

The Office for Ohioans with Disabilities (OOD) is a state agency devoted to helping individuals with disabilities obtain valuable work, and partners with industries across Ohio to help attain their goals.

OOD plans to find the industry growth of Ohio's occupations for the next decade, and needs to compare those findings to their current Vocational Rehabilitation (VR) participant job goals. With these comparisons, Vocational Rehabilitation participants and counselors can make an informed choice with knowledge of current job-markets to more accurately choose a competitive job goal.

This information will assist OOD's decision making team in determining where their constituents are wanting to work – so that funding will be appropriately allocated and business connections are facilitated in the appropriate fields and industries.

AIM

This project desires to produce two primary files for comparison – a projections file of industry job changes for the next decade, and current OOD participant job goals. These two files will be visualized in Tableau for easy interaction by counselors and analysis.

The goal is for these files to shed light on where participants are most likely to be hired and allow OOD to direct their efforts towards industries of growth in building meaningful partnerships. Historical data will also be analyzed to find seasonal hiring patterns and assist with job placement rates in each quarter.

Historical Job Change 2006 – 2016; Restaurants
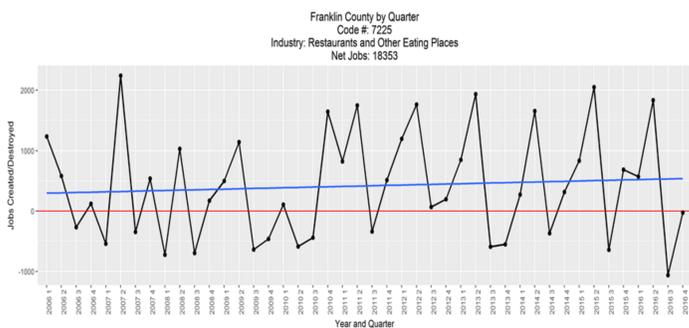
Graph of Jobs Created/Destroyed in each quarter in Franklin County for Restaurants and Other Eating Places. Reproducible in R for any county in Ohio and any two or four digit NAICS code for the years 2006 to 2016. Data from census.gov Quarterly Workforce Indicators.

METHODS

Historical data are pulled from the US census website, projections data are created by the Department of Jobs and Family Services through the Ohio Labor Market Index, and the data were manipulated in R. OOD data are within a SQL database online and connects through Tableau for viewing and joining datasets.

- Multiple variables calculated accurate values for skewed measures and created new labels

- Tableau geographically maps the data from R and OOD participants

Once Tableau renders the OOD participant data, it is filtered down to include only:

- Vocational Rehabilitation Participants, who are:
- In Service
- In-Plan / Interrupted / Job Ready

OOD Data were then selected from the previous full year to eliminate seasonal trends and stagnant data.
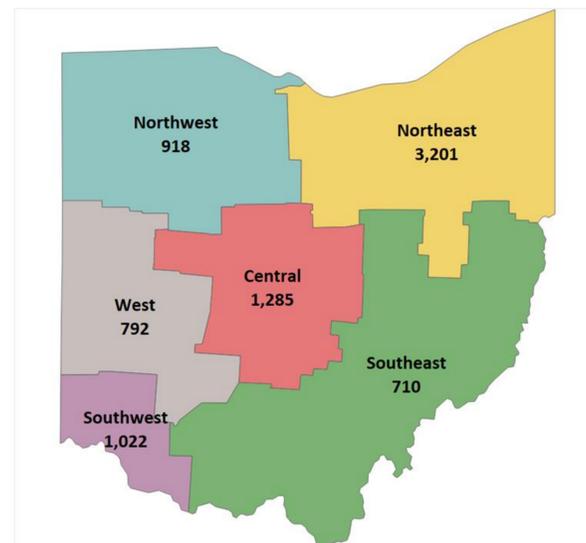
OOD VR Participants In-Service & Not Employed

Tableau visualized OOD VR Participant counts by Jobs Ohio region & includes drill-down to individual region counts of top-demanded job goals and individual bar graphs showing occupation counts by region. Identical graphs were produced to visualize projected industry growth by region for comparisons to the above OOD data.

OOD VR Participant Job Goals in High-Growth Industries
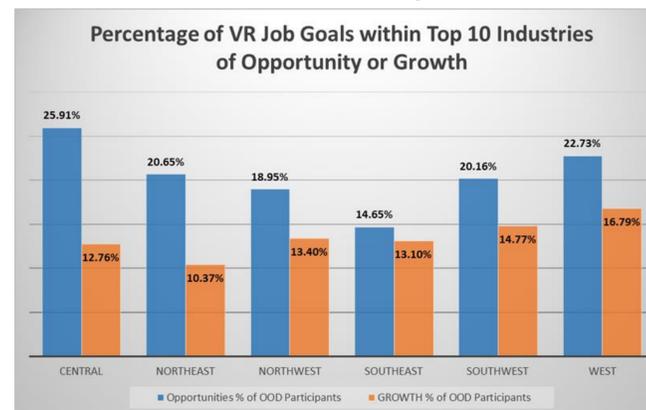
- Average: 13.53% of OOD job goals are within a top 10 industry of projected job growth.

- Average: 20.51% of OOD job goals are within a top 10 industry of projected job opportunities.

RESULTS

It is found that most of OOD participant job goals fall outside of the top 10 industries of expected job opportunity, and even less OOD participants have job goals within the top 10 expected industries of job growth.

Within job _opportunities_, meaning job replacements + job growth, the most **oversaturated** occupations are:

- Personal Care and Service Workers: All Other
- Janitors and Cleaners
- Nonfarm Animal Caretakers.

The **least saturated** job _opportunities_ occupations are:

- Fast Food: All Other
- Retail Salespersons
- Stock Clerks and Order Fillers

Within job _growth_, meaning new jobs created, the most **oversaturated** occupations are:

- Healthcare entirely
- Waiters and Waitresses
- Computer Systems Analysts

The **least saturated** job _growth_ occupations are:

- Nurses
- Waiters and Waitresses
- Home Health Aides
- Medical Secretaries
- Computer Systems Analysists

Projected Annual Job Opportunities in Ohio
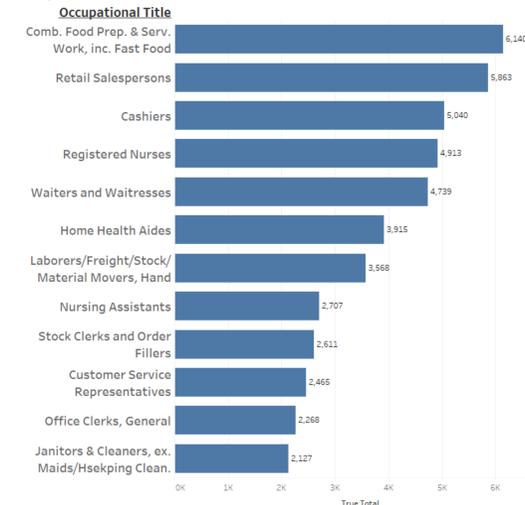
CONCLUSIONS

With the information provided on projected market changes in job availability, participants will be able to make an informed choice of where to place their job goal at. This will help raise the job placement rate of OOD participants who can now consciously choose occupations with greater rates of employment.

By utilizing annual averages of OOD participant data, it is possible to avoid seasonality skewing preferences for job goals.

Changing to a lower level SOC code to determine a job goal can coalesce many of the catch-all job goals or inter-industry job goals to a more accurate job title, while allowing job coaches to more precisely aid the participants in training for their occupational preferences.

Low level codes can also consolidate resources that are spread thin across hundreds of individual job goals, and allow more training and focus on larger groups of participants for a greater success rate in job placement. These groups would allow for employer-partnerships between OOD and industries to be both more manageable and meaningful.

BIBLIOGRAPHY

1 Census Data - https://ledextract.ces.census.gov/static/data.html
2 Ohio Labor Market Index - http://ohiolmi.com/proj/OhioJobOutlook.htm
3 Bureau of Labor Statistics - https://www.bls.gov/news.release/disabl.nr0.htm

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