

Developing a Profile of Multiple Worksite Report (MWR) Non-Respondents

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Office of Employment and Unemployment
Statistics

Coding it Forward

August 5th, 2021

Outline

1. MWR Background

2. Related Side

Projects:

2a. MWR Form
Cognitive Analysis

2b. Automating
Proof Review

3. The Main Problem

4. Methodology

5. Results

6. Conclusions



1. Background: Quarterly Census of Employment and Wages

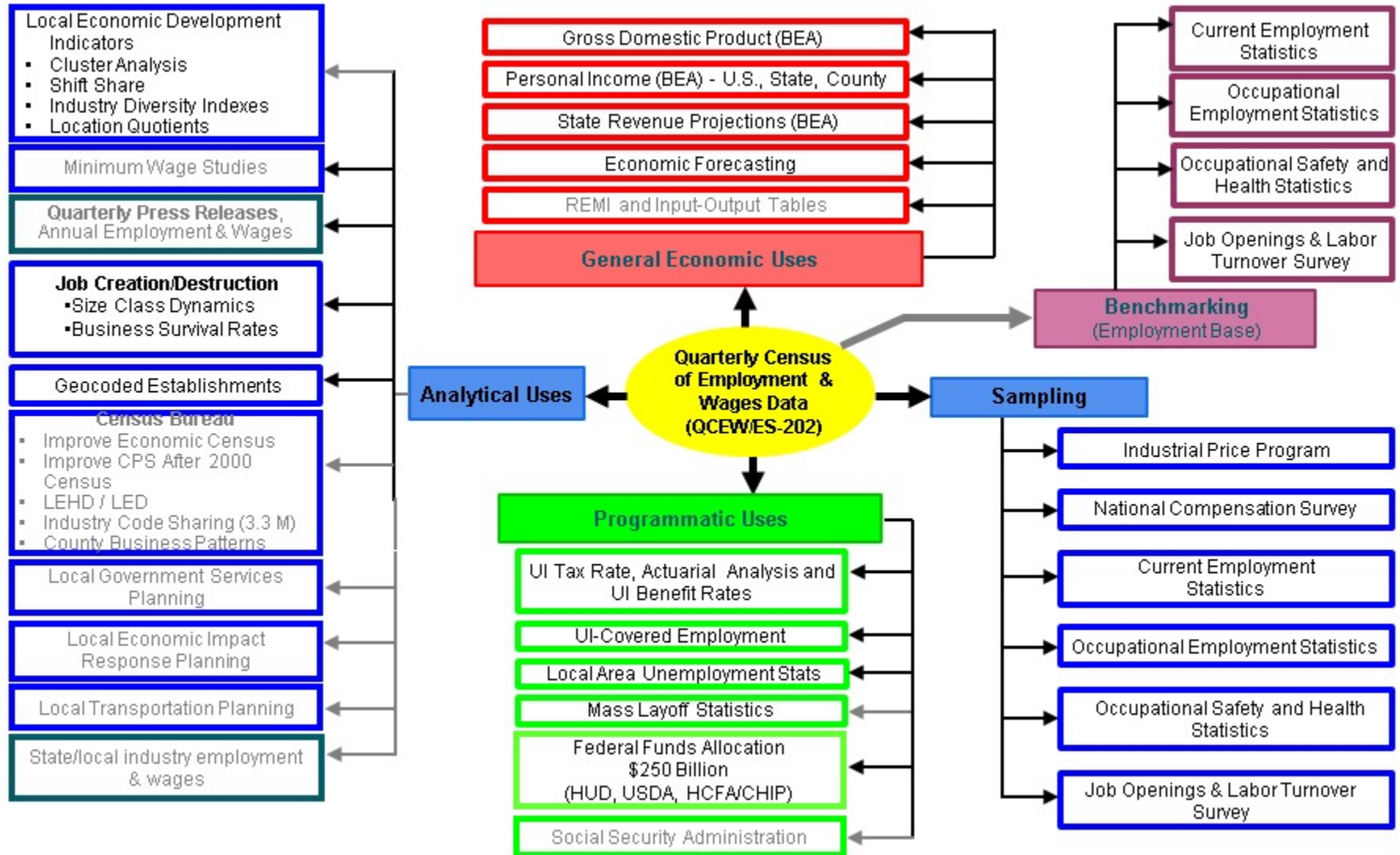
- a Federal-State program that partners with state tax departments to collect and publish employment and wage information at the local, county, and metropolitan-statistical levels
- Publishes quarterly employment counts and wage totals for over 10 million establishments covering 97% of U.S. workers.
- The Quarterly Census of Employment and Wages is formed through two census surveys: the Annual Refiling Survey, and the **Multiple Worksite Report (MWR)**



1. Background: Who files an MWR?

- Most multi-location employers with a total of 10 or more employees combined in their secondary locations are required or requested to complete the MWR
- The MWR is mandatory in 31 states

Uses of Quarterly Census of Employment and Wages Data



2a. MWR Print Form Cognitive Analysis

■ 1st page:

 UNITED STATES DEPARTMENT OF LABOR
Bureau of Labor Statistics
Washington, DC 20212
BLS 3020 - Multiple Worksite Report

March 2021

Dear Employer,

The U.S. Bureau of Labor Statistics (BLS) and your state agency request that you provide your company's employment and wages each quarter using the enclosed BLS 3020 - Multiple Worksite Report (MWR).

We encourage you to **GO PAPERLESS**, which will save your time and tax dollars. You can report on the web with the User ID and password printed on your enclosed MWR form. For detailed web reporting instructions, please visit: <http://www.bls.gov/cew/cwmwr05.htm>

The MWR collects employment and wage data by worksite location from employers who conduct business at more than one location within the State. These data are necessary to prepare summaries of economic conditions and business activities by geographical area and industry within your State. Other uses of the data can be found at www.bls.gov. Data are shared with the U.S. Department of Labor's Bureau of Labor Statistics as part of a Federal/State cooperative effort to reduce employer reporting burden and will be used for statistical and Unemployment Insurance program purposes and other purposes in accordance with law.

This report is authorized by 29 U.S. Code, Section 2. Please provide employment and wages for each worksite (e.g., store, plant, office). Please review and update the worksite information on the attached report. Provide any missing information for each of the listed worksites, add any omitted worksites, and indicate worksites that are inactive, closed, or have been sold. A computer generated listing which includes all of the worksite information requested on the Multiple Worksite Report is acceptable in lieu of the form.

If you have any questions, please contact the State Agency listed on the enclosed form.

Thank you for your cooperation.

Sincerely,



Emily Thomas
U.S. Bureau of Labor Statistics

Enclosures

1. Multiple Worksite Report (BLS 3020-MWR)
2. Business Reply Mail Envelope



0204754

 UNITED STATES DEPARTMENT OF LABOR
Bureau of Labor Statistics
Washington, DC 20212
BLS 3020 - Multiple Worksite Report

March 2021

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GO PAPERLESS, to save time and tax dollars. Report online with the User ID and password in your enclosed MWR form.

The MWR is authorized by 29 U.S. Code, Section 2. This report collects employment and wage data by worksite location from employers who conduct business at more than one location within the state. Please provide employment and wages for each worksite (e.g., store, plant, office).

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If you have any questions, please contact the state agency listed in the enclosed form.

Thank you for your cooperation.

Sincerely,



Emily Thomas
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1. Multiple Worksite Report (BLS 3020-MWR)
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For detailed web reporting instructions, please visit:
<https://www.bls.gov/respondents/mwr/web-reporting.htm>



0204754



■ 2nd page:

[illegible]

2a. MWR Print Form Cognitive Analysis

3rd page:

U.I. NUMBER: 0000123456 In Michigan

INSTRUCTIONS

DUE DATE: Please return this form or a computer-generated facsimile by **APRIL 30, 2021**

Please follow these steps to prepare your Multiple Worksite Report. Contact the Agency listed in Step 6 if you have any questions or if you need additional information, or see <http://www.bls.gov/cw/mwr00.htm>

1. Review the business name, contact name, and mailing address and make any necessary corrections (Section 2).
2. The Worksites list (Section 3), shows the individual worksites (business locations) that appear in our files for the U.I. Number. Please read across the row for each worksite and do the following:
 - **NAME/ADDRESS/DESCRIPTION:** Review the name and physical location address for each worksite and make any necessary corrections. Review the description below the physical location to be sure it uniquely identifies each worksite (plant name, store number, etc.). If there is no printed description, please enter a unique identifier for the site.
 - **EMPLOYMENT:** Enter employment for each month of the quarter. Employment is the total number of full- and part-time employees who worked during or received pay for the pay period which includes the 12th of the month. Include all employees who were subject to Unemployment Insurance laws.
 - **WAGES:** Enter wages paid during the quarter that are subject to State Unemployment Insurance laws, including the portion that exceeds the State's taxable wage base. **Round wages to the nearest dollar.**
 - **LARGE CHANGES:** Use the space beside the worksite to explain any large changes in employment and/or wages. Changes might result from store closings, strikes, layoffs, bonuses, seasonal increases or decreases, or similar events.
 - **CLOSED OR SOLD:** If a worksite has been sold, closed, or is otherwise inactive, use the space beside the worksite to show:
 - (a) the date closed or sold; (b) if sold, the name of the company that bought the business at that worksite; and (c) the purchaser's U.I. Number, if you know it.
3. Is the list in Section 3 complete? That is, does the business operate any worksites using this U.I. Number that do not appear on the form, such as newly-opened worksites or newly-acquired worksites?

MISSING WORKSITES: Provide the following information for each additional worksite. You may use available blank lines or attach a separate page. If you are not sure how to report a worksite or employee, please call the office listed in Step 6 of these instructions.

 - a. The business name, street or physical location address (NO POST OFFICE BOXES), city, state, and zip code
 - b. A unique description or identifier for each worksite (e.g., plant name, store number, or similar description)
 - c. The number of employees for each month of the quarter, and quarterly wages
 - d. The county, township, city, independent city, or similar geographic area in which the worksite is located
 - e. The main business activity at the worksite

In addition, if you purchased any of these worksites from another company, please provide:

- f. The name of the company that sold the worksite
- g. The effective date of the sale, and
- h. The seller's U.I. Number, if you know it.

4. Complete the Totals section at the end of the list. For each month, sum the number of employees at all worksites. Then sum the wages for the quarter at all worksites. **Except for rounding, these figures MUST agree with the totals on your Quarterly Contributions Report.**
5. Using the enclosed envelope, return your completed form to the central processing facility.
6. If you have questions, please contact your State Agency listed below:

Michigan Dept of Technology, Management and Budget
Labor Market Information - QCEW
3032 West Grand Blvd
Detroit, MI 48202-6032
Phone: (313) 456-3070 Fax: (313) 456-3150 Email: MWR_MI@bls.gov

GENERAL INFORMATION

This Multiple Worksite Report (MWR) collects employment and wages by individual work location in this State. If you operate businesses from more than one location under the Unemployment Insurance Account Number (U.I. Number) shown above, the MWR supplements your Quarterly Contributions Report. Data from the MWR enable our agency to monitor and analyze conditions of business activities by geographic area and industry in this State. The information collected on this form by the Bureau of Labor Statistics and the State agencies cooperating in its statistical programs will be used for statistical and Unemployment Insurance program purposes, and other purposes in accordance with law.

PAPERWORK REDUCTION ACT STATEMENT

We estimate that this form will take from 10 minutes to 60 minutes to complete per response, with an average of 22 minutes. This includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this information. If you have any comments regarding these estimates or any aspect of this form, send them to the Bureau of Labor Statistics, Division of Administrative Statistics and Labor Turnover, Room 4805, 2 Massachusetts Avenue N.E., Washington, D.C. 20512. The OMB control number for this survey is 1220-0134 and it expires on 10/31/2022. Without a currently valid OMB number, BLS would not be able to conduct this survey.



U.I. NUMBER: 1234567890 In Michigan

DUE DATE: APRIL 30, 2021

MWR FAQ: <https://www.bls.gov/respondents/mwr/questions-and-answers.htm>

QUESTIONS?
Michigan Dept of Technology, Management and Budget
Labor Market Information - QCEW
3032 West Grand Blvd
Detroit, MI 48202-6032
Phone: (313) 456-3070 Fax: (313) 456-3150
Email: MWR_MI@bls.gov

For additional information: <https://www.bls.gov/respondents/mwr/>

INSTRUCTIONS

1. **WORKSITE LIST:** Every individual worksite (business location) for your company in this state is listed.
 - **NAME/ADDRESS/DESCRIPTION:** Review this information and update as needed.
 - **EMPLOYMENT:** Enter employment for each month of the quarter. Employment is the total number of full- and part-time employees who worked during or received pay for the pay period which includes the 12th of the month. Include all employees who were subject to Unemployment Insurance laws.
 - **WAGES:** Enter wages paid during the quarter that are subject to State Unemployment Insurance laws, including the portion that exceeds the State's taxable wage base. **Round wages to the nearest dollar.**
 - **LARGE CHANGES:** Use the space beside the worksite to explain any large changes in employment and/or wages. Changes might result from store closings, strikes, layoffs, bonuses, seasonal increases or decreases, or similar events.
 - **CLOSED OR SOLD:** If a worksite has been sold, closed, or is otherwise inactive, use the space beside the worksite to show:
 - (a) the date closed or sold; (b) if sold, the name of the company that bought the business at that worksite; and (c) the purchaser's U.I. Number.
2. **ADDING WORKSITE(S):** If your business has worksites in this state that are not listed, use the available blank lines or attach a separate page with any missing worksites.
 - a. Business name, physical address (no P.O. boxes), city, state, and zip code
 - b. Description for each worksite (plant name, store number, or similar description)
 - c. Number of employees for each month of the quarter and quarterly wages
 - d. Main business activity at the worksite (office, warehouse, branch bank, or similar description)

If you purchased any of these worksites from another company, please provide the seller's company name, U.I. Number and the effective date of the sale.
3. **TOTALS:** For each month, sum the number of employees and wages for the quarter at all worksites. **The totals on this form must match the corresponding totals on your Quarterly Contributions Report (QCR).** Your state's QCR form number is listed in the totals section.
4. **SUBMIT:** Return your completed MWR form in the enclosed envelope. Forms are scanned at a central processing facility.

PURPOSE OF THIS REPORT

This Multiple Worksite Report (MWR) collects employment and wages by individual work location in this State. If you operate businesses from more than one location under the Unemployment Insurance Account Number (U.I. Number) shown above, the MWR supplements your Quarterly Contributions Report. Data from the MWR enable our agency to monitor and analyze conditions of business activities by geographic area and industry in this State. The information collected on this form by the Bureau of Labor Statistics and the State agencies cooperating in its statistical programs will be used for statistical and Unemployment Insurance program purposes, and other purposes in accordance with law.

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2b. Automating Proof Review

- MWR web letters are sent out to respondents and the state and company info on these need to be verified
- These are currently being manually reviewed, thousands at a time
- I established groundwork with code that can automate a proof review process

2b. Automating Proof Review

- I wrote code that can draw out relevant data from a state excel sheet and from company txt files to compare to data from the web letter PDFs
 - ▶ This could help save 100s of work hours and tax dollars

3. The Problem

- My office would like to look at a profile of non-respondents to their Multiple Worksite Report (MWR) census to help improve response rates
 - ▶ Eligible population is constantly shifting, making this analysis important, but difficult to organize
 - ▶ Looking at one quarter of data to analyze (2021 1st quarter)

4. Methodology Breakdown

- I. Gathering and cleaning MWR respondent data
- II. Adding this data to a structured database
- III. Analyze and plot this data

4. Methodology I.

- Gather all relevant data:
 - ▶ State Historical Files (SHF)
 - ▶ Web, Print, and EDI responses
 - Electronic Data Interchange Center (EDI) – Companies with a large number of worksites in multiple States submit a file upload that is processed at the EDIC.
- Combine these .txt files so they are easily iterable by a program
- Clean up these files to only include relevant variables
 - ▶ Unemployment Insurance Number (UIN- serves as unique firm identifier)
 - ▶ Reporting Unit Number (RUN- serves as a unique establishment identifier)
 - ▶ Employment data

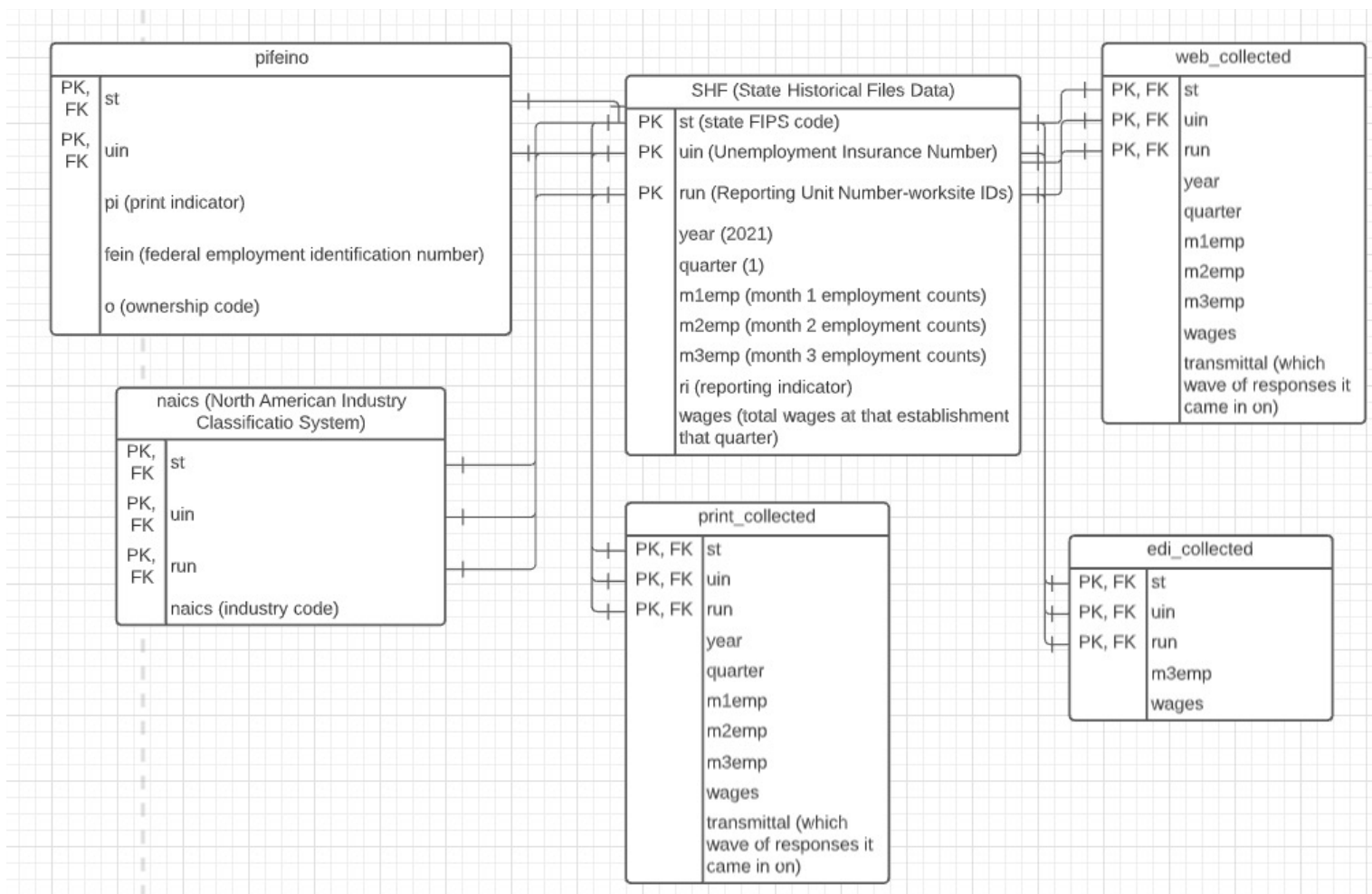


4. Methodology II.

- Write a code file to add all this data to a database so it is easy to work with
- Create an efficient database to ensure structural integrity (unique values, linkages)



4. Database Structure

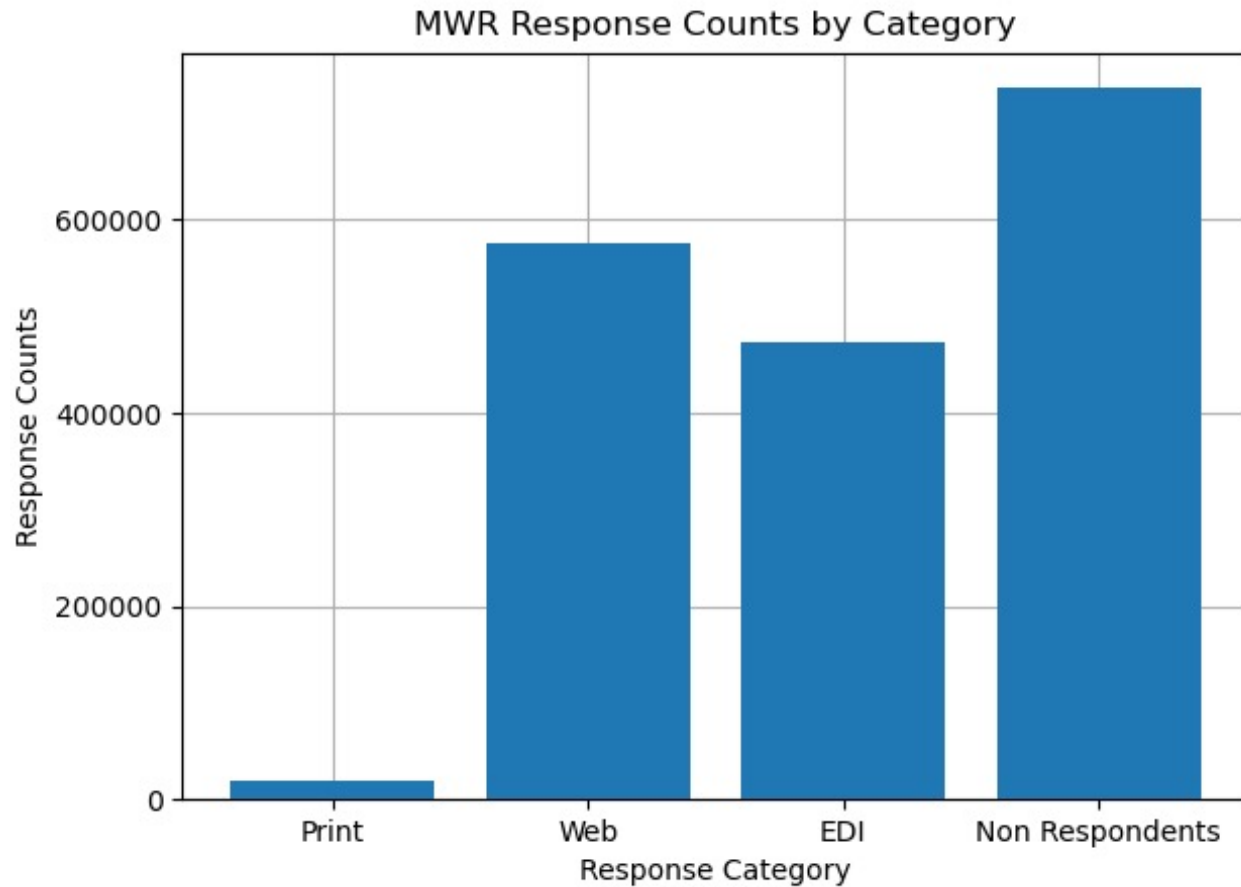


4. Methodology III.

- Write a code file to gather relevant data to procure graphs for analysis
- Plot this data to convey relevant information

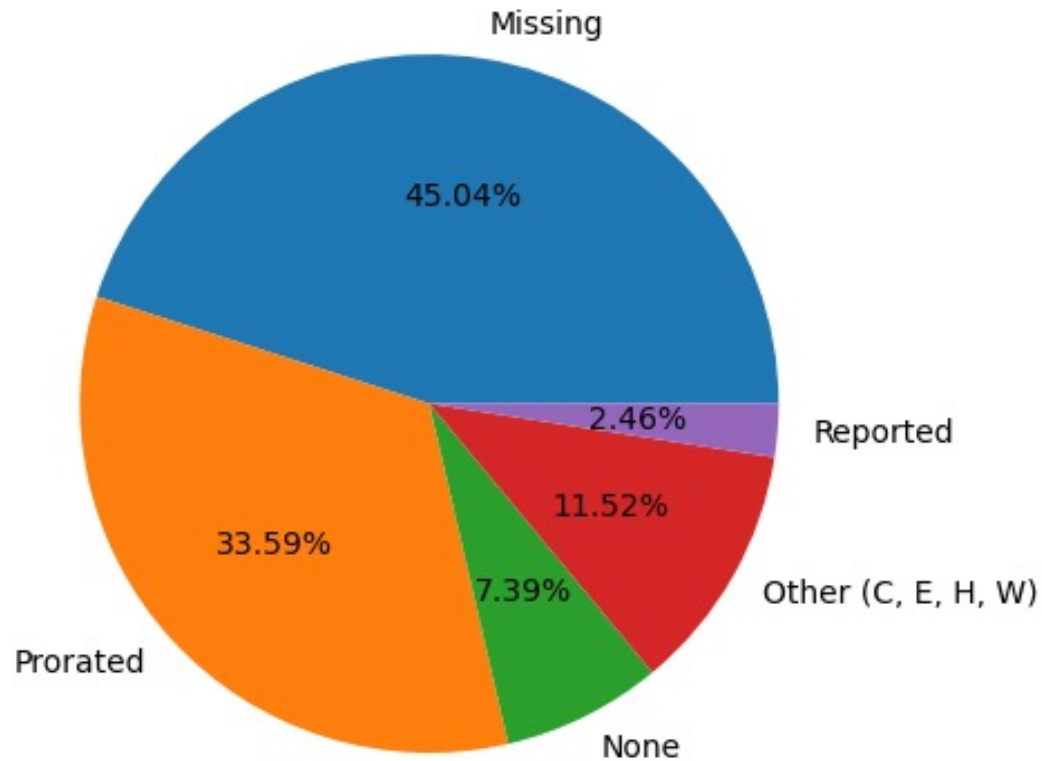
matplotlib

5. Results I.



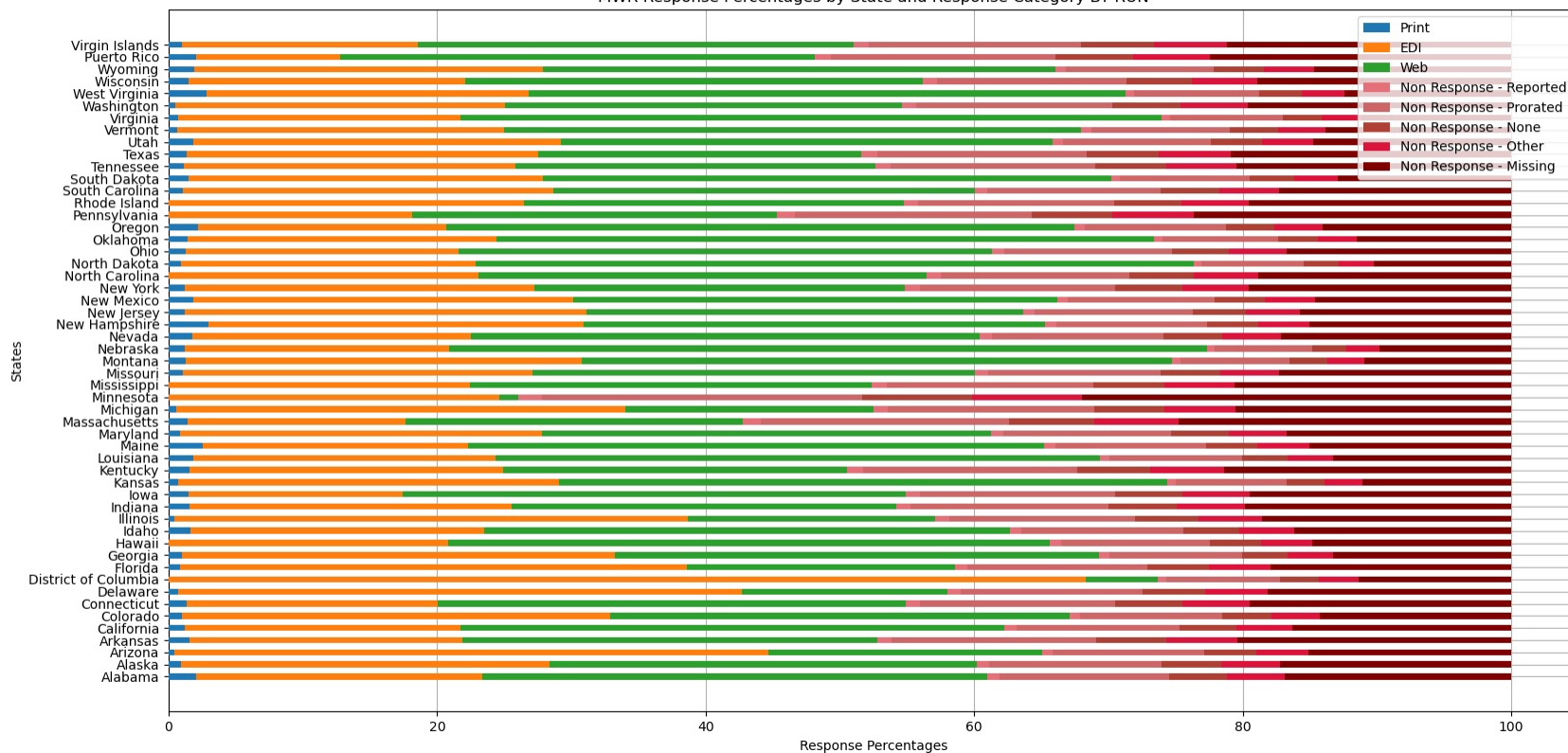
5. Results II.

Reporting Indicators of MWR Non-Respondents

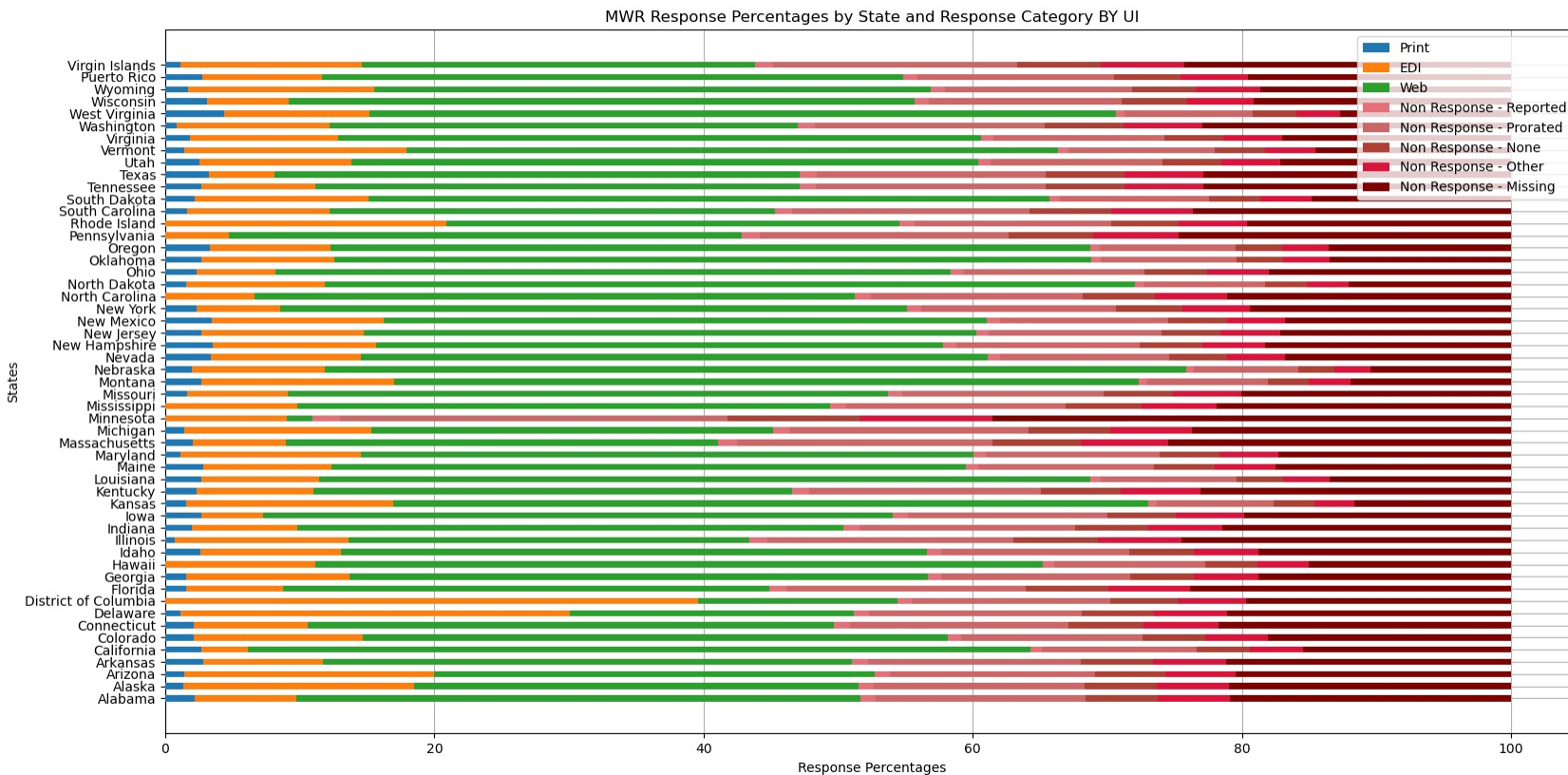


5. Results III.

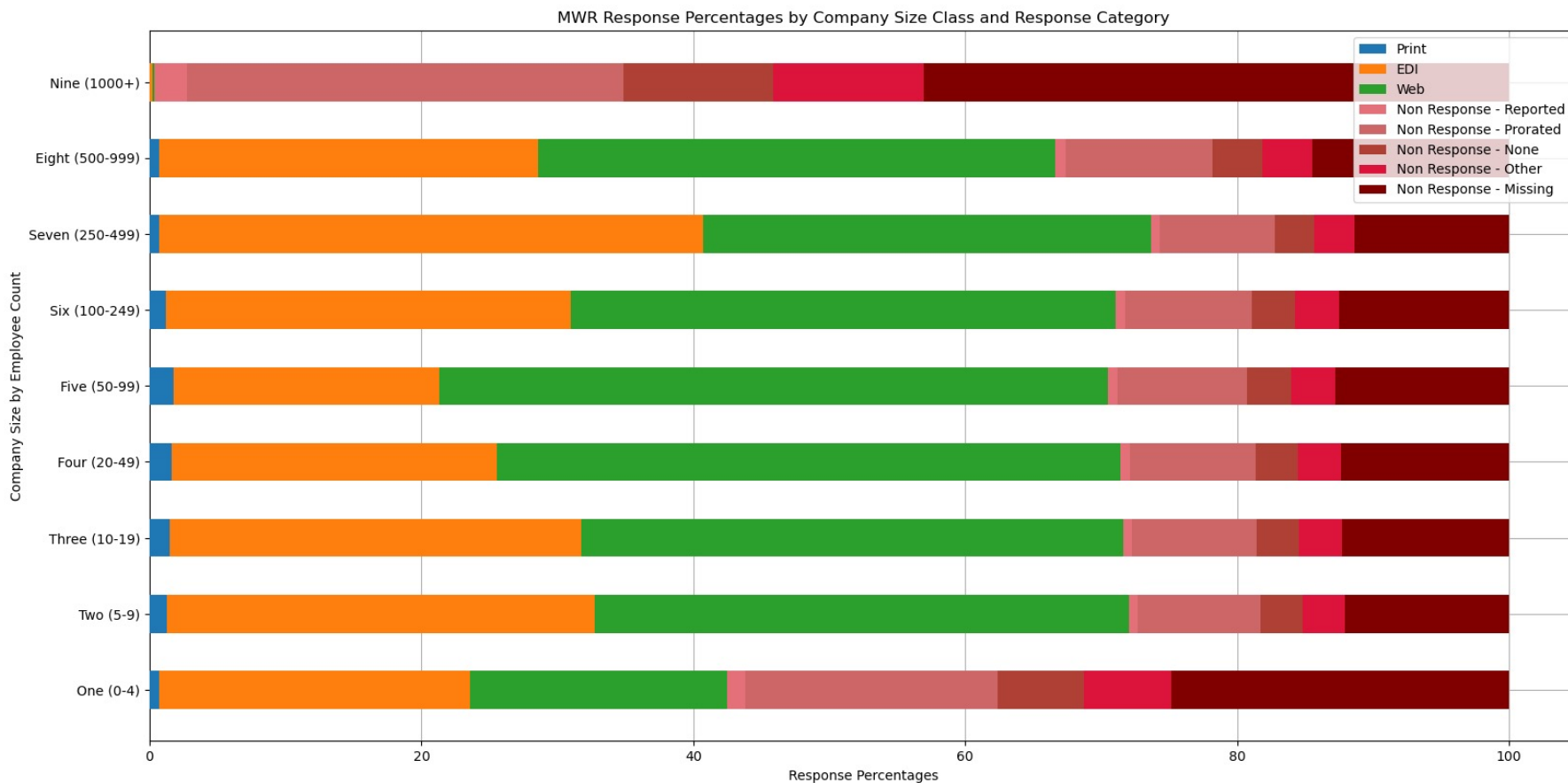
MWR Response Percentages by State and Response Category BY RUN



5. Results IV.



5. Results V.



6. Conclusions

- Successful push from print to web
- Smaller proportion of “reported” indicators than expected
- There’s groundwork to specifically target different groups of non-respondents (by state, establishment size, etc.) to increase their response rates
- This quarter may have some anomalies (pandemic), so it’ll be good to continue this analysis over time

Contact Information

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Office of Employment and Unemployment
Statistics

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