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Leveraging Administrative Data for Program Evaluation and Research

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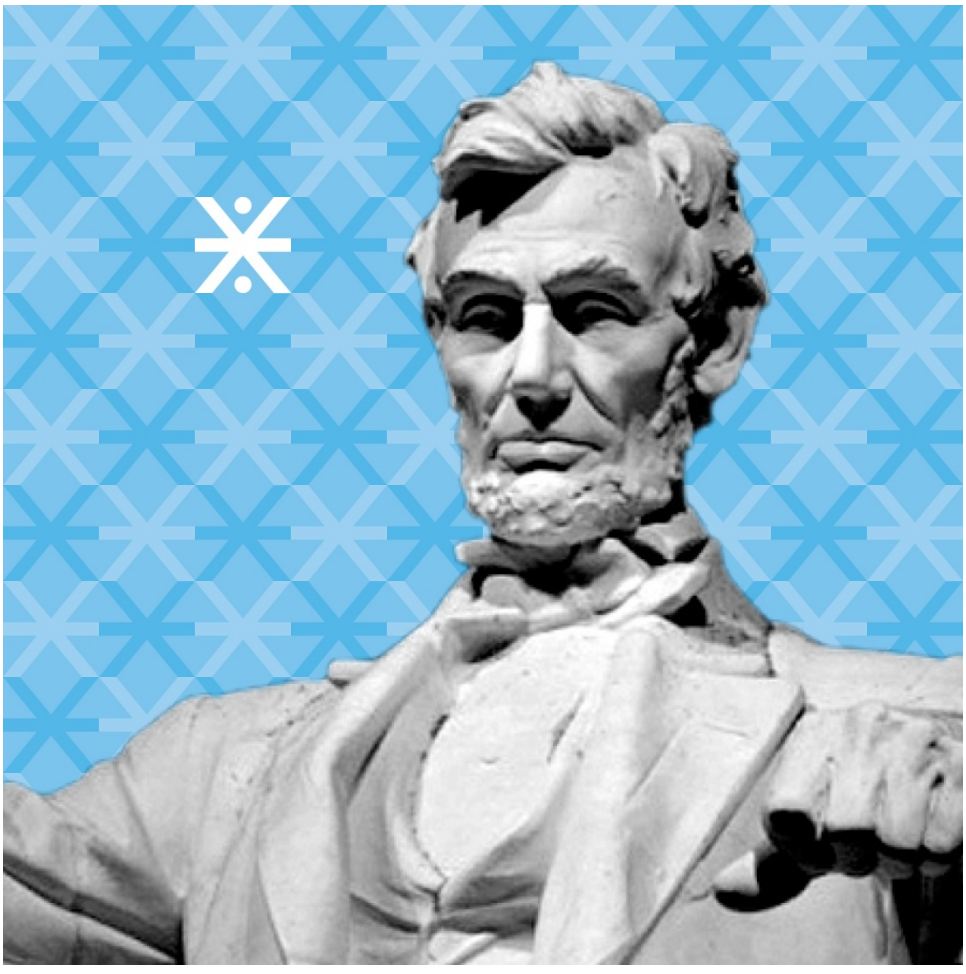

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Table of Contents

Executive Summary

In recent years, federal agencies have increasingly used administrative data to conduct program evaluation and research. These agencies recognize that administrative data provide a more efficient and cost-effective alternative to primary data collection or external data. The Department of Labor (DOL) has been an early adopter of integrating administrative data into evaluation and research. With the Administrative Data Research and Analysis contracts awarded in 2012 and 2015 and the Data Analytics Unit established in 2014, DOL took huge strides in using administrative data.

In this white paper, Summit Consulting, LLC (Summit) discusses how DOL can build on early successes with using administrative data. The paper draws on the last six years of experience working with DOL's worker protection and workforce development agencies and expertise with the administrative data of many of DOL agencies. Four specific ways DOL can more fully integrate administrative data into evaluation and research include the following:

- Consider administrative data first and fully for all research and evaluation projects.
- Standardize and document the process for transforming administrative data into research-ready datasets.
- Factor evaluation and research needs into designing or refining data collection systems.
- Leverage external data sources to supplement administrative data's utility.

Case Studies in Administrative Data Usage at DOL

- **Wage and Hour Division (WHD)**—Impact Evaluation of WHD's enforcement actions on recidivism
- **Occupational Safety and Health Administration (OSHA)**—Impact Evaluation of OSHA State Plans
- **Employee Benefits Security Administration (EBSA)**—Analysis of the Effect of Major Case Initiative on Enforcement Portfolio
- **Veterans Employment and Training Service (VETS)**—Comprehensive Evaluation of Jobs for Veterans State Grants (JVSG) Program
- **Office of Trade Adjustment Assistance (OTAA)**—Impact Evaluation of Secondary Outcomes for TAA Program

Summit also presents a series of case studies that provide concrete examples of potential evaluation and research projects using DOL administrative data. These case studies span a variety of DOL worker protection and workforce development agencies and programs. Summit developed these case studies to be relevant to the specific regulatory and programmatic priorities of the agencies. Moreover, DOL can carry out all of the proposed studies using only administrative data and publicly available data, such as the Current Population Survey (CPS). The case studies include information on the proposed research and questions, data sources, methodology, and benefits to the agency of conducting the proposed research.

Introduction

In recent years, federal agencies have increasingly used administrative data to conduct program evaluation and research. As outlined in the Office of Management and Budget (OMB) memorandum M-10-01, the current administration encourages agencies to conduct evidence-based evaluations of their programs to guide budgeting and program implementation.[1] As part of this shift toward evidence-based evaluations, the administration stresses using administrative data as a preferable alternative to collecting primary data. For instance, the FY2016 proposed budget outlines the efficiency and cost effectiveness advantages of using administrative data for program evaluation.[2]

The Department of Labor (DOL) has been an early adopter of integrating administrative data into evaluation and research. DOL established the Chief Evaluation Office (CEO) in 2010 to coordinate, manage, and implement DOL's evaluation program. In 2012 and 2015, CEO awarded the Administrative Data Research and Analysis (ADRA) contracts to promote use of administrative data in large scale evaluation and research studies. In 2014, CEO established the Data Analytics Unit to design and conduct quick turnaround analyses of DOL programs using the agencies' administrative data. Similarly, since 2012, the Employee Benefits Security Administration (EBSA) has integrated their administrative data sources (Form 5500 data, OE investigative data, OA audit data) with external data sources to support program research and evaluation.

In coming years, DOL will likely rely even more on agency administrative data for evaluation and research. The incoming administration will likely involve a shift in DOL enforcement priorities. This shift will require the department to use data sources nimble enough to accommodate many different types of research. Moreover, the department may experience budget reductions over the next four fiscal years, which will require agencies to leverage cost-effective data sources for research.

What Are Administrative Data?

- Any data collected by the agency for the design, implementation, or monitoring of a program

What Are the Advantages of Administrative Data?

- More directly related to the program than external data
- Less costly to collect than primary data
- More timely and regularly collected than external or primary data
- Able to provide causal results similar to using primary data

In this white paper, Summit discusses how DOL can build on early successes with using administrative data for evaluation and research. The paper draws on experience with DOL agencies to propose specific solutions for further integrating administrative data into evaluation. Additionally, this paper includes a series of case studies with concrete examples of evaluation and research projects using DOL administrative data.

[1] https://www.whitehouse.gov/sites/default/files/omb/assets/memoranda_2010/m10-01.pdf
[2] https://www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/ap_7_evidence.pdf

Advancing the Use of Administrative Data for Evaluation and Research

Consider Administrative Data First for Evaluation and Research

DOL agencies should consider administrative data first and fully for all research and evaluation projects. Administrative data have many advantages over primary data collection. Moreover, we can use administrative data for a wide range of evaluation and research projects. However, if agencies only consider administrative data as a fallback option, they are less likely to use the data at all.

To determine whether administrative data is suitable for analysis, Summit uses a triage method developed by Dr. David Levine, Professor of Business Administration at University of California Berkeley. The triage method focuses on three questions about the administrative data:

- Is the data *large enough* to detect program effects and support robust analysis?
- Has the agency *collected the data long enough* to allow for multi-year analysis?
- Does the data include a *natural randomization or* information for a *potential control group*?

These three questions can help DOL agencies determine if their administrative data can support evaluation and research. The agencies should consider primary data collection *only after* determining their administrative data is insufficient or unsuitable for research. Additionally, agencies could request researchers show in proposals or analysis plans that administrative data is unsuitable for the project before proposing primary data collection.

How Can Administrative Data Be Used?

- Full Program Evaluation
- Rapid Cycle Evaluation
- Basic Research
- Needs Assessment
- Predictive Modeling
- Business Intelligence Tools
- Prototyping
- Sampling Frame for Data Collections
- Public Use Files for External Researchers

Standardize Processes for Transforming Administrative Data into Research Datasets

DOL agencies should standardize and fully document the processes used to transform their administrative data into research-ready datasets. This work allows agencies to proactively establish best practices for working with administrative data. These best practices can ensure that researchers use the data appropriately, decrease the amount of time needed to familiarize researchers with the data and eliminate duplicative efforts of new researchers in working with the data. All of these benefits increase the utility of the agency's administrative data for research and evaluation.

Agencies can use the work of current research projects to develop, refine, and document best practice methods for using their administrative data. The agencies could request researchers provide a detailed summary of the data quality review and cleaning process used to create the research dataset, including a list of any data quality issues found and corrected. The project's final report could include this information as an appendix or supplemental document. For example, at the conclusion of each research study, Summit provides a summary of the data quality review and cleaning process in the final report.

Agencies can use the information submitted by researchers to develop a best practices manual for working with administrative data. The manual should include enough detailed and comprehensive

information to enable a researcher unfamiliar with the data to easily create a research-ready dataset. The agency could distribute this best practices manual to all researchers at the start of new projects.

Consider Evaluation and Research When Designing Data Collection Systems

DOL agencies should work to integrate evaluation and research concerns when designing administrative data collection instruments and processes. This work will help ensure the agency's administrative data can support research and evaluation needs. Agencies should elicit input and feedback from researchers and experienced data users at each step of the data collection process: initial design, planned re-designs, and periodically over the course of the program's implementation.

What Should Be Included in a Best Practices Manual?

- The data's collection process, structure, size, and unit(s) of analysis
- Any known data quality issues and their resolutions
- Steps for linking data internally and creating a flat file with important variables

At each point, input from researchers and data users will help agencies think proactively about how the data collection system can better support research and evaluation. For instance, this input can help agencies design instruments that better capture information important to evaluation, such as outcomes and program or participant characteristics. For example, last fall, Summit provided public comments on the research opportunities opened up by EBSA's proposed changes to the Form 5500 questionnaire and collection process.

Leverage External Data Sources to Supplement Administrative Data

DOL agencies should leverage external data sources to supplement their administrative data. External data can help administrative data support more in-depth evaluation, provide more contextual information about the agency's regulatory or participant population, or enable a wider variety of research and evaluation topics. In recent studies for WHD, Mining Safety and Health Administration (MSHA), and OTAA, as well as ongoing work with EBSA, Summit has linked DOL administrative data to external data sources such as Experian, STR Global, and the American Community Survey. To best use external data in research, agencies should consider the full range of available data: administrative data from other agencies, public use surveys, and proprietary data collections. Likewise, the agencies should ensure their administrative data is ready to link to common external data sources. This includes confirming the data includes commonly used unique identifiers (e.g. Employer Identification Number [EIN]) and/or identification information in standardized formats (e.g. state and county information in Federal Information Processing Standard [FIPS] codes).

Case Studies of Using Administrative Data for Evaluation and Research at the Department of Labor

In the following section, Summit presents a series of case studies that provide concrete examples of potential evaluation and research projects using DOL administrative data. These case studies span a variety of DOL worker protection and workforce development agencies and programs. Summit drew on CEO and DOL agency experience to develop a set of case studies relevant to agency-specific regulatory and programmatic priorities. Moreover, DOL can carry out all of the proposed studies using only the respective agency's administrative data and widely available external data. The case studies include information on the proposed research and questions, data sources, methodology, and benefits to the agency of conducting the proposed research.

Staffing

To complete the research proposed in the following case studies, DOL would need a research team that includes research analysts and programmers working under senior analysts (task leads), all overseen by a project director who is supported by one or more principal investigators. The research team as a whole would need to have experience working with most of DOL's administrative data including OSHA, WHD, MSHA, Office of Workers Compensation Programs (OWCP), EBSA, Office of Federal Contracting Compliance Programs (OFCCP), Office of Labor Management Standards (OLMS), and Employment and Training Administration (ETA). Likewise, the research team would need to have expertise with the following aspects of using administrative data for research and evaluation:

- Identifying and resolving data quality issues to produce a research-ready dataset
- Identifying or creating appropriate comparison groups for impact analyses
- Linking data across multiple internal databases and with external data
- Identifying, applying, or adapting complex statistical methods as appropriate for analysis
- Creating longitudinal datasets
- Communicating complex analysis results both orally and in writing

Deliverables

The research team could provide a final report on the results of the evaluation or analysis and a briefing to relevant DOL staff. The final report and briefing materials would be of publication-ready quality. In addition, for select studies of interest to DOL, the research team could provide additional public dissemination materials, including infographics, web content, or issue briefs.

Timeline

Assuming access to the proper DOL data set and the deployment of properly selected key personnel and staff members, a research team should be able to complete each proposed study within 26 to 52 weeks. Proposed studies such as predictive analyses and outcomes evaluations may take only 26 weeks to complete. However, projects such as impact evaluations and database refinement may require up to 52 weeks to complete. DOL could complete the set of studies proposed for each agency within 52 to 78 weeks. With two researcher teams working concurrently, DOL could complete the entire series of proposed studies within 130 to 195 weeks (2.5 to 3.75 years).

Wage and Hour Division

Research and Evaluation to Support WHD's Strategic Enforcement Initiative

In plans for FY2017, the WHD continues implementation of its strategic enforcement initiative.[3] The agency continues to emphasize directed investigations rather than reactive investigations, focusing on industries and establishments where evidence shows the largest potential for violations. In addition, WHD directs resources on enforcement activities with compliance effects beyond a specific investigated establishment to the larger industry where the establishment operates. In both cases, the agency focuses on a particular set of priority industries that disproportionately employ low wage workers and that are increasingly operating under fissured work structures (i.e. where the ownership of an establishment is separated from the management/responsibility of the establishment's workforce).

Proposed Research

Summit proposes a set of research and evaluation studies to support WHD's strategic enforcement initiative. These studies include two predictive analyses to help WHD better identify the establishments most likely to violate Fair Labor Standards Act (FLSA) wage regulations and the characteristics of establishments most associated with these violations. The proposed research also includes an evaluation of the impact of WHD enforcement actions on recidivism in FLSA wage violations.

Proposed Research for WHD

- Perform Predictive Analysis of Establishments Most Likely to Violate FLSA Wage Regulations
- Conduct Predictive Analysis of Establishments with Highest Likelihood of Recidivism
- Evaluate the Impact of Enforcement Actions on Establishment Recidivism

Research Question 1: Which establishments are most likely to violate FLSA wage regulations and which characteristics of establishments are most associated with violating these regulations?

This analysis focuses on WHD priority industries, particularly those industries affected by fissured work structures such as the janitorial and landscaping services, hotels and motels, fast food service, and child care services. The analysis specifically considers the effect of fissured work structures on establishments' likelihood to violate wage regulations.

Research Question 2: Which violator establishments are most likely to recidivate and which characteristics of establishments are most associated with this recidivism?

This analysis will examine two types of recidivism: (1) committing any FLSA wage violation and (2) committing the same kind of FLSA wage violation.

Research Question 3: Do WHD enforcement actions (such as assessed back wages owed and civil penalties) lead to decreased recidivism?

[3] FY2017 Congressional Budget Justification, Wage and Hour Division.

Benefits to WHD

The studies proposed here help WHD advance a strategic enforcement initiative in two important ways. The predictive analyses help WHD identify common establishment characteristics that are most predictive of FLSA wage violators and wage violation recidivists. These results help WHD strategically target investigative and enforcement resources on establishment types that make up the bulk of violators and recidivists and whose compliance will have the largest impacts. The impact evaluation helps WHD identify specific enforcement activities—such as assessed civil penalties or back wages owed—that lead to lower recidivism. This information helps WHD strategically employ enforcement actions that have both immediate and long term effects at reducing non-compliance, thereby improving the overall impact of WHD enforcement activity.

Data Sources

These studies primarily use WHD Wage and Hour Investigative Support and Reporting Database (WHISARD) for the investigations, violations, and enforcement process data as well as the investigated establishments' characteristics. For the predictive analyses, we will need to control for the selection bias of the non-random nature of WHD investigations. As a result, the studies link WHISARD data with external data sources that provide a census of establishments in the priority industries.

Methodology

The predictive analyses employ standard predictive modeling methods of training and testing samples with respective separate model fit criteria. The analysis may use path-dependent selection techniques (such as forward or hybrid selection) but may also employ other selection techniques such as Least Absolute Shrinkage and Selection Operator (LASSO), as appropriate.

For the impact evaluation, Summit uses standard difference-in-difference or difference-in-means methods to compare the recidivism rates between violator establishments that were assessed a civil penalty or back wages owed (treatment group) and those that did not receive either type of enforcement action (control group). Summit will utilize standard methods for constructing the control group, such as propensity score matching, exact matching, or synthetic control.

Occupational Safety and Health Administration

Impact Evaluation of OSHA State Plans

State Plans are job safety and health programs approved by the Occupational Safety and Health Administration (OSHA) and operated by individual states instead of the federal OSHA. OSHA conducts Federal Annual Monitoring Evaluations (FAMEs) of the 28 State Plans operating each fiscal year. FAMEs usually consist of an onsite review of a random sample of case files to determine if the state follows policies and procedures and to verify outstanding items from previous years' FAME findings.

Proposed Research

Summit proposes adding an impact evaluation to State Plan FAMEs, examining the following research questions.

Research Question 1: Did the State Plans reduce injury and illness rates and the number of violations?

Research Question 2: Which State Plans have the lowest impact on injury and illness rates and the number of violations?

Proposed Research for OSHA

- Conduct an Impact Evaluation of OSHA State Plans
- Refine VPP Automated Database System to Support Evaluation and Research

Benefits to OSHA

Adding an impact aspect to FAMEs allows OSHA to determine whether the State Plans are effective at reducing injury and illness rates and violations. The impact evaluation also allows for identifying State Plans that are more and less effective at advancing workplace safety and health. This enables OSHA to allocate enforcement resources more efficiently and better channel efforts towards fulfilling the OSHA mission.

Data Sources

The impact evaluation uses the OSHA administrative database, particularly the records of establishments located in the State Plans, to follow injury and illness rates and violation rates by state over time. The evaluation assesses workplace safety and health using injury and illness rates as measured by the days away, restricted, or transferred (DART) case rates and the number of violations by employers in the state. On June 1, 2015, establishments located in State Plans started adopting OSHA's new reporting requirements. The impact evaluation would use non-State Plan states' administrative records as comparisons, including the inspection results, and OSHA Form 300A data.

Methodology

This study would apply quasi-experimental methods to currently available administrative data. For example, a differences-in-differences method comparing State Plan effectiveness in reducing injury and illness rates to other State Plans and to non-State Plan states could identify the best performing State Plans. OSHA could use propensity score matching algorithms based on socioeconomic and macroeconomic characteristics to identify pairs of states for comparisons.

Refine VADs to Allow for Impact Evaluations of VPP Program

The Voluntary Protection Programs (VPP) recognize private and public sector employers who have implemented effective safety and health management systems and maintain injury and illness rates

below national Bureau of Labor Statistics averages for their respective industries."[4] In FY2017, OSHA intends to pursue a new or enhanced VPP Automated Database System (VADs) to allow for consolidating VPP applicant and participant data, validate the transition of data, and explore enhancing functionality of these systems to allow for electronic reporting by VPP participants.[5]

Proposed Project

Summit proposes helping OSHA with developing the VADs into an integrated database that can facilitate evaluation and research efforts. Transforming the VADs into a research-ready database would require work in the following four main areas: cleaning data, managing data, measuring outcomes, and integrating data.

Table 1: Proposed Tasks and Specific Activities for OSHA VADs

Proposed Tasks	Specific Activities
Task 1: Cleaning Data	• Conduct checks of basic data formatting, missing values, cleaning requirements and logical connections between data fields during the VADs data input process. • Control manual entries using a pre-set selection list to minimize manual entry errors.
Task 2: Managing Data	• Prevent records from being over-written without a log of data changes. • Automatically assign each observation type (e.g. inspection, employer, citation, violation) a unique identifier created by the system.
Task 3: Measuring Outcomes	• Standardize measures for program evaluation (e.g. injury and illness rates, violation codes, participant info) to ensure comparisons to other OSHA data.
Task 4: Integrating Data	• Add FIPS-codes (county), zip codes, and detailed NAICS codes (industry) to the data so the data can be merged with external data sources, such as public surveys. • Standardize street address and business names to allow for linking to proprietary data.

Benefits to OSHA

By integrating research concerns into the continued design of the VADs, OSHA helps ensure the administrative data collected for the VPP program supports future evaluation needs. As a result of this work, OSHA could conduct impact evaluations and other reproducible research projects relying on the VADs data. This benefit helps OSHA identify high performance areas and detect potential inefficiencies in VPP operations using rigorous statistical methods *without* having to collect additional, custom data.

[4] https://www.osha.gov/dcsp/vpp/
[5] FY 2017 Congressional Budget Justification, Occupational Safety and Health Administration https://www.dol.gov/sites/default/files/documents/general/budget/CBJ-2017-V2-12.pdf

Employee Benefits Security Administration

Analysis of EBSA Changes to Performance Metrics and Major Case Initiative

In fiscal year 2015, the EBSA reshaped enforcement performance metrics to reflect the outcomes associated with each investigation rather than the number of investigations closed with a finding of noncompliance. These revisions furthered the EBSA goal of defining quantitative performance metrics that reflect the enforcement program's *impact* on participants and beneficiaries. During the same year, EBSA shifted a great deal of enforcement resources toward their Major Case initiative, prioritizing complex, high-impact investigations that take a great deal of resources over those they could close quickly with minor corrections. As a result, the number of investigations opened each year decreased substantially from over 3,000 per year to around 1,500 per year. The composition of the EBSA enforcement portfolio also changed significantly to reflect an increased emphasis on major cases.

Proposed Research

Summit proposes studying the impact of EBSA enforcement efforts as a portfolio of civil and criminal investigations and how this portfolio has changed over time. Working with the Office of Enforcement, our team would design a set of research questions examining these changes in EBSA enforcement priorities and portfolio and the FY2015 change in performance metrics. Summit could help EBSA perform the following studies in these areas.

Proposed Research for EBSA

- Analyze Effects of Major Case Initiative on Enforcement Portfolio
- Examine How Refined Performance Metrics Change the Assessment of Program Effectiveness

Research Idea 1: Conduct an analysis of EBSA enforcement portfolio changes related to priorities shifting to emphasize Major Cases. This research examines the five-year period around the EBSA shift in enforcement priority, FY2013–FY2017. The analysis focuses on the following four aspects of change:

- *Total Resources:* What was the total amount of resources (defined as total staff hours) expended each year for the EBSA enforcement program?
- *Composition of Resources:* What proportion of total staff hours does the agency spend on Major Case Initiative investigations? How has this allocation of resources changed over time?
- *Impact of Resources:* How often do Major Case Initiative investigations fail to close with major results? What level of resources do these investigations consume? Are decertified investigations often close to meeting the definition of a Major Case or are they likely to close with no results?
- *Missed Opportunities:* Are there certain types of plans the agency is less likely to investigate due to shifting priorities?

Research Idea 2: Conduct a comparative analysis of how changing performance metrics changes the view of the EBSA enforcement program effectiveness. This research examines the five-year period around the EBSA change in performance metrics, FY2013–FY2017. The analysis focuses on the following three aspects of change in EBSA performance metrics.

- *Changing Performance Rankings:* Are there regions, types of investigations, or types of plans that look better or worse performing after changing the metric perspective?

- *Effects on Legacy Programs:* Are there legacy enforcement programs that require a great deal of resources but appear to perform poorly when assessed under the new metrics?
- *Providing Evidence of Effectiveness:* Do the new performance metrics provide sufficient evidence to justify performing fewer investigations but using the same amount of total resources?

Benefits to EBSA

These studies provide quantitative evidence to support the new EBSA approach to Employee Retirement Income Security Act (ERISA) enforcement, demonstrating that EBSA continues to increase impact on the benefit plan community by better focusing enforcement resources. These studies also provide EBSA with detailed information to continue improving the targeting of enforcement resources and refinement of performance metrics.

Data Sources

Summit anticipates these research questions could be answered using EBSA Enforcement Management System (EMS) data. EMS is a case management system that contains rich information on plans under investigation, investigation outcomes, and the resources expended pursuing each investigation. Case records for over 15 years of investigations are stored in EMS, facilitating longitudinal studies. Summit may link the EMS data with EBSA Form 5500 data as needed to provide complementary information on the characteristics of plans investigated and not investigated under changed enforcement priorities and performance metrics.

Methodology

Summit expects to use primarily descriptive and correlational statistical methods to conduct these analyses. Our team also examines near-term time trends for some of the questions considered in these analyses, such as changes in the total resources expended for the EBSA enforcement program.

Veterans Employment and Training Service

Research to Support VETS JVSG Program

The Veterans Employment and Training Service (VETS) seeks to be "the nationally recognized leader in helping veterans, service members and spouses find good jobs."[6] VETS implements the JVSG program to target veterans with significant barriers to employment. The JVSG program provides veterans with intensive employment services and proactively connects them with the local job market. Preliminary analyses show that JVSG participants generally benefit in terms of employment and earnings relative to veterans who do not participate in the JVSG program.[7] Accordingly, VETS has established aggressive goals for implementing the JVSG program and ensuring they extend coverage to all qualifying veterans.

Proposed Research

Summit proposes to design and conduct a comprehensive impact evaluation of the JVSG program to support VETS in demonstrating program effectiveness. This comprehensive evaluation includes the following two main components:

Proposed Research for VETS

- Comprehensively Evaluate the JVSG Program Impact
- Conduct an Analysis Predicting which JSVG Participants are Least Likely to Receive Intensive Services

Research Question 1: What is the impact of the JVSG program on key VETS outcomes (entering employment, employment retention, and earnings)?

Research Question 2: What is the dollar-value benefit of the JVSG program, estimating the impact on participant earnings relative to the total program budget (i.e. a program multiplier)?

Summit also proposes to design and estimate a statistical model to predict the likelihood of JVSG participants to receive intensive services. This analysis answers a specific set of questions.

Research Question 3: Which JVSG participants are most and least likely to receive intensive services and which JVSG participant characteristics are most predictive of the participant's likelihood to receive intensive services?

Benefits to VETS

The impact evaluation on the JVSG program provides two main benefits to VETS. Currently, VETS allocates over 60% of total budget to the JVSG program. An impact evaluation, complete with a program multiplier, provides clear budget justification for this continued focus on the JVSG program. In addition, VETS wants to increase the proportion of participants receiving intensive services to 90 percent by 2017.[8] Clear and quantified impacts of the JVSG program on earnings and employment is one of the most effective outreach tools to increase JVSG participation. Likewise, the predictive analysis will help VETS identify types of participants that are particularly unlikely to receive intensive services and may need targeted outreach services.

[6] https://www.dol.gov/vets/aboutvets/aboutvets.htm
[7] https://www.dol.gov/asp/evaluation/completed-studies/VeteranNon-VeteranJobSeekers.pdf
[8] https://www.dol.gov/sites/default/files/documents/general/budget/CBJ-2017-V3-05.pdf

Data Sources

The proposed impact evaluation as well as the predictive model uses Wagner-Peyser employment services data. The Wagner-Peyser dataset follows individual participants from program enrollment to nine months after program exit. This dataset also includes all relevant outcome variables (earnings, employment) and a rich set of demographic variables (age, sex, race) used to conduct an evaluation of the program and to predict JVSG participants' likelihood to participate in intensive services. We use Wagner-Peyser data for information on both the JVSG participants and non-participants as well as for information on intensive services participants and non-participants.

Methodology

Summit could use propensity score matching coupled with difference-in-difference methods to estimate the impact of the JVSG program. Propensity score methods match program participants with statistically similar non-participants. The difference in difference of outcomes between the statistically-matched participants and non-participants represents the JVSG program's estimated impact.

The predictive analysis employs standard predictive modeling methods of training and testing samples with respective separate model fit criteria. The analysis may use path-dependent selection techniques (e.g. forward or hybrid selection) or other selection techniques (e.g. LASSO), as appropriate.

Office of Trade Adjustment Assistance

Evaluation and Analyses to Support the Trade Adjustment Assistance Program

The OTAA mission is to create career pathways that transition workers from jobs lost due to the effects of international trade to tomorrow's high-growth careers. OTAA fulfills this mission through managing and administering the Trade Adjustment Assistance (TAA) program. TAA assists U.S. workers who have lost or may lose their jobs as a result of foreign trade. It provides adversely affected workers with opportunities to obtain the skills, credentials, resources, and support necessary for reemployment. Since 1975, the TAA program has served more than 2 million U.S. workers. [9]

Proposed Research Idea 1: This study proposes to evaluate the impact of TAA services by answering the following research question: what is the effect of TAA services on non-traditional employment outcomes for TAA participants?

Examples of non-traditional employment outcomes we can use include:

Proposed Research for OTAA

- Evaluate Impact of the TAA Program for Additional Outcomes
- Examine Feasibility of Changing the Income Threshold for the A/RTAA program

- Helping participants transition into industries or occupations that are higher paying or show higher rates of employment growth
- Keeping older workers from dropping out of the labor force prematurely
- Decreasing the number of unemployment spells a participant experiences
- Decreasing the average length of unemployment spell
- Increasing average wage growth from pre-TAA participation to post-program completion

Benefits to OTAA

This analysis helps OTAA understand the TAA program impact on employment outcomes other than the three main employment outcomes: (1) entered employment, (2) retained employment, and (3) average earnings. The evaluation helps OTAA understand the program's longer term impacts on employment outcomes or impacts for specific populations of interest. This information informs and guides OTAA efforts to enhance or refine the TAA program.

Data Sources

TAA Management Information System (MIS) and Trade Act Activity Report (TAPR) databases supply the data for TAA participants. The Unemployment Insurance (UI) wage database could supply the data for workers that did not apply for services (the control group).

Methodology

Summit uses standard propensity score matching, exact matching, or synthetic control methods to construct a control group of otherwise similar TAA non-participants. In addition, the team uses standard

[9] OTAA 2015 Annual Report, pg. 2.

difference-in-difference or difference-in-means methods to compare the outcomes of the participant and non-participant groups and isolate the effect of TAA services on the outcome of interest.

Proposed Research Idea 2: This project examines the consequences of setting an income threshold for receiving A/RTAA benefits and the feasibility of altering or removing this income threshold. The project answers the following research questions:

- Does the current income threshold for A/RTAA benefits disproportionately exclude certain types of TAA participants?
- How do the employment outcomes differ for A/RTAA recipients and non-recipients (e.g. TAA participants who are not eligible for the benefit due to the income threshold)?
- How might participant characteristics and employment outcomes change if OTAA alters or removes the A/RTAA income threshold?

Benefits to OTAA

Researching these questions helps OTAA determine: (a) whether the current A/RTAA income threshold is excluding some workers that OTAA may otherwise want to include in the program and (b) whether the excluded workers are likely to see the continued employment disadvantages of the A/RTAA program. The analysis also provides information on the possible consequences to A/RTAA of changing the income threshold.

Data Sources

The OTAA MIS and TAPR databases primarily supply the data for this analysis. To supplement OTAA's administrative data for question three, Summit includes individual employment and earnings and regional economic data from a public use survey.

Methodology

The first part of the analysis (focusing on research questions 1 and 2) compares the participant characteristics and the immediate and longer-term employment outcomes for TAA participants who meet the A/RTAA income threshold (income < $50,000)[10] and those who do not. The second part of the analysis (focusing on research question 3) examines the feasibility of removing or altering the A/RTAA income threshold. Based on a set of policy changes identified by OTAA (e.g. increasing the income threshold to $75,000), Summit examines how these changes in the income threshold may change the size, composition, subsidy cost, and employment outcomes of the A/RTAA population.

[10] "These benefits are available if you are age 50 or older and you do not earn more than $50,000 annually in your new employment." Source: www.doleta.gov/tradeact/2015_amend_benfits.cfm

Conclusion

In recent years, federal agencies have increasingly used administrative data to conduct program evaluation and research. The DOL has been an early adopter of integrating administrative data use into evaluation and research. In this white paper, Summit discussed ways DOL can build on early successes with using administrative data for evaluation and research. Summit drew on experience with CEO and other DOL agencies to propose four specific ways DOL can further leverage administrative data in evaluation and research. In this paper, Summit also presented a series of case studies for select DOL agencies. The case studies include concrete examples of evaluation and research projects using agency administrative data that support enforcement and program priorities.

About Summit Consulting, LLC

Summit is a specialized analytics advisory firm that guides federal agencies, financial institutions, and litigators as they decode their most complex analytical challenges. Summit's staff of economists, econometricians, and research scientists use quantitative techniques to assist our clients as they model risk, evaluate program performance, and predict future performance.

At Summit, we solve complex analytical challenges with unparalleled customer service and extensive client collaboration. The solutions are complete only when they are understood by our clients and solve their problems. Our distinct capabilities include program evaluation, applied statistics and economics, mortgage finance, financial services, federal credit modeling and forecasting, and litigation analytics.

Summit hosts a solutions-focused academic environment and is dedicated to staying at—and pushing—the forefront of analytics best practices. To that end, our staff members present research at conferences worldwide and regularly partake in intensive in-house technical trainings. Our principals, academics, and research scientists are recognized experts in their fields, and they are capable of leading large and small solution teams.

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