The Jobs and Employment Data Exchange

A model for public-private collaboration to improve private data quality, access, and reliability for reuse by national statistical agencies

Matt Gee, Brighthive & University of Chicago Committee on National Statistics December 9, 2021
Understanding labor market dynamics is a critical area of focus for national statistics.

- Hiring & firing
- Changes in wages
- In-demand skills
- Occupational transition probabilities
Where We Find Data About Work

Surveys

Example Sources:
- National Compensation Survey
- OESS
- CPS
- O*NET DCP

Example Products:
- Wage data by MSA
- O*NET KSAs

Administrative Data

Example Sources:
- State Unemployment Insurance Records

Example Products:
- LEHD
- LODES

Private / Corporate Data

Example Sources:
- Applicant Tracking Systems
- Payroll platforms
- HR Information Systems
- Online worker profiles and job boards

Example Products:
- O*NET Hot Technologies
Relative Strengths & Limitations

Surveys

++ Design

- Uptake

- Precisely aligned to measurement concepts
- Increasing costs of collection
- Weak incentives for respondents
- Lack of local applicability / usability / value to respondents

Private / Corporate Data

- Design

+ Uptake

- Operationally critical data sources--> automated collection, high fidelity, and high volume
- Not aligned to a measurement concept
- Not consistent across organizations or over time
Current national statistical data products lack granularity, timeliness, and dynamism needed for many stakeholders & decisions.

Public-private collaboration & data reuse is possible (e.g. OpenSkills API)

Employers get high value in creating and using more structured data on jobs. Unless the data standards are built into their HR systems the cost & lift of producing standardized data is too high for most employers.

Vendors value and are willing to invest in standardization and enabling public benefit use cases for private data.

There is regulatory precedent for public-private data standard development and adoption.
Can Data Standards Help?

Employment and Earnings Records Standards (EERS) Project

**Timeline:** June 2019 – December 2020

**Objectives:** Develop records standards (including data elements, definitions, and formats) with HR Open Standards Consortium for use in the public and private sectors. Explore the use of these standards in:

- Improving employer HR systems
- Enhancing state UI wage records
- Improving federal and state data collection
EERS Findings

High-Cost, Low-Value Data

- Government design
- Single purpose
- Limited sample
- Independent collection
- Dispersed collection
- Format varies by report
- Few items per report
- Inconsistent data definitions
- No uniform reporting guidance
- Infrequent collection
- Inconsistent reporting time period
- Siloed data management

Low-Cost, High-Value Data

- Public-private collaborative design
- Multiple purpose
- Population
- Coordinated collection
- Centralized collection
- Uniform reporting format
- All items in a single report
- Standardized data definitions
- Uniform reporting guidance
- Frequent collection
- Consistent reporting time period
- Cooperative data management
Enter JEDx

**JEDx Jobs and Employment Data Exchange**

- **What:** A public-private approach for modernizing America’s workforce data starting with job and employment data with rich, standardized, and timely information directly from the source.

- **How:** A public-private data collaborative and APIs that improve the collection and use of standards-based jobs and employment data from HR/ATS systems.

- **Who:** JEDx Advisory Committee includes 50+ members from state and federal agencies, employers, HR technology service providers, and other stakeholders.
JEDx and Federal Agencies

- **End State**
  - (ISO) data standards for jobs and employment data
  - data sharing/exchange mechanism
  - an ecosystem supporting the format and exchange standard for private and public use

- **Potential impact on economic statistics**
  - ↑ Coverage, ↓ collection costs, ↓ response burden, ↑ Survey targeting
  - ↑ Data quality
    - Accuracy and consistency
    - Granularity
    - Timeliness and frequency
  - ↑ Usefulness of data for worker and employer use cases
  - ↑ input from agencies & ↑ trust from private stakeholders through shared forum
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<th>Job Overview</th>
<th>Competency-Related Information</th>
<th>Credentialing and Other Hiring Requirements</th>
<th>Compensation and Work Hours</th>
<th>Job Postings</th>
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<td>• Assessment</td>
<td>• Minimum *</td>
<td>• Base Salary (incl. range)</td>
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<td>• Employer Overview</td>
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<td>• Physical Requirement</td>
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<td>• Preferred *</td>
<td>• Estimated Salary</td>
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<td>• Incentive Compensation</td>
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<td>• Hiring Organization</td>
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*Credential, Education, Experience
In validated, predictable formats across employers that are already in use.

Primary Economic Activity
Software design and deployment including cybersecurity.

Employer Address
123 Acme Way

Employer Identifier
465-A

Employer Overview
Blake Lee founded the company in Seattle in 1989. Since then we have become a state of the art cybersecurity company with a culture of responsibility. We have 6,000 employees working every day to promote the security in a forward-thinking, innovative, sustainable way. Find out more about our global operations.

Industry Code
541512

Occupation Code
15-1112.00

Job Summary
ACME Cyber, Inc. is looking for a junior level cybersecurity specialist to support corporate and client contracts in our Herndon, VA locations. You will be a critical member of a highly-skilled, adaptive cyber team that carries out defensive vulnerability research.

Job Location
Herndon, VA

Job Location Type

Developed in the open with broad participation
Shared automatically through the systems employers already
Under specific, compliant, and well governed conditions of reuse

**Use Case 1**
Streamlined UI Reporting using Augmented Wage Records

**Use Case 2**
Enriched Labor Market Information & Workforce Analytics

**Use Case 3**
Worker/Learner Empowerment Through Trusted Records

**Now**

**Future**
Use Case #1: Improving Federal and State Reporting

Project Work Tasks and Milestones

- Establish project steering group to finalize work plan, roles, and commitments
- Determine jobs and employment data collection priorities
  - UI wage record enhancement priorities
  - Other federal and state reporting requirements
- Develop a comprehensive report
- Develop a standards-based, enhanced, and shared UI wage reporting system
- Establish a testbed for assessing the viability of the standards-based enhanced UI wage reporting system
- Demonstrate value: reduced reporting costs, improved data quality and timeliness, and improved workforce analytics
Use Case #1: Improving Federal and State Reporting

Public and Private Partners

- Employers and HR technology service providers
- Data and technology standards organizations
- State agencies receiving data from employers including state workforce agencies administering UI reporting
- Federal agencies receiving data from state agencies or directly from employers
- Public and private workforce analytics providers
- Other partners
JEDx Timeline

**Phase 1**
Standard Design & Development

**Phase 2**
Public-Private Use Case Pilots

**Phase 3**
Private Vendor Adoption

**Phase 4**
Public Agency Adoption

- **2021**
  - Refine v1 of JEDx based on use case requirements, design considerations, and stakeholder feedback

- **2022**
  - Focus on UI Modernization Use Case
    - 7 States
    - 5 major HRIS/ATS vendors
    - Several thousand employers

- **2023**
  - HROpen Standards & T3 Innovation Network provide vendor implementation guides
  - Reach 75% market coverage

- **2024**
  - State agencies / Federal agencies begin accepting data from JEDx for data product testing

- **2025**
  - Public Agency Adoption
JEDx as a Model

- The approach JEDx has taken to date can serve as an illustrative model for statistical agencies in other priority areas needing better public-private collaboration to improve national statistics
  - Non-governmental intermediary supported by philanthropy as a neutral convener for public and private actors
  - Open forum for surfacing needs, use cases, and challenges, with national statistics being one of many
  - Balanced participation between data producers, data consumers, data systems, and data intermediaries
  - Build on existing industry standards and practices wherever possible
  - Identifying incentive compatible use cases that require minimal new policy intervention to gain adoption that can support
  - Test with a minimum viable coalition to prove out feasibility, statistical validity, etc.
  - Allow industry to drive adoption over time based on the strength of the use case
  - Support enabling policy & guidelines when necessary
Role of Statistical Agencies in Public-Private Collaboration

- **Participate**
  - Bring Federal statistical priorities and roadmaps to the standards process
  - Inform the roadmap
  - Acknowledge that Federal statistical priorities may not always be put first

- **Innovate**
  - Many agencies may not have data infrastructure, capacity, or policies that allow for the reuse of large volumes of private data shared under governed conditions
  - Innovation teams, CDOs, and PIFs can play a critical role in Agency innovation and digital transformation

- **Adopt**
  - Agree to be bound by public-private standards process and data governance policies in the use of new private data
  - Add new data product development & testing to relevant agency roadmaps when feasible
Thank You

JEDx Webpage: https://www.uschamberfoundation.org/JEDx

Questions?