Workforce Information Advisory Council

Draft Subcommittee Recommendations

June 26, 2024

Envisioning Subcommittee

Problem Statement

- New technologies such as AI are thought to be changing jobs and the labor market
- Existing methodologies are unable either to quantify those changes or measure the impact on skill needs at the local level
- This inability hampers the ability of government agencies and education/training providers to make informed education and workforce policy decisions
- New methodologies are called for

Subcommittee Goal

Supporting the development of a Workforce & Labor Market Information (WLMI) system that leverages existing survey and administrative data using AI to provide **timely, accurate, localized occupation and skill insights** on the future of work, so that state labor market agencies, economic development organizations, education and training providers, and unions have **better predictive information** and can plan for and support the growth of high wage jobs in their communities

Findings

Lack of timely, local, actionable, data:

- Lag in reporting degrades utility
- CPS response rates reduce quality at local level
- Limited data on credentials and skills (especially at local level) affects usability
- Post-secondary Employment Outcome Exploration data product 4 years delayed and uses DP

States acting to fill gap:

- Many private and public orgs have developed new approaches to capturing & staging skills information with the private sector
- Many states are moving to develop new approaches to leverage linked education & workforce data
- A number of states piloting projects in partnership with federal agencies and philanthropic organizations

Recommendation

- U.S. Secretary of Labor should support a pilot program that builds on state ideas
- The pilot should include testing:
  - The potential to create a local Skills*NET
  - The value of these products for WLMI data consumers

Minimally Viable Product

- Link 1+ novel data sources with traditional LMI data
- Include a set of measures & evaluations related to success
- Compare new data sources to other external sources
- Evaluate value to different stakeholders

Pilot Process

- Building towards identifying a minimally viable product
- Elements would include:
  - Test the matching of private sector data against wage records
  - Examine value of enhancing O*NET to produce information about local skills clusters
  - Produce a diagnostic report on data quality & the methodologies used
  - Work with WLMI users & partners to evaluate potential value

Possible Deliverable: 1

Test the potential of private sector data being matched against wage records – this would involve:

- Matching wage records to skills records at the individual and employer level
- Developing imputation models for non-matched records
- For states that have linked education/workforce records, documenting the quality of the imputations with and without education data (which would mean the pilot ideally would focus on a state that has a robust state longitudinal data system)

Possible Deliverable: 2

Report on the value to:

- Supplement the existing O*NET with local skills clusters
- Benchmark the results to the O*NET national results for specific economic sectors

Possible Deliverable: 3

Produce a diagnostic report which benchmarks and documents the results to include:

- Testing linkage quality and match rates by different industries, skills, and occupations
- Documenting and making available the match code to allow select partners conduct independent evaluations of the work

Possible Deliverable: 4

Work with WLMI users and partner agencies to evaluate the potential value of products produced according to these techniques such as by:

- Producing local skill level information on earnings and employment for AI research intensive employers if co-funded with NSF
- Producing estimates of local skill demand and supply if co-funded with U.S. Department of Education

Action Item for Discussion

The U.S. Department of Labor (DOL) should fund up to four test cases representing different economic sectors

Interested private sector data providers would partner with a volunteer state to link their skills data to wage records (and possible SLDS data) and provide a report

DOL should engage the WIAC in development of the minimally viable product

Incremental Subcommittee

Building Foundations for Access, Innovation, and Collaboration in the States

Recommendation 1

The Secretary of Labor should strengthen the coverage and accuracy of the National Labor Exchange (NLx), so that it can serve as a low- or no-cost foundation for real-time labor market information products to be developed by the states

Itemized NLX Recommendations

a. Contract with a vendor to undertake a widespread marketing and adoption campaign to encourage full reporting of job listings;
b. Coordinate with Commerce, Energy, and other federal departments to place a requirement that all jobs funded by the Bipartisan Infrastructure Law, the Inflation Reduction Act, and the CHIPS and Science Act be listed on NLx;
c. Include a budget line item that directly funds NLx's maintenance and operations;
d. Contract with the National Association of State Workforce Agencies (NASWA) and either the U.S. Digital Service or a private sector technology partner to clean, parse, and standardize NLx data; and
e. Issue a competitive grant opportunity to develop one or more proof-of-concept products using NLx, such as labor market information tools that can be used to identify emerging demand for skills it arises.

NLX Explanation and Justifications

a. Current labor market information relies on administrative data and large-scale surveys administered by the federal statistical system, while statistically sound and providing a critically needed overview of the national economy, have several limitations that make them less helpful for the rapid identification of skill needs. Currently, labor market information is released on a lag, is less useful to assess local and regional labor market conditions than it is for national decision-makers, and do not provide information about the demand for specific skills.
b. Combine data from NLX, NDNH with jobseeker profiles and resume analysis and processing with large language models and generative AI to build customized data for jobseekers and policymakers.
c. Enhance the quality of NLX data by ensuring its consistent use, leverage that data to build more responsive data.

Recommendation 2

The Secretary of Labor should fund a project to replicate the NJ Career Navigator and similar open-source, cutting edge tools for use by all states.

Components of a Career Navigation System

a. Online job postings, integrated with NLX
b. Skills, tools, and technologies from O*NET
c. Employment and wage outcomes from WIOA programs
d. ETPL data about available training programs
e. Wage record data
f. Resume data, linked to wage record data to provide a historic basis for career transitions
g. Customized recommendations based on similarities to other real-world experiences

Any such project should be focused on building a reproducible process for other states, document project challenges and successes, and recommending ways to scale the project for implementation in other states.

Recommendation 3

The Secretary of Labor should direct and support the Bureau of Labor Statistics (BLS) to expand the capacity of its API to better support access to its data within publicly accessible data products.

BLS API Explanation

a. The API currently limits registered users to 50 series IDs, for 20 years, with 500 queries per day.
b. To use the API to query all annual data for OEWS would require 241 straight days of queries because each data element is a unique series ID.
c. A restrictive API forces users who want the data into either downloading the entire series for each BLS data product or working through manual data retrieval options or third-party sources.
d. Where the API is sufficiently robust, other departments (such as the Census Bureau) enable the creativity of data users to build open-source tools that can be shared with others.

Recommendation 4

The Secretary of Labor should actively solicit, share, and incentivize open, innovative and actionable information, reports, and dashboards resulting from collaborative work among the state partners in the WIOA and WLMI communities.

This includes ongoing investment in WDQI grants, providing support for data analytics training in modern and open-source tools, connecting administrative data for evidence-based policy-making and improving data literacy.

Building Collaborative Networks

a. Among the states, this already happens at small scale through NGOs helping to connect and train states.
b. Examples – NASWA, Coleridge Initiative, LMI Institute & C2ER – but these can depend on access and may not reach states in a comprehensive manner.
c. Open, reproducible products are necessary to allow a cycle of innovation. WIOA Equity reports from DOL are built in a reproducible, scripted format but sharing code – not just products – is important to allow for ongoing development.
d. Where confidential or proprietary information is needed, using standardized source files as the input wherever possible can help to ensure reproducibility.
e. Even non-financial recognition of collaborative work could help incentivize individuals and organizations to put in the extra effort to build common, not proprietary, tools.

Recommendation 5

The Secretary of Labor can develop a national data sharing partnership with the U.S. Department of Transportation and states to match and leverage demographic data collected from motor vehicle license applications with state payroll administrative data collected in the Unemployment Insurance program from businesses.

Leveraging Interagency Administrative Data

All states collect demographic data as part of their motor vehicle licensing program. Some states enter data sharing agreements to this end at the local level. A formal collective collaboration at the national level would assist states to more securely and effectively leverage these important data elements to serve customers in education, business, labor, and more.

This effort could be accomplished using the BLS Wage Record Program as the data matching and leveraging vehicle. BLS already has the legal and technical infrastructure to support a collaborative like this for around 30 partner states.

Enriching labor market information with age and sex could be formalized in most states. Other opportunities exist for states that collect other valuable demographic data like race and ethnicity. It would also help a variety of public sector partners to match data for customers where individual identifiers are not collected when assessing employment and earnings' outcomes. Long-term these data collaborations could improve information security and efficiencies for our customers while seeking the vital services we provide.