



The Failure of Big Data to Address Problems in the Workforce during the COVID-19 Era

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The COVID-19-driven recession has devastated the U.S. labor market and American workers. In March 2020, in the span of a month, initial unemployment weekly claims increased from 216,000 (U.S. Department of Labor 2020c) to a peak of 6.8 million, setting new records for unemployment since the Great Depression (U.S. Department of Labor 2020a). The total insured unemployment rate increased from 1.2 percent on March 14 to 14.8 percent on May 16, which translates to about 22 million unemployed (U.S. Department of Labor 2020b).

Real-time data are essential for policymakers to be able to formulate a strategy to respond to a crisis when it begins and can help to inform disaster and pandemic plans. Unfortunately, the United States does not have sufficient data infrastructure to quickly address the policy needs for responding to the COVID-19 workforce crisis nor to similar ones in the future. In a crisis, federal and state governments typically supplement unemployment compensation with additional resources such as the pandemic unemployment assistance program. However, during the pandemic, states were so preoccupied with meeting new program requirements and disbursing benefits that data required to monitor and respond to the crisis were largely ignored (Marr 2020).

The purpose of this paper is to offer recommendations for improving national workforce data collection and dissemination to better address future economic recessions and to allow for the routine monitoring of state and local economies.

The recession precipitated by COVID-19 illustrates the challenges that policymakers face in obtaining information needed for making decisions. Today, the availability of data and the primary response to the unemployment crisis have been delegated to 50 state unemployment insurance (UI) systems, with limitations on sharing data among the systems. Using the data is also dependent on the resource investments that states made in data analytics, both in staffing and technology.

In addition, the legal framework for using state administrative data to inform policy is outdated. Many federal and state laws limit the use of data to administering the program for which the data are collected. When the laws were written, it was never envisioned that data could be used to improve policy. Ambiguous and conflicting laws and strict privacy provisions limit data use for evidence-based policymaking.

This should not have been the case. In 2016, with bipartisan support, Congress passed the Evidence-Based Policymaking Commission Act (Public Law 114-140) to form an independent commission to study how the data that the government already collects can be used to improve government programs and policies (Commission on Evidence-Based Policymaking 2017). In 2017, the commission issued its final report and provided four broad

recommendations that would leverage both federal and state administrative data for policymaking while protecting privacy and ensuring confidentiality. They include:

1. **Improving Secure, Private, and Modernizing Privacy Protections for Evidence Building:** The commission recommended revising privacy laws to allow administrative data (and the linking of administrative data) to be used for statistical purposes with strict privacy and confidentiality controls using current technologies.
2. **Modernizing Privacy Protections for Evidence Building:** The commission recommended adopting “modern privacy-enhancing technologies for confidential data used for evidence building to ensure that government’s capabilities to keep data secure and protect confidentiality are constantly improving” (Commission on Evidence-Based Policymaking 2017, p. 2).
3. **Implementing the National Secure Data Service:** The commission recommended the creation of a National Secure Data Service to be housed in the U.S. Department of Commerce, a steering committee to oversee the service, and the flexibility to leverage public/private partnerships.
4. **Strengthening Federal Evidence-Building Capacity:** The commission recommended that each federal agency appoint and train representatives to encourage evidence building in support of a coordinated effort, including placing a chief evaluation officer in each agency.

To date, many of these objectives have been implemented. Congress largely followed the commission’s recommendations by passing the Foundations for Evidence-Based Policymaking Act of 2018. Congress also included an appropriation of about \$7 million to start a National Secure Data Service (Nyczepir 2020).

Despite these achievements and the best efforts of Congress and the Commission on Evidence-Based Policymaking, the goals the commission laid out have yet to come to fruition. This paper will address three challenges related to implementing these recommendations and laws. First, the updates to privacy laws to date are insufficient. Many local jurisdictions are passing incompatible laws to allow for the kind evidence-based policymaking to occur. Second, legislative authority within programs that collect administrative data does not explicitly allow for data analysis without stringent restrictions. Third, state and federal governments have limited capacity to support this effort due to the divestments in government in both human and technological resources.

Failure of Privacy Laws to Examine Tradeoffs between Data Use and Confidentiality

The first challenge in using state administrative data for policy research is that privacy legislation fails to balance tradeoffs between individual privacy and the public benefits of using the data for policy-oriented research and evaluation. The problem stems from three issues:

1. The privacy legal framework in the United States is not uniform. At the federal level, legislation is introduced by topic and is not comprehensive (Baik 2020).
2. When privacy laws are proposed, they are typically introduced to address a specific problem and limited time is spent examining unintended consequences or tradeoffs.¹
3. Pressure has increased to address privacy and confidentiality in private, state, and federal data. In 2018, for example, nearly 600 pieces of state legislation were introduced focusing on data privacy (Data Quality Campaign 2018). However, little time has been spent on examining tradeoffs for research and how the data can be used (Lane 2020, Vance and Waughn 2020).

Since the introduction of the European Union’s General Data Protection Regulation in 2016, both state governments and the federal government have been under pressure from the general public to pass rights-based privacy or consent laws (Drake 2017, Edenberg and Jones 2019). California was the first to introduce such legislation with the California Consumer Privacy Act and later the California Privacy Rights Act (Dean 2020). Scholars have noted that these laws have had many unintended consequences for innovation and research and are likely to spread across the country (Baik 2020, Palmieri 2020).

Recommendation #1: Enact federal or uniform state legislation allowing research using de-identified state data.

While uniform legislation may help with addressing one’s right to keep data private, it threatens initiatives that encourage data linking within state data systems. New legislation should model the Confidential Information Protection and Statistical Efficiency Act, which created special protections for federal statistical/research data, including the prohibition of use for nonstatistical purposes (such as surveillance and enforcement or use in the courts) (E-Government Act of 2002 2002, Foundations for Evidence-Based Policymaking Act of 2018 2019). Explicit legislation would allow for and encourage states to use existing data to improve the monitoring of the spread of COVID-19 and to assist in drafting policy to improve the workforce and reduce unemployment. Current efforts to implement uniform legislation modeling California privacy laws addressing one’s right to keep data private (Layton 2020a, 2020b) threatens initiatives that encourage data linking within state data systems.

Legislative Authority to Use Administrative Data Is Limited

The second challenge in using state administrative data to improve policy is that laws impose limits on data use. As previously stated, the Commission on Evidence-Based Policymaking identified this barrier and called for the revision of federal and state laws that limited access to

¹ The Family Educational Rights and Privacy Act (FERPA) serves as an illustrative example. Its passage in 1974 sparked many immediate concerns about the law’s negative impact on information sharing and the business practices needed to run education institutions. It has undergone countless amendments, and the U.S. Department of Education has had to issue scores of “Dear Colleague” letters laying out privacy requirements (Vance and Waughn 2020).

data for research purposes. While federal policymakers made progress by passing the Foundations for Evidence-Based Policymaking Act of 2018, limitations still exist and many existing laws are inconsistent with the goals of the act. Two examples illustrate these limitations: (1) states still cannot freely exchange unemployment insurance wage data, and (2) tax data for research are difficult to obtain.

States have two sources of administrative wage data to use in research. These two sources provide important outcome metrics for many questions about state and federal programs. The first source is wage data reported to state departments of labor in support of UI programs. The U.S. Department of Labor maintains a master data-sharing agreement that allows states to share UI wage data with each other. The State Wage Interchange System (SWIS) allows states to exchange data to examine outcomes for programs under the Workforce Innovation and Opportunity Act (WIOA). However, because the SWIS agreement covers only WIOA programs, many other uses are not permitted under the agreement. For example, it does not cover:

- Workforce outcomes for two- and four-year colleges and universities unless they are funded under the Carl D. Perkins Career and Technical Education Act of 2006 or are listed under a WIOA eligible-provider training list
- Individual wage records from partner programs (such as Temporary Assistance for Needy Families, or TANF, and the Supplemental Nutrition Assistance Program, or SNAP, as well as SNAP Employment and Training and SNAP apprenticeships). Only aggregate records can be shared, which prevents more detailed analysis.
- Local programs or federal/state programs not under WIOA (Leventoff 2019)

While states can try to obtain bilateral agreements with other states to use SWIS data outside of the data-sharing agreement, doing so is not always feasible because it is not widely known who the contacts are within each state nor what the individual requirements are that each state puts on its own data.

The second source of administrative data available to states is tax data. The federal government has a large amount of tax data that can be used for interstate analysis in addition to UI wage data collected in its Longitudinal Employer-Household Dynamics program. The use of federal tax data for research is very narrow, allowing only for statistical use within the Department of Commerce (through the Census Bureau and Bureau of Economic Analysis).² Therefore, Title 13 of the U.S. Code and a memorandum of understanding between the Department of Commerce and the Treasury governs all tax data used in research in the federal government. Use of tax data must benefit only census programs (U.S. Census Bureau 2018). Due to these laws, no data are shared between federal agencies or with states.³ As a result of these legal restrictions, state treasuries or tax offices hesitate to share tax data for research

² See 26 U.S. Code § 6103 - Confidentiality and disclosure of returns and return information.

³ While researchers can access census data through research data centers, they must justify how they are using the data for each project, obtain special sworn status, and travel in person to the center. Currently, some data centers are closed in response to the pandemic. Even when they are open, there are many barriers to accessing this data.

purposes because anything derived from the federal tax returns can be considered protected data.

The Census Bureau has served as a repository of state wage records with some promising studies that would allow states to examine data across state lines. Most notably, tax data can greatly benefit both state and federal programs by providing income information for workers not covered by unemployment insurance programs, including federal and military employees, self-employed workers, and individuals who live in one state but work in another (Gosa et al. 2016). In fact, the Census holds wage records that combine multiple sources to get the best measure of income, but states cannot easily access this data due to Title 13 restrictions.

The federal government could be an important partner in facilitating the exchange of data across state lines, but federal laws and regulations as well as the lack of foresight in designing data-sharing agreements have limited its ability to fulfill this function.

Recommendation #2: Conduct a review of all federal laws that limit the sharing of data across program areas and states.

Congress has passed laws to implement nearly all of the recommendations of the Commission on Evidence-Based Policymaking, but the most difficult work is in restrictive privacy or confidentiality laws written before methods were uncovered to use administrative data for the public good. In other words, tradeoffs in balancing data use with data privacy protections were not examined. A process should be developed for the Congressional Budget Office to analyze any new legislation to identify these tradeoffs just as is done on budgetary costs (that is, “scoring” legislation). The commission should continue its work to examine legislation across the U.S. Code to identify privacy protections that are more restrictive than the Privacy Act and the Confidential Information Protection and Statistical Efficiency Act so that federal and state administrative data can be used for statistical purposes.

Limited Capacity for Evidence-Based Policymaking

The third challenge in using “Big Data” to help with the workforce system policy is that limited human and technological resources at the state level restricts capacity for evidence-based policymaking. Multiple states are using outdated technology and have few staff available to use data for policymaking (King 2020, Long et al. 2020). One study estimates that nearly one-third of state IT systems are outdated and require modernization (Center for Digital Government 2018).

Many reports point out that information technology infrastructure within state governments is outdated and unable to meet current demands or the demands for data (Bloomberg News Wire 2020). Soon after the coronavirus pandemic closed many state governments, the federal government quickly passed a stimulus package that included increased benefits for unemployment insurance and stimulus checks. States and federal agencies struggled to implement these changes and to keep up with the volume of beneficiaries. The Internal Revenue Service, for example, cited its outdated technology when it ran into problems with

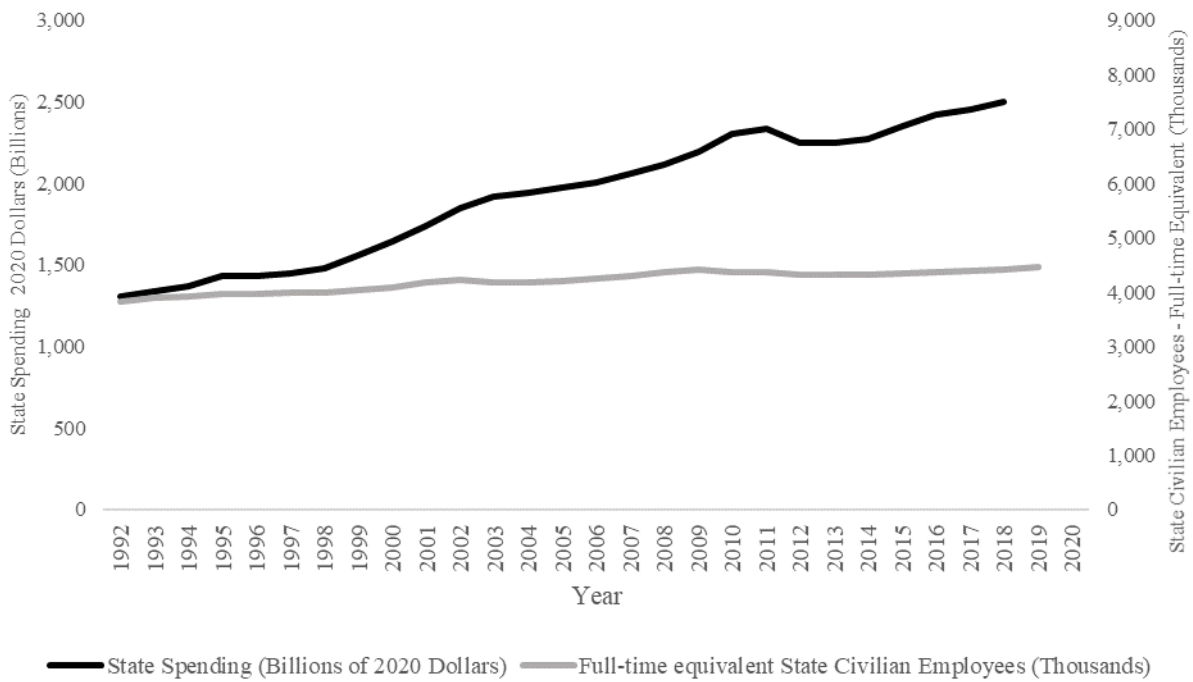
issuing stimulus checks. The software used for processing payments was Computer Business-Oriented Language (COBOL), a language developed in 1962 (Long et al. 2020).

State unemployment insurance offices ran into similar difficulties. Connecticut, New Jersey, and Oklahoma, for example, blamed 60-year old computer language and the lack of programmers for slowing down the processing of unemployment claims benefits (Bloomberg News Wire 2020, Lee 2020). As recently as 2019, the Government Accountability Office issued a report citing the problem of outdated technology and the inability to hire COBOL programmers to maintain federal systems (USGAO 2019)—a problem that also applies to state governments.

In addition to technological challenges, states have human resource constraints. The federal workforce has not grown since the 1960s even while the federal programs and spending has expanded, a fact that has been well documented (DiIulio 2014, Lewis 2019, Light 2008). To get the work done, the responsibility for policy implementation has moved from the civilian workforce to contractors, grantees, and state and local governments (DiIulio 2014, Lewis 2019, Light 2008, Verkuil, 2017). A similar pattern holds for state governments.

Figure 1 compares the growth in the number of people working for the 50 state governments to state spending. Between 1992 and 2019, state spending increased by 91 percent while the number of full-time equivalent state employees only grew at 16 percent. State employees are doing more with less.

Figure 1: Growth in State Spending and State Employment: 1992-2019



Sources: Annual Survey of Public Employment & Payroll Methodology: 1992-2019; Annual Survey of State Government Finances: 1992-2018, United State Census Bureau. Analysis by Author.
 Note: No state employment data are available for 1996. The midpoint value was imputed for that year.

State governments, like the federal government, rely more on technology and a combination of contractors, nonprofits, and universities to get their work done (Lewis 2019). Many state agencies simply do not have well-developed research units to capitalize on the rich longitudinal program data captured in state data systems.

Recommendation #3: Incentivize activities that increase research capacity within state government.

Lane (2020) asserts that the most pressing needs for the states are in training their employees to structure, assemble, and analyze data and that an emphasis on expanding human resources is necessary. Federal funding to states should be designed to expand the capacity of states to create state-level statistical and evaluation agencies with staff trained in the most innovative statistical and data science techniques. Workforce and education grant programs should be tightly coordinated and designed to incentivize states to create internal capacity for evidence-based policymaking.

Conclusion

To be prepared to respond to a crisis, building the information and data systems needed to inform decision-making is critical. Attempting to resolve issues of unavailable data during a

crisis is daunting. The recession that COVID-19 triggered illustrates an immediate need at the state level that “Big Data” and the federal statistical system cannot address. Applying the recommendations of the Commission on Evidence-Based Policy Making at the state level will improve data-informed decision-making for the entire country.

The recommendations presented in this paper are designed to prioritize the use of state data for research, including:

- Enacting federal or uniform state legislation permitting research using de-identified state data
- Conducting a review of all federal laws that limit the sharing of data across program areas and states
- Encouraging activities that increase research capacity within state government

While implementing such policies is ambitious and requires engagement with the public on balancing the tradeoffs with the benefits of policy research with privacy and confidentiality protections, this investment in time and money will improve policymaking for the good of everyone.

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