EXHIBIT E1

Statewide Longitudinal Data System and Economic Security Report

July 20, 2020

ALC Data-Sharing Data-Driven Decision-Making Subcommittee Meeting

Agenda Item D

Statewide Longitudinal Data System (SLDS)

- Act 912 of 2017 established the Data and Transparency Panel and the Chief Data Officer (CDO) position.

- Act 936 of 2019 requires the Data and Transparency Panel to:

  (7) Develop a unified longitudinal system that links existing siloed agency information for education and workforce outcomes to continuously conduct a business systems assessment to:

  (A) Help the leaders of this state and service providers develop an improved understanding of individual outcomes resulting from education and workforce pipelines in Arkansas;

  (B) Identify opportunities for improvement by using real-time information; and

  (C) Continuously align programs and resources to the evolving economy of this state.

- SLDS links administrative data across state departments/divisions so that it can be used to improve policy, programs, and practices through evidence-based collaboration.

Data and Transparency Panel

- Key points of agreement and areas of work:
  - Arkansas needs SLDS capacity to facilitate linkage of data across departments/divisions.
  - The Div. of Info. Systems (DIS) and office of the CDO are leading SLDS development.
  - A federated data integration model will be used where practical, wherein participating agencies maintain control of the data in their source systems but agree through MOUs or DSAs to share data.
  - A data governance framework is being developed by key department stakeholders to manage the security and accessibility of data.
  - The SLDS infrastructure will be implemented in the state data center and managed by DIS.
  - Data integration will be implemented and managed by DIS.
  - A self-service business intelligence data access model will be created for authorized and authenticated access to data for research, decision & policy making, and operational support.

Economic Security Report (ESR)

- The ESR is an example of how the state can leverage its SLDS capacity to integrate valuable data and better inform policy, practice, and the public.
- The ESR is required by Act 852 of 2015
- The report uses linked administrative data from the Division of Workforce Services (DWS) and Division of Higher Education (DHE).
- The ESR summarizes workforce outcomes by higher education entity, program, and certificate/degree level, and is:
  - provided to institutions, students, and the public;
  - used by DWS as valuable labor market information; and
  - used by DHE to help evaluate certificate/degree programs.
- DIS has worked with DWS and DHE to enhance the ESR by:
  - Dynamically generating the report, reducing cost and increasing flexibility; and
  - Providing a self-service platform that allows authorized users to perform their own analysis.

Division of Workforce Services

- Opportunities beyond the current Economic Security Report
  - Economic Security Report Variants- County or Industry of Employment
  - Impact of work experience on earnings
    - Trends of “movement” between industries, and how that impacts wages
    - Longevity within an industry and the impact on wages
  - Workforce outcomes of training programs, certifications, and licensures not currently included in the ESR
  - Federal Reporting requirements for Training Providers

Department of Commerce Research Division/Division of Higher Education

- ESR data, in combination with data from Chmura Analytics, is currently being used to create workforce analyses for proposed new and reconfigured academic programs in Higher Ed
  - Shed light on whether new/reconfigured programs are likely to help graduates get jobs
  - Workforce analyses come to Dr. Nathan Smith, who prepares a report with sections such as the following:
    - Introduction
    - Institution focus
    - Occupation focus
  - Workforce analyses are required as part of the academic program creation/reconfiguration process, but their results are strictly advisory
- Down the road, linked DWS-DHE data to support higher ed decision-making better through
  - Provide institutions with greater and more user-friendly access to ESR and other information.
  - Facilitate better institutional planning

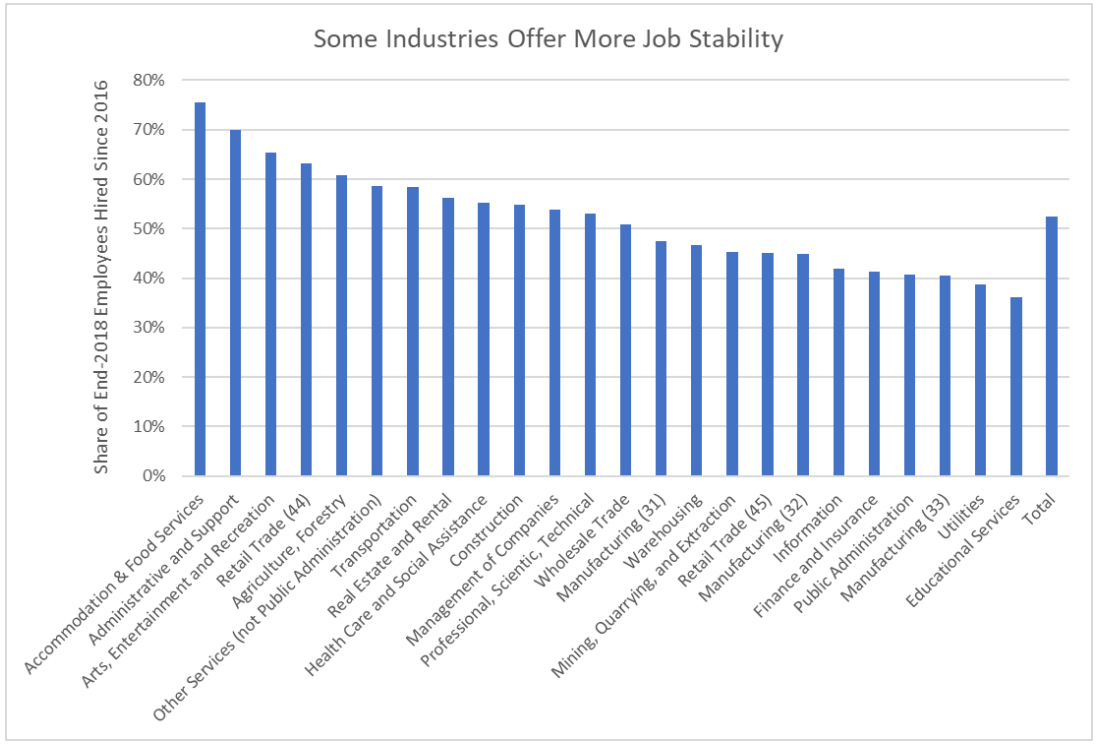
Department of Commerce Research Division/Division of Higher Education

- Down the road, linked DWS-DHE data to support higher ed decision-making better through
  - Provide institutions with greater and more user-friendly access to ESR and other information.
  - Facilitate better institutional planning
  - Expand quality assurance indicators for institutions around degree programs
  - Expand equity-based measures around higher education in Arkansas
  - Provide greater quality assurance measures for higher ed consumers
  - Provide tangible insights data around the value proposition for higher education

Department of Commerce Research Division

- The ESR analysis could be enhanced/enriched by including information about:
  - Job stability after completion/graduation
  - What industries graduates are working in
    - In some cases, the relevance of this for assessing workforce success is clear, e.g., compare an Electrical Engineering graduate working in utilities vs. food services
    - Sometimes it sheds little light, e.g., accountants and IT support staff work in many industries
    - Difficult to define standardized metrics of general relevance
  - Longer-term earnings trajectories (2^{nd}, 3^{rd}, 5^{th}, 10^{th} years etc.)
  - The ages of program graduates and completers
    - Life-cycle effects may sometimes explain differences in FTE work, avg. earnings
  - *Ex ante* vs. *ex post* earnings
    - It may be possible to use regression analysis to shed more light on program impact for programs with a substantial mid-career element in their student pool

More Analytics: Job Stability by Industry

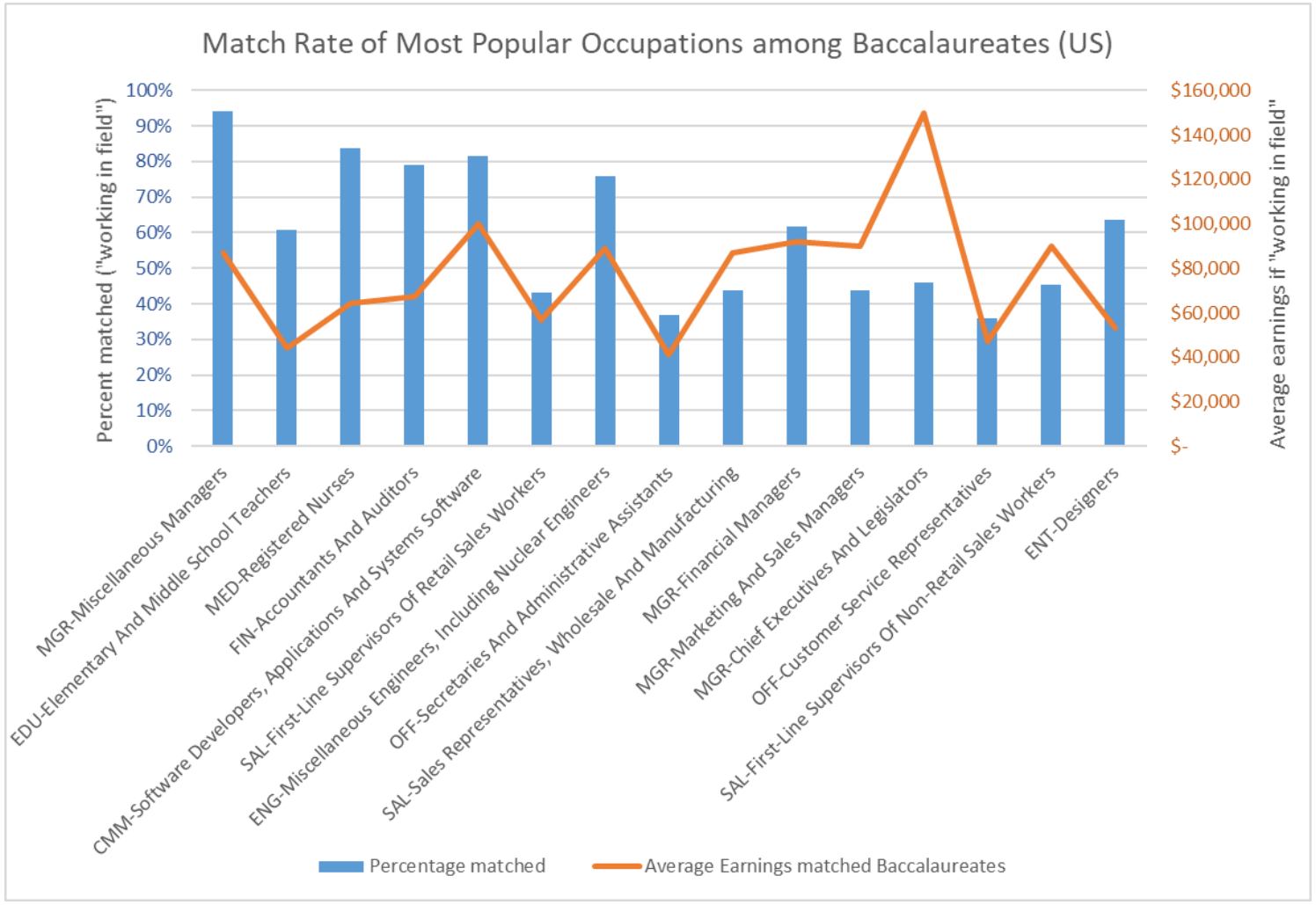


- Job stability varies by industry
  - ~40% of the workforce in utilities, education, heavy/metal/machinery manufacturing (NAICS 33) and public administration was hired in the past three years
  - >60% in accommodation and food services; administration and waste management; arts, entertainment and recreation; and retail trade were hired in the past three years

Department of Commerce Research Division

- Some potential future data enhancements
  - Better info on employment outcomes (e.g., hours)
  - Incorporate a broader set of higher education institutions
- Other things we could do with linked data.
  - Annual interactive employment report
  - With enriched data sources, we could study:
    - How many graduates are **really** working full-time
    - How many graduates leave their home-towns and/or the state
    - How many graduates are “working in their field”
    - How many graduates are prosperous vs. in economic distress
    - Whether graduates are doing well compared to people of similar backgrounds
    - How many graduates are on welfare
    - How many graduates are in prison
    - Causation: Regression analysis to elucidate whether particular credentials **really** raise earnings when many factors are controlled for

Do People Work in Their Fields?
In Some of the Most Common Occupations, Fewer than Half of College Grads Had a Related Major



What's next?

- Finalize the DWS-DHE-DIS data sharing agreement
- Develop an enhanced ESR for release in 2021 that includes elements like:
  - Improved analytics and data visualizations and
  - Better interface for higher ed institutions and potentially the public
- Investigate opportunities to use linked administrative data to support COVID-19 response and recovery.
- The CDO's office will continue collaborating with state departments/divisions to:
  - Build the state's SLDS capacity;
  - Bring more datasets into the SLDS;
  - Add the capacity to use federal, other state, and private sector data;
  - Surface pressing needs and important questions; and
  - Build the analytics capacity to use data to help make the state more efficient and effective.