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Practical Implications for Institutions, Systems, and State Agencies Using PSEO Data

Scholarship America

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Practical Implications for Institutions, Systems, and State Agencies Using PSEO Data

Evidence from COVID-Era Labor-Market Disruption and Recovery

This paper draws directly on findings from *COVID-19 and Early-Career Labor-Market Outcomes for Postsecondary Graduates*, which uses restricted-access Postsecondary Employment Outcomes (PSEO) administrative data for Texas to examine how labor-market entry during the COVID-19 pandemic affected graduate earnings, employment stability, industry placement, field-of-study alignment, and geographic mobility across pre-pandemic, disruption, and recovery cohorts (2018-2024). By exploiting cohort-level variation and field-of-study fixed effects, the analysis demonstrates that early-career outcomes are highly sensitive to macroeconomic shocks but exhibit partial recovery as graduates accumulate labor-market experience (Results: H1, H6; Table 1).

Because PSEO links postsecondary completion records to unemployment insurance wage data, it enables observation of labor-market dynamics that are otherwise unobservable through surveys or short-term placement metrics. The applications outlined below are not speculative; they follow directly from the outcomes measured and estimated in the empirical analysis.

Improving Academic Advising and Major Selection

(Linked to H3, H4; Results: Industry Placement and Field-of-Study Alignment)

The paper finds that graduates entering the labor market during the COVID-19 disruption period experienced increased industry dispersion and lower field-of-study alignment relative to pre-pandemic cohorts (H3, H4). These patterns indicate that labor-market shocks can temporarily weaken the connection between academic training and early employment outcomes.

PSEO data can be leveraged by institutions to improve academic advising by:

- Providing students with field-specific earnings and alignment trajectories across economic cycles.
- Identifying majors with historically higher exposure to labor-market mismatch during downturns.
- Communicating realistic expectations about early-career volatility and recovery timelines.

These applications follow directly from the observed mismatch effects and do not require additional assumptions beyond those tested in the paper.

Implications for Presidents, Provosts, and Academic Leaders

(Linked to H1, H3, H6; Earnings, Industry Placement, and Recovery Dynamics)

As institutions face enrollment declines, budget pressures, and increased scrutiny of program-level outcomes, presidents, provosts, deans, and academic leaders are increasingly relying on labor-market and earnings data to inform academic portfolio decisions, resource allocation, and program prioritization. PSEO data can be a valuable input in these discussions because it provides longitudinal insight into graduate earnings, employment stability, and workforce alignment. However, this study suggests such data should be interpreted with caution, particularly following periods of major labor-market disruption such as COVID-19.

The findings demonstrate that short-term earnings outcomes, industry placement, and field-of-study alignment can be significantly influenced by macroeconomic shocks rather than solely reflecting academic program quality or long-term labor-market demand. Disruption-period graduates experienced temporary earnings penalties, greater sectoral displacement, and weaker alignment between education and early employment, though some recovery occurred over time. These patterns indicate that short-term post-graduation earnings should not be treated as a standalone measure of institutional effectiveness or academic program viability.

For institutional leaders, this creates several practical cautions:

- Avoid over-reliance on short-term earnings metrics when evaluating academic offerings, particularly in post-disruption labor markets.
- Interpret program-level earnings decline within macroeconomic context, distinguishing structural program weakness from temporary labor-market volatility.
- Use longitudinal outcome trends rather than single-cohort snapshots when considering expansion, consolidation, or discontinuation of academic programs.
- Incorporate multiple indicators, including enrollment demand, mission alignment, equity considerations, workforce needs, and long-term graduate trajectories, alongside earnings data in academic planning.
- Exercise caution in external messaging promotes short-term earnings outcomes as evidence of institutional or program success during periods of economic instability.

Taken together, this research offers a “yes, but with caution” perspective for executive leadership: earnings and workforce outcome data can strengthen institutional decision-making, but post-disruption labor-market outcomes must be interpreted within broader economic context to avoid unintended misjudgments about program quality, workforce relevance, or institutional effectiveness.

Strengthening Employer Partnerships and Workforce Alignment

(Linked to H3; Results: Industry Placement)

The analysis documents that pandemic-era graduates were more likely to enter industries outside traditional pathways associated with their fields of study (H3). This reflects sectoral reallocation during the disruption period rather than changes in graduate preferences.

PSEO data enables institutions and state systems to:

- Identify which industries absorbed displaced graduates during periods of contraction.
- Develop targeted partnerships with employers in expanding sectors.
- Align curricula and work-based learning opportunities with observed hiring patterns.

These applications are grounded in the industry placement outcomes measured using NAICS codes in the empirical models.

Geographic Mobility and Regional Workforce Planning

(Linked to H5; Results: Geographic Mobility)

The paper finds reduced interstate mobility among graduates entering the labor market during the pandemic disruption period (H5). This suggests that geographic constraints and local labor-market conditions played a significant role in shaping early-career outcomes.

PSEO data supports:

- Analysis of in-state retention versus out-migration by field and degree level.
- Regional workforce planning aligned with local economic development strategies.
- Place-based investments in education and training where mobility is constrained.

These applications directly reflect the geographic mobility indicators constructed from administrative wage records.

Earnings Trajectories and Timing of Alumni Engagement

(Linked to H1, H6; Results: Earnings Recovery)

The earnings analysis shows statistically significant short-term earnings penalties for disruption-period cohorts at the one-year horizon, with diminished and statistically insignificant differences at longer horizons (H1, H6; Table 1). This pattern indicates partial recovery as graduates accumulate experience.

Institutions can use PSEO data to:

- Identify when graduates reach earnings levels associated with financial stability.
- Time alumni engagement and fundraising efforts based on observed earnings recovery, not graduation year alone.
- Segment alumni outreach strategies using longitudinal earnings trajectories.

These applications are directly tied to the earnings dynamics estimated in the regression models.

System-Level Program Planning and Coordination

(Linked to Empirical Design: Cohort × Field × Degree Cells)

The study's unit of analysis, cohort–field, degree cells with field-of-study fixed effects; allows comparison of outcomes across programs and institutions under varying labor-market conditions.

State systems can leverage PSEO data to:

- Evaluate program performance across economic cycles.
- Coordinate offerings across institutions to reduce duplication.
- Shift from enrollment-based metrics to outcome-based planning.

These applications follow from the structure of the empirical design rather than additional inference.

Informing Public and Philanthropic Funding Decisions

(Linked to H1-H7; Results Across Outcomes)

The paper demonstrates that returns to postsecondary education are temporally contingent and uneven across cohorts, fields, and degree levels. This has direct implications for funding strategies.

PSEO data can inform:

- Countercyclical funding targeted toward programs and populations most affected by labor-market shocks.
- Evaluation of long-term returns on public investment in postsecondary education.
- Equity-focused interventions where disruption effects are concentrated.

These applications are grounded in the heterogeneity analyses and cohort comparisons conducted in the study.

Conclusion

This paper demonstrates that PSEO administrative data can serve not only as a powerful tool for documenting labor-market disruption and recovery, but also as a critical resource for improving decision-making across institutions, state systems, and the broader higher-education ecosystem. Each practical application outlined in this paper is directly grounded in measured outcomes, tested hypotheses, or core design features of the empirical analysis, ensuring that the implications remain closely tied to evidence rather than speculative inference.

At the same time, the findings underscore the importance of interpreting postsecondary labor-market outcomes within broader economic and temporal context. Short-term earnings, employment patterns, industry placement, and field-of-study alignment may reflect macroeconomic shocks, sectoral disruption, and recovery dynamics rather than solely academic program quality or long-term workforce relevance. For institutional leaders, including presidents, provosts, deans, and policymakers, this reinforces the need to use longitudinal outcomes and multiple indicators when making decisions about academic offerings, workforce alignment, funding priorities, and strategic planning.

This study highlights how translating observed labor-market dynamics into actionable insight can strengthen alignment, resilience, and equity in postsecondary education. However, it also offers an important caution: while PSEO data can meaningfully improve institutional and policy decision-making, post-disruption labor-market outcomes should be interpreted carefully to avoid overreliance on short-term signals when evaluating program effectiveness, workforce demand, or long-term educational value.