

ECONOMIC RETURNS TO UP/RESKILLING

CAN SHORT SKILLS-BUILDING SEQUENCES IN COMMUNITY AND TECHNICAL COLLEGES YIELD A LIVING WAGE?

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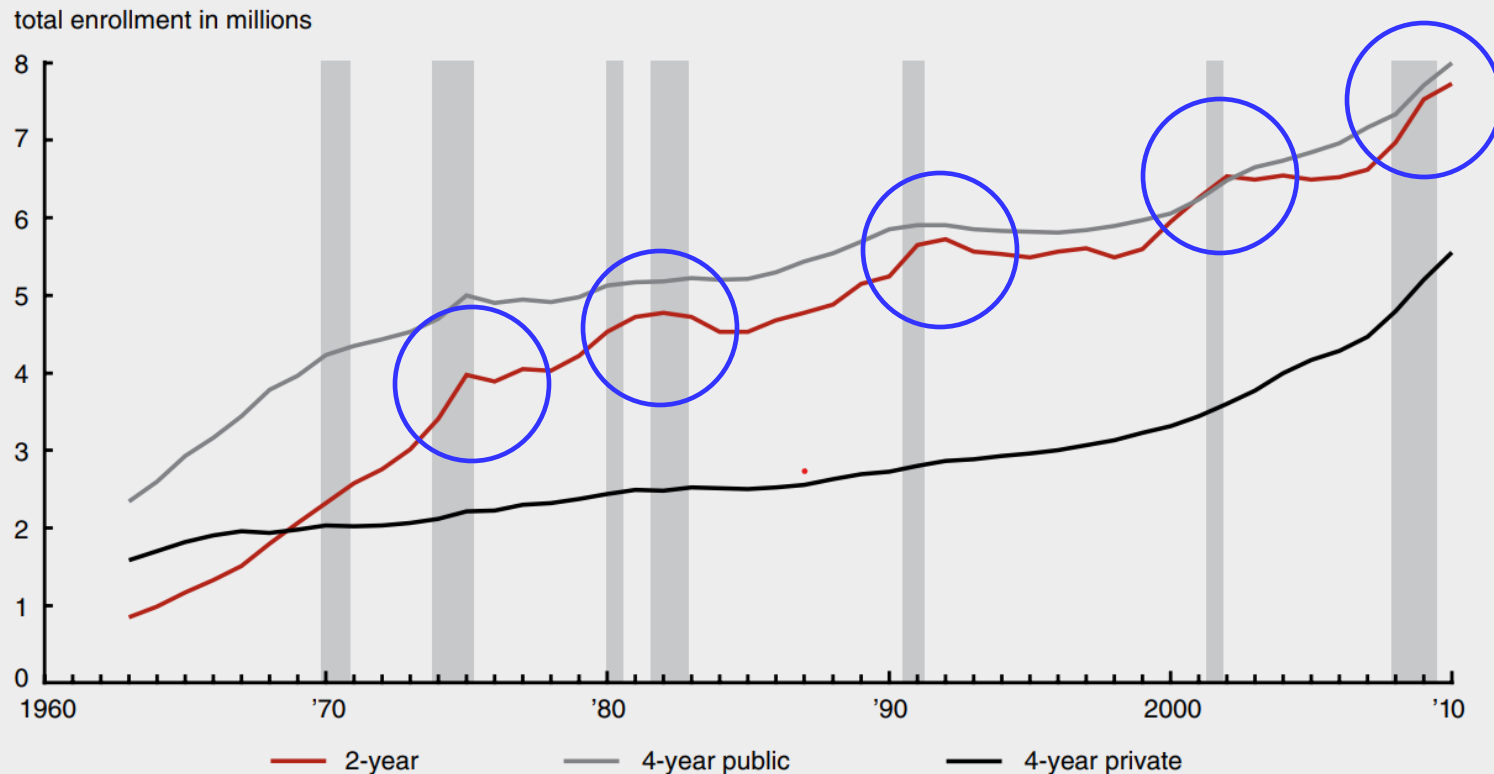


https://bit.ly/skillsbuilders_SHEEO2024

COUNTERCYCLICAL ENROLLMENT TRENDS

FIGURE 2

Postsecondary enrollment by institution type



Note: Shaded bars indicate recessions as defined by the National Bureau of Economic Research.

Source: Authors' calculations based on data from the National Center for Education Statistics' *Integrated Postsecondary Education Survey*.

Community college enrollments surge in economic downturns.

Many of these students are enrolling to reskill or upskill for employment.

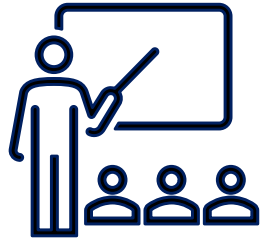
This trend will likely increase given AI, inflation, and longer life spans.

Barrow, L., & Davis, J., The upside of down: Postsecondary enrollment in the great recession. *Economic Perspectives*.

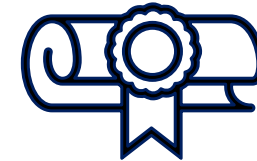
<https://www.chicagofed.org/publications/economic-perspectives/2012/4q-barrow-davis>

POPULAR DISCOURSE ON UP/RESKILLING

Short sequences of CTE coursework are sufficient to set up many students for success in the workforce.



College credentials are necessary for long-term success in the workforce for most students.



Can upskilling/reskilling lift individuals who are living in poverty up to a self-sustaining wage?



THE FIRST STEP IS TO IDENTIFY SKILLS BUILDERS

THE UNIVERSITY OF MICHIGAN'S FOUR-STATE STUDY OF SKILLS BUILDERS



THE UNIVERSITY OF MICHIGAN TEAM DEVELOPED A METHOD FOR IDENTIFYING STUDENTS WHO ARE UP/RESKILLING

Prior research tell us that skills builders...

- Enroll in community college for a short time (typically 1-2 semesters)
- Attempt few credits (usually attending part-time)
- Take most or all of their courses in career & technical education (CTE) fields
- Complete their courses successfully at an exceptionally high rate

Students' self-reported goals turn out to be not a very effective method of spotting skills builders.

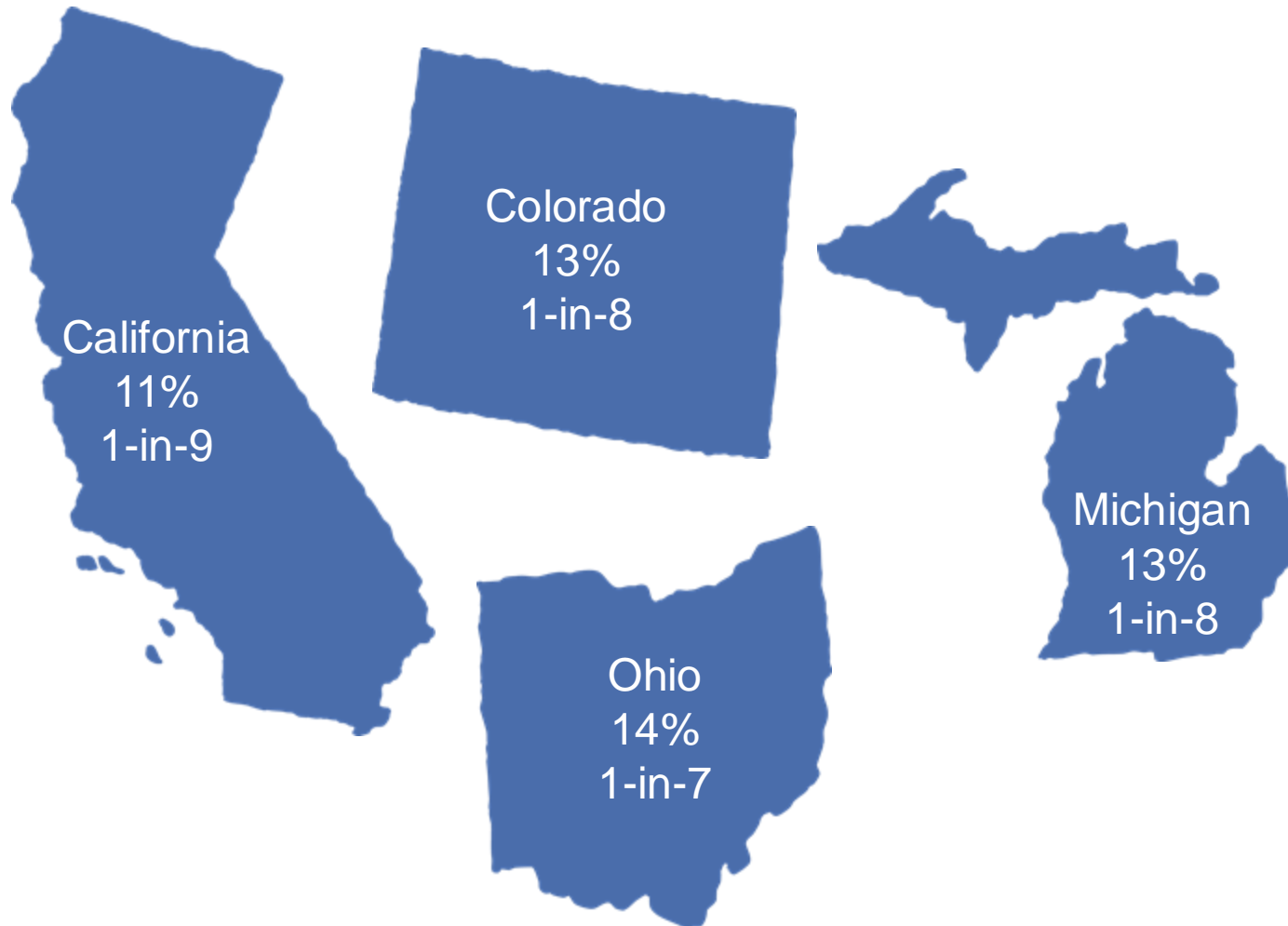
We developed a method to consistently identify skills builders.

Bahr, P. R., Chen, Y., & Columbus, R. (2023). Community college skills builders: Prevalence, characteristics, behavior, and outcomes of successful non-completing students across four states. *Journal of Higher Education*, 94, 96-131.

<https://bit.ly/skillsbuilders4states>



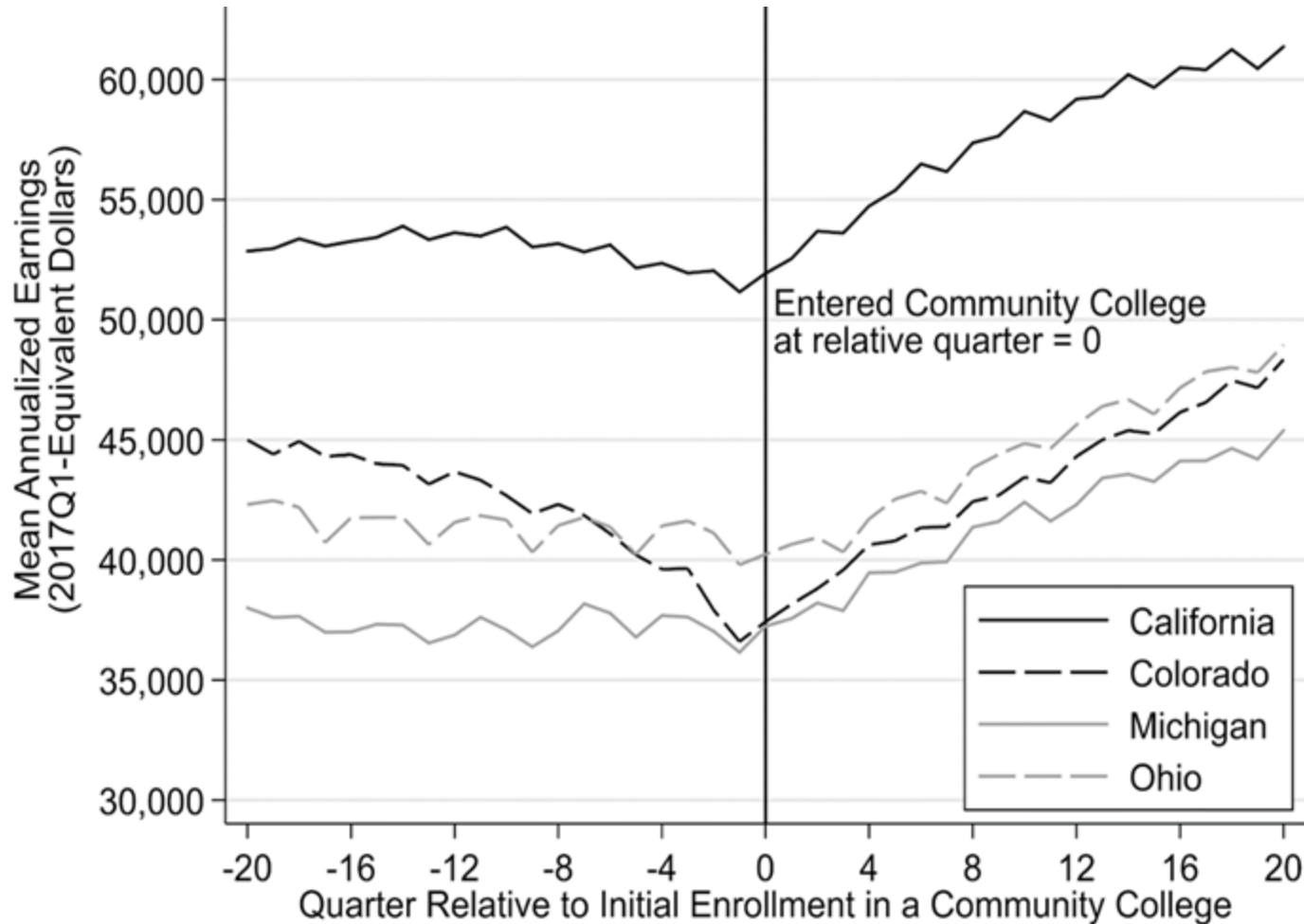
WHAT DID WE LEARN?



Skills builders...

- Rarely complete a postsecondary credential...
.... though Colorado's skills builders have a comparatively high rate of certificate completion.
- Tend to be of above average age and disproportionately male.

SKILLS BUILDERS DOWNWARD EARNINGS TRENDS REVERSE AFTER COLLEGE



The earnings trends are intriguing.

But, the trends mask substantial variation in gains across the many up/reskilling sequences.

FOCUSING ON COLORADO'S SKILLS BUILDERS

Broader Sample

- New entrants to the Colorado Community College System (CCCS) in 2007 through 2014
- Age 20 to 64 at entry
- No record of dual-enrollment in high school and college
- No record of enrollment in a four-year college or university in the 400 days prior to community college entry
- $N = 222,512$

Subset of Skills Builder Students

- Applied the Bahr et al. (2023) methodology to identify a subset of 32,535 skills builders
- Restricted the subset to the 18,482 skills builders who had at least 2 quarters of UI earnings records before and after college
- 18,482 skills builders enrolled in 5,410 different course combinations.
- We retained course combinations taken by at least 10 students.
- Final Analytical Sample = 10,717 skills builders who enrolled in 233 unique course combinations.

FOCUSING ON COLORADO'S SKILLS BUILDERS

Pre-college economic shock 32%

Prior College Experience

None 60%

Some college, no credential 13%

Prior college credential 27%

Self-Reported Goal

Baccalaureate degree 11%

Associate degree for job 4%

Certificate 21%

Some courses for job 5%

Personal interest 30%

Unknown 30%

Number of credits

0-2.0 25%

2.1-4.0 32%

4.1-8.0 15%

8.1-12.0 14%

12.1-16.0 3%

16.1+ 11%

Avg Number of Courses 2.3

Credential Award (6 Years)

No credential awarded 69%

Certificate 31%

Associate degree < 1%

Baccalaureate degree < 1%

Field of Study

Health 41%

Information Science 16%

Business 11%

Engineering Technology 10%

Protective Service 9%

Family & Consumer 4%

Precision Production 3%

Parks & Leisure 3%

Construction Trades 2%

All Other Fields 2%

Women 47%

Race/Ethnicity

White 73%

Latino/a 12%

Black 2%

Asian & NHPI 2%

Other Race/Ethn 2%

Race Unknown 9%

Average Age at Entry 38

EXAMPLE UP/RESKILLING COURSE COMBINATIONS

Health Disciplines:

- 4,385 students took 64 different course combinations
- Students took 8 credits on average
- Almost half (47%) of students earned a postsecondary credential

Protective Services:

- 912 students took 21 different course combinations
- Students took 31 credits on average
- Almost three-quarters (73%) of students earned a postsecondary credential

Information Science:

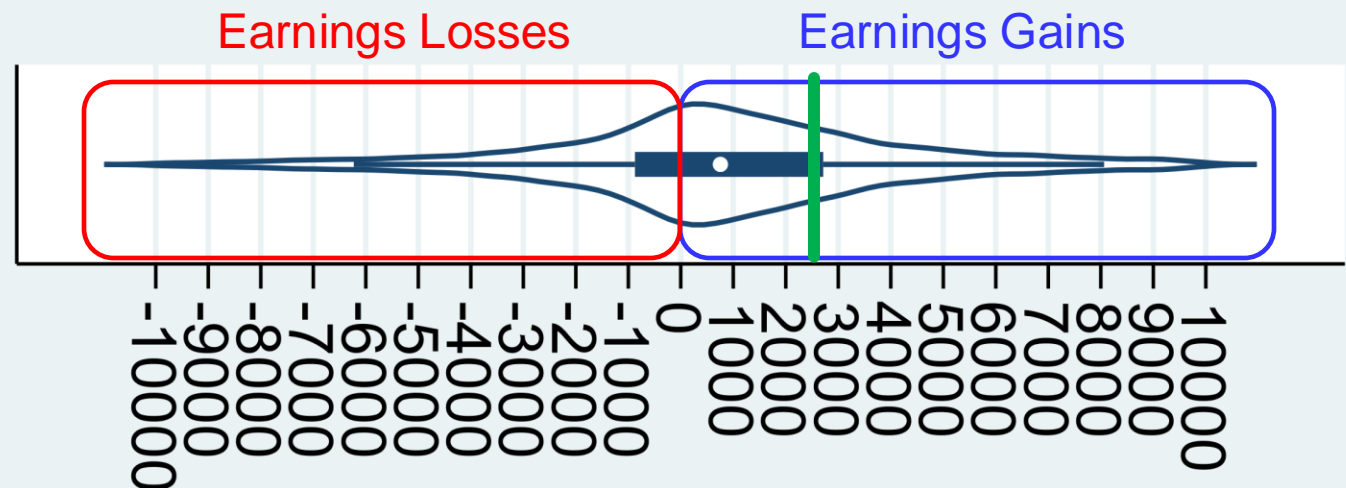
- 1,723 students took 48 different course combinations
- Students took 5 credits on average
- 8% of students earned a postsecondary credential

Construction Trades:

- 214 students took 8 different course combinations
- Students took 11 credits on average
- One-quarter (25%) of students earned a postsecondary credential

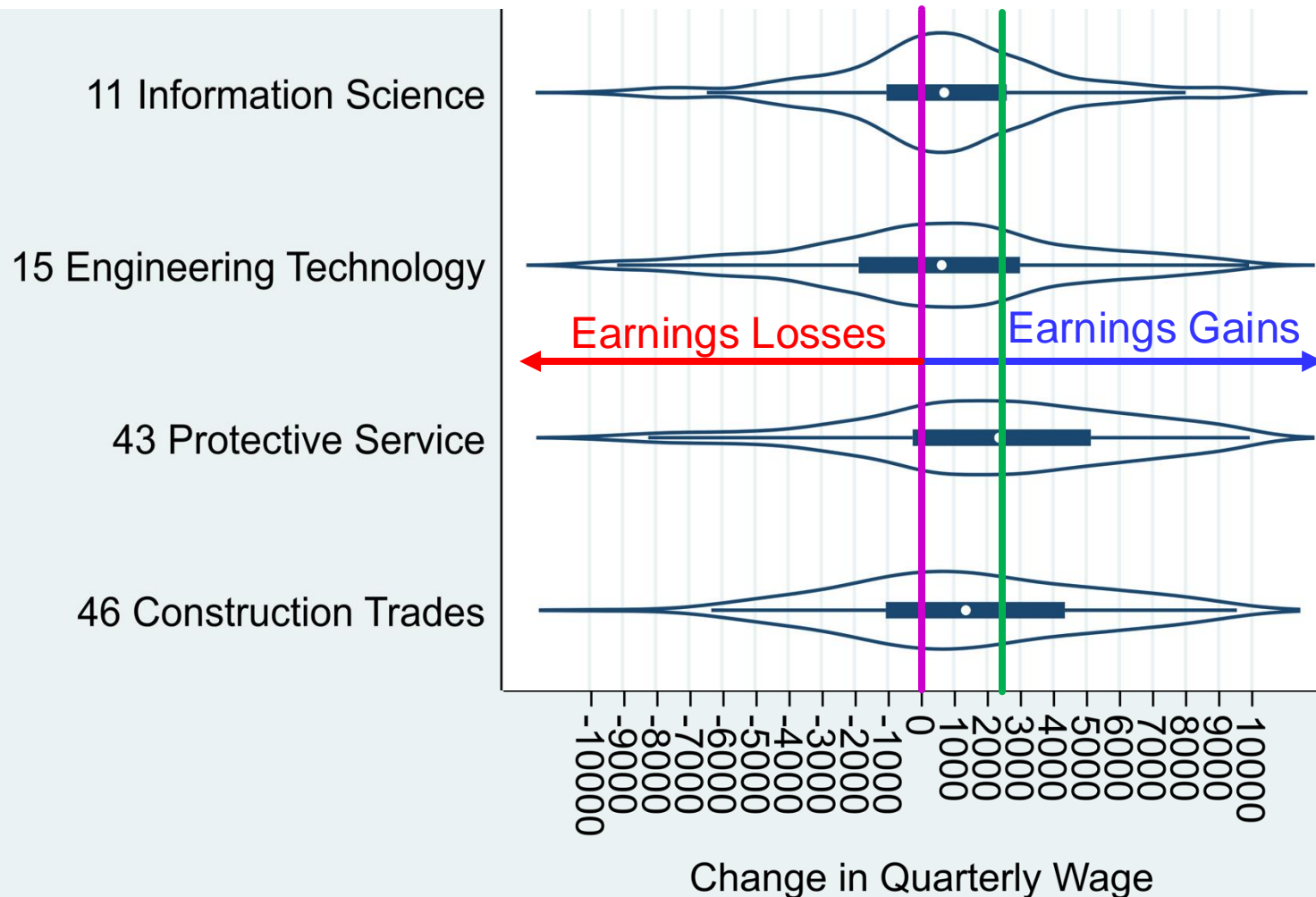
AVERAGE EARNINGS GAINS

All Skills Builders



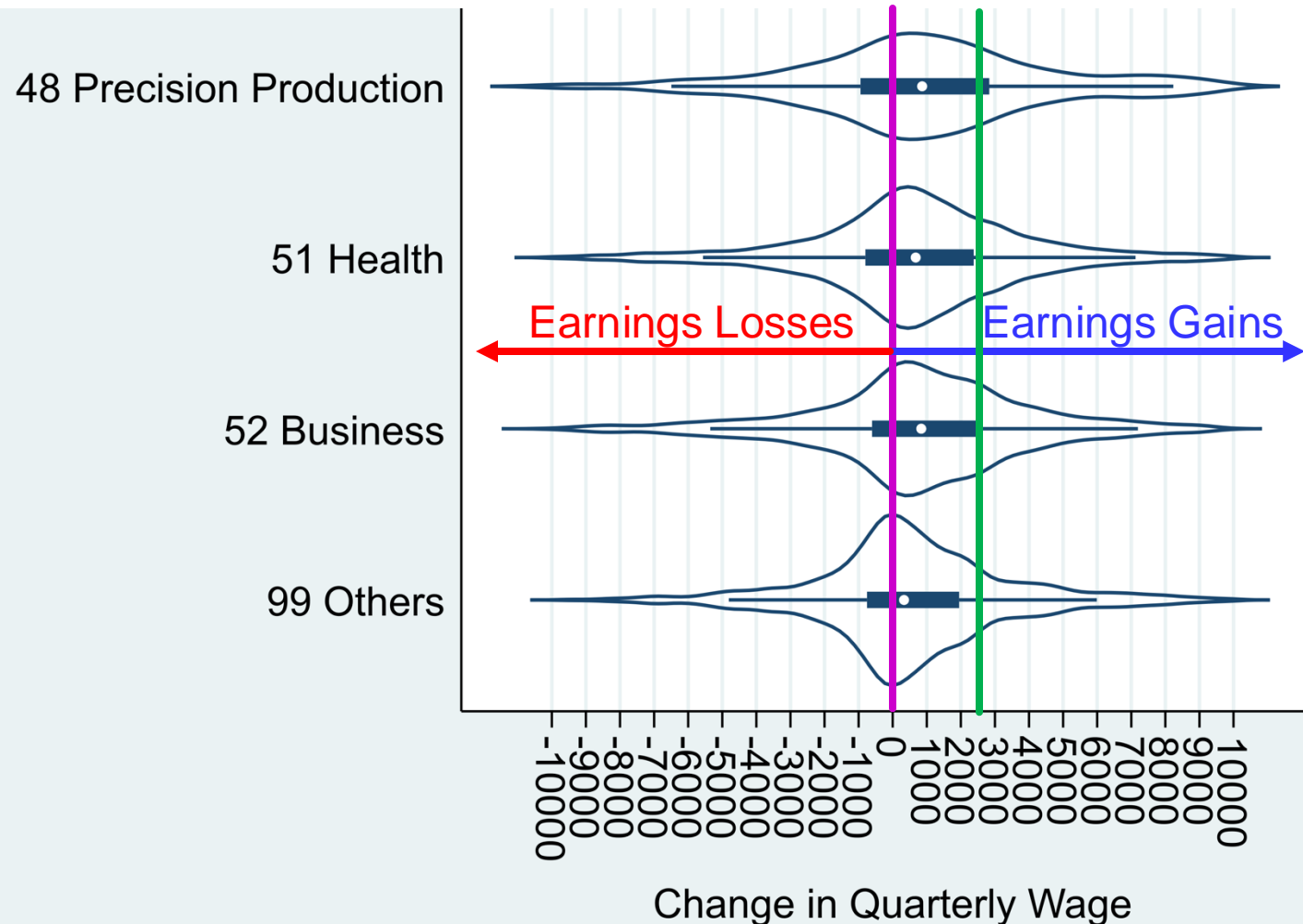
- Students earn more, but very few earn significantly more.
- A majority of employed skills builders realize **moderate** gains in average earnings, typically under \$2,500 per quarter (or less than \$10,000 per year).
- A sizeable number of skills builders experience no gains or losses in average earnings.

AVERAGE EARNINGS GAINS



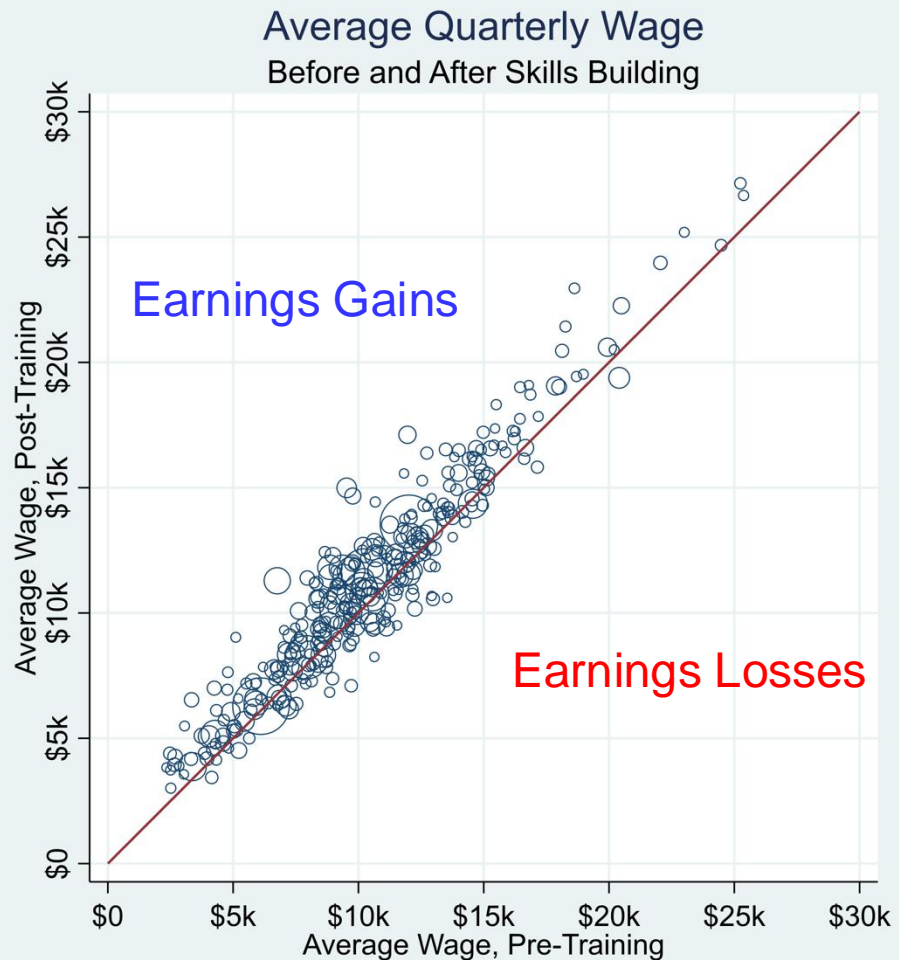
- In fields like IT and engineering technology, many students do not make more money and students who earn more have modest gains.
- in protective services and construction, some students earn a lot more – this is likely influenced by the fact that unions are strong in these fields.

AVERAGE EARNINGS GAINS



- Average gains differ by field of study.
- In some fields of study, a greater share of skills builders realize earnings gains.
- In every field, a sizeable minority of skills builders experience no gains or earnings losses.

PRE- AND POST-EARNINGS BY COURSE COMBINATION



Students in most course combinations realize gains in earnings, on average.

Students who had lower earnings before enrolling rarely secure substantial earnings gains.

ESTIMATING POST-COLLEGE AVERAGE EARNINGS

Which **course combinations** yield the largest earnings gains?



Which **students** realize the largest earnings gains?

Can upskilling/reskilling lift individuals who are living in poverty up to a self-sustaining wage?

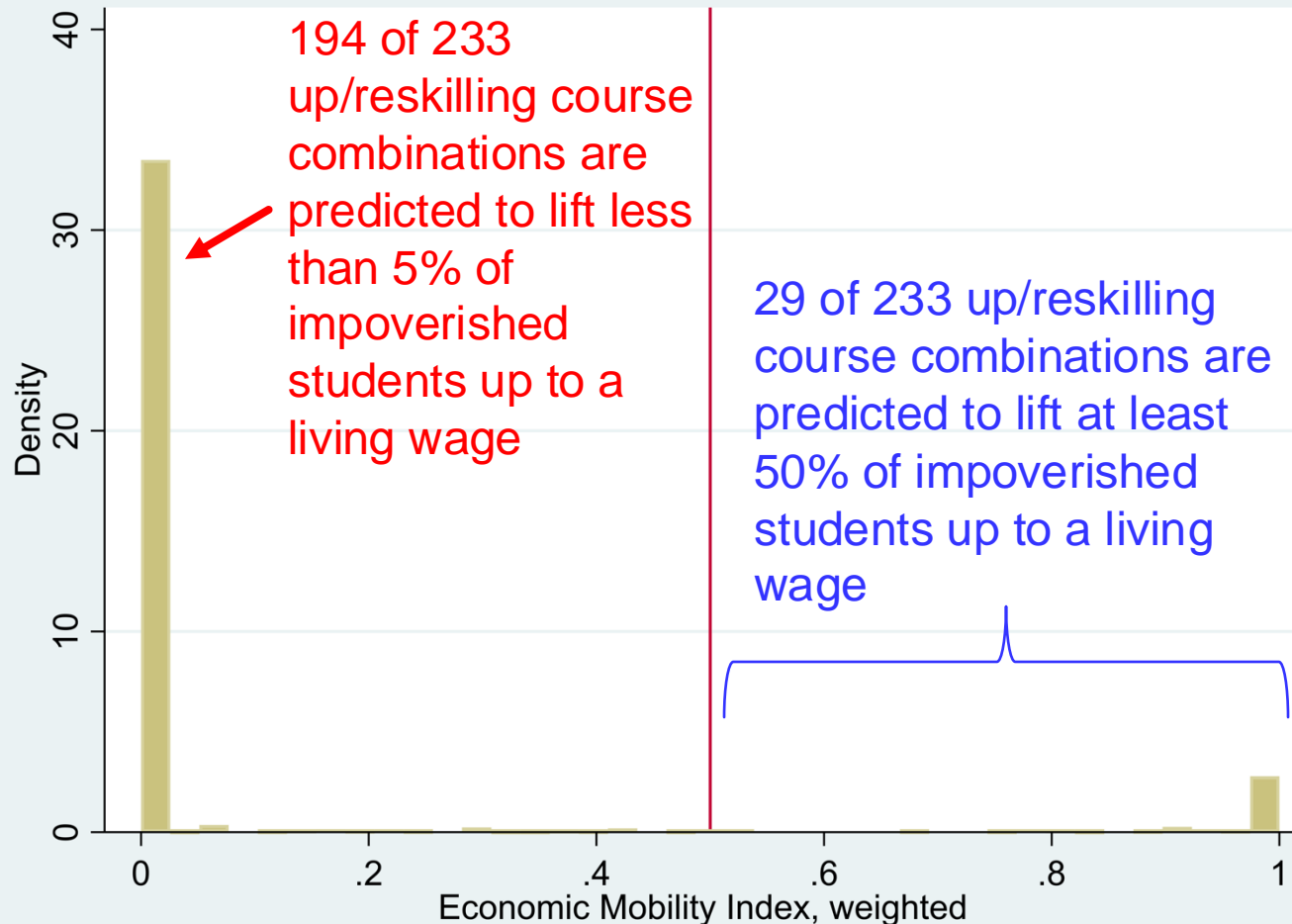
ANALYZING DIFFERENCES IN EARNINGS GAINS

Explanatory Variable	Coef	p
Pre-College Earnings (\$1000s)	-\$243	***
Prior College Experience		
Some College, No Degree (vs. No College)	\$417	***
Previous Credential (vs. No College)	\$865	***
Pre-Enrollment Economic Shock (vs. No Shock)	-\$1,377	***
Age		
Identity	-\$949	***
Square	\$25	***
Cube	-\$0.22	***
Women (vs. Men)	-\$831	***
Race/Ethnicity		
Black (vs. White)	-\$457	NS
Hispanic (vs. White)	-\$72	NS
Asian or Pacific Islander (vs. White)	\$67	NS
Other Race/Ethnicity (vs. White)	\$1,586	NS
[coefficients for other groups not shown]	---	---

- Students with prior college education, especially degree-holders, net larger earnings gains from up/reskilling.
- Students who experienced a pre-college economic shock realize smaller gains from up/reskilling.
- Earnings gains are smaller for individuals with higher pre-college earnings.
- Students in their 20s tend to realize larger gains than students in their 30s and 40s, while students in their 50s and older have the lowest gains.
- Women realize smaller gains than men.
- No significant differences in gains by race/ethnicity.

The model includes fixed effects for the 233 course combinations and a control for students' reported goal at college entry.

WHAT SHARE OF UP/RESKILLING COURSE COMBINATIONS COULD LIFT STUDENTS OUT OF POVERTY?



Economic Mobility Index

The proportion of impoverished students who are predicted to be earning a living wage by 12 quarters after completing a particular up/reskilling course combination.

Poverty: Less than 130% of the Federal Poverty Line

Living Wage: More than 185% of the Federal Poverty Line

PROMISING VS. UN-PROMISING COURSE COMBINATIONS

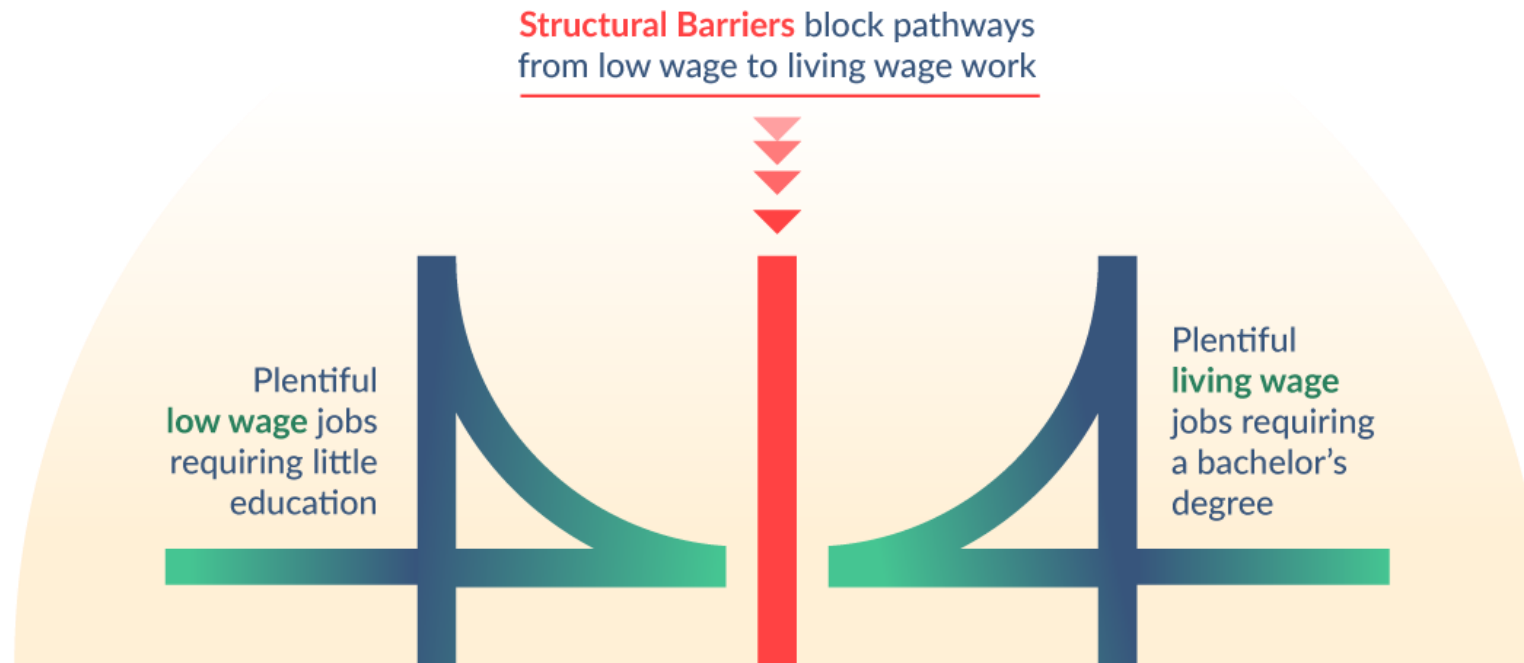
Un-Promising Course Combinations (EMI < 5%)

- Average 6 credits in length
- Average 23% of students earn credentials (most from the CCCS)
- Average pre-enrollment quarterly earnings of \$10,538
- Average quarterly gain of \$542
- Two-thirds (65%) are in Health, Information Science, or Business

Promising Course Combinations (EMI ≥ 95%)

- Average 17 credits in length
- Average 47% of students earn credentials (most from the CCCS)
- Average pre-enrollment quarterly earnings of \$13,463
- Average quarterly gain of \$1,811
- Three-quarters (76%) are in Protective Services, Information Science, or Health

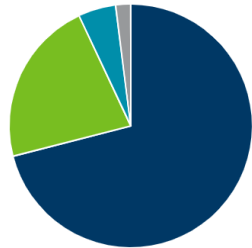
BIG PICTURE



Making Meaning of Economic Mobility and ROI

BIG PICTURE

Statewide



■ Employed 20 Hours or Less
 ■ Employed 21 to 29 Hours
 ■ Employed 30 to 34 Hours
 ■ Employed 35 Hours or More

Type	Count	Percent	Average Hours Worked	Average Hourly Wage
Employed 20 Hours or Less	12,519	71%	9	\$17.16
Employed 21 to 29 Hours	3,852	22%	24	\$18.45
Employed 30 to 34 Hours	890	5%	31	\$19.53
Employed 35 Hours or More	306	2%	40	\$18.78

Industry	Percent	Count	Average Hourly Wage
Construction	7%	1,221	\$22.47
Education and Health Care and Social Assistance	15%	2,661	\$16.75
Financial Activities	1%	205	\$18.76
Information	0%	81	\$15.55
Leisure and Hospitality	22%	3,869	\$16.85
Manufacturing	8%	1,390	\$19.76
Natural Resources and Mining	1%	153	\$17.96
Other Services	3%	568	\$17.56
Professional and Business Services	9%	1,491	\$18.16
Public Administration	1%	252	\$15.74
Trade, Transportation and Utilities	32%	5,638	\$16.81

Working Realities for High School Graduates

Minnesota, which has the ability to calculate hours worked in addition to earnings and industry of employment, found that most students who went straight to work after graduating high school work minimal hours for low wages.

OPPORTUNITIES

Colleges can:

- Identify skillsets that help workers—both experienced adults and young people—move from prevalent low-wage positions to more stable jobs with greater job security and better working conditions
- Design programs that take into account the specific assets and considerations of working populations in their region (example: United Domestic Workers initiative in California)
- Work with employers to adopt skills-first hiring by bundling competencies learned in college with other document capabilities

FOR MORE INFORMATION

University of Michigan
research on up/reskilling



<https://bit.ly/EPR-Skill>

Plain language summaries
of skills builder findings



<https://economic-mobility.wested.org/project/skills-builders/>

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