Why Economics Keeps Options Open

Earnings, career breadth, and resilience in the early-career labor market

A short evidence brief for students and instructors

Eli Kochersperger, Ph.D. · Assistant Professor of Economics
Department of Marketing, Global Business & Economics · Kean University · August 2026

The short version. Economics is not the highest-paying major, the broadest major, or the safest major under every possible labor-market shock.
What stands out is the **combination**: relatively high early-career earnings, access to many different high-quality occupations, and comparatively low exposure to uncertainty about which parts of the labor market will be strong in the future.

89th
percentile in earnings
Median early-career earnings across majors in our analytic sample.

98th
percentile in strong career paths
Number of occupations in which Economics graduates are both strongly represented and earnings are above the occupational median.

88th
percentile in average resilience
Performance when equal-sized labor-demand shocks are placed across different occupations.

These statistics are descriptive estimates from 2022–2024 American Community Survey microdata combined with occupational information from the U.S. Bureau of Labor Statistics. Methodological details and limitations appear in the appendix.

1. A degree can be valuable because of the choices it preserves

Choosing a major is unusual because students make the decision *before* they know exactly where their careers will take them.

Some degrees prepare graduates extremely well for a relatively specific part of the labor market. Others provide access to a much wider range of occupations. Breadth alone, however, is not necessarily valuable if the additional career paths are poorly paid or offer limited opportunities.

The interesting question is therefore not simply:

> *Which major leads to the highest-paying job?*

A different question is:

> *Which majors leave graduates with several good alternatives when their interests, opportunities, or the economy turn out differently than expected?*

Our data suggest that Economics occupies an unusual position on this dimension.

2. Economics combines relatively high earnings with many strong career paths

Figure 1 compares early-career earnings with the number of *strong career paths* associated with each major.

A strong career path is an occupation that satisfies two simple conditions: graduates from the major appear in that occupation more often than we would expect from the occupation's overall size, and the occupation has above-median earnings.

The goal is not to count every occupation in which somebody with a particular degree has ever worked. Instead, we want to identify career paths that appear both **meaningful** and **economically attractive**.

> **What to notice.** Computer Science has higher early-career earnings. General Business reaches an even larger number of occupations. Finance looks quite similar to Economics on several dimensions.
> Economics stands out because it combines **high earnings with unusually broad access to good jobs**.

3. Different majors make different tradeoffs

The contrast is easier to see by focusing on the five majors used in our classroom simulation.

Major	Median earnings	Strong paths	In good-paying occupations	Shock resilience percentile
Computer Science	$88,261	20	83%	9th
Finance	$76,144	36	78%	48th
Economics	**$76,144**	**41**	**72%**	**88th**
General Business	$58,096	55	60%	86th
Psychology	$44,689	22	36%	87th

Table 1: Selected early-career outcomes for the five majors represented in the classroom activity. "Strong paths" are defined in the technical appendix. A higher resilience percentile means smaller average losses under the occupational-demand stress tests.

Figure 1: Early-career earnings and strong occupational pathways. Each point represents a college major. Economics combines relatively high median earnings with an unusually large number of strong, above-median-earning occupational matches.

This table illustrates why simply counting jobs can be misleading.

General Business is exceptionally broad, but its typical earnings are lower. Psychology graduates disperse across many occupations, but a much smaller share work in occupations with above-median earnings. Computer Science offers exceptionally strong returns, but its opportunities are more concentrated.

Economics is not best on each individual measure. Its distinctive feature is the **joint combination**.

4. Breadth matters more when the future is uncertain

The value of having several career options depends on uncertainty.

If a student knew with certainty that technology employment would be exceptionally strong after graduation, specializing in Computer Science could be very attractive. If the student knew that financial services would dominate, Finance might instead be the natural choice.

Students generally do not know this when they choose a major.

To study that problem, we use Bureau of Labor Statistics data on occupational demand and repeatedly expose different parts of the labor market to equally sized hypothetical demand shocks. We then ask how much the set of attractive opportunities associated with each major deteriorates.

> **The basic pattern.** Highly specialized degrees can perform extremely well when demand remains strong in their primary career market, but they can also be more exposed when a shock lands directly on that market.
> Economics is comparatively diversified across several high-value occupational families. That diversification reduces average exposure to *where* labor-market weakness happens to occur.

Figure 2: **The early-career risk–return tradeoff.** The vertical axis shows median early-career earnings. The horizontal axis measures average loss under equal-sized occupational-demand shocks; smaller losses imply greater resilience.

5. What does this mean for a student?

The results do **not** imply that every student should major in Economics.

A student who knows that they want to become a software developer may rationally prefer Computer Science. Someone committed to a clinical or helping profession may prefer Psychology. Personal interests, ability, graduate-school plans, and non-pecuniary job characteristics all matter.

Instead, the evidence suggests a narrower point:

Economics appears to offer a relatively unusual combination of high expected returns and several distinct, valuable ways to use the degree.

That feature can be especially valuable for a student who is uncertain about exactly what they will want to do four, five, or ten years from now.

Economists sometimes describe this as **option value**: a choice can be valuable today because it preserves useful choices that can be exercised later, after uncertainty has been resolved.

6. From the evidence to the classroom simulation

The accompanying classroom activity turns this idea into a simple decision problem.

Students choose among five stylized majors before entering an uncertain labor market. Different majors provide different chances of receiving opportunities in five career markets. Students then observe the economy that actually occurs and choose among the jobs available to them.

The game deliberately simplifies reality. Its numerical parameters are **not estimates of literal probabilities that a particular major receives a particular job offer**.

Instead, the parameters were chosen to reproduce the broad empirical patterns documented above:

- Computer Science represents a high-return but relatively concentrated specialist degree;
- Finance represents a high-return degree with strong access to a smaller cluster of related career markets;
- General Business represents broad, comparatively low-cost access to business careers;
- Psychology represents broad access centered on people-oriented occupations but with lower typical labor-market earnings; and
- Economics represents relatively high-value access across several distinct career markets.

What we are *not* claiming.
These results are descriptive. They do not show that choosing an Economics major *causes* a particular salary or career outcome. Students sort into majors and occupations for many reasons, including ability, preferences, geography, networks, and prior career plans.
Economics also does not dominate every measure. For example, its protection against the most extreme simulated occupational shocks is much closer to the middle of the distribution than its average shock resilience.
The evidence supports a claim about the **observed combination of earnings, career breadth, and average resilience**, not a claim that Economics is universally the best degree.

7. Data sources

The analysis combines:

- 2022–2024 American Community Survey Public Use Microdata Sample (ACS PUMS), U.S. Census Bureau;
- occupational employment projections and occupational characteristics from the U.S. Bureau of Labor Statistics; and
- Census/BLS occupation crosswalks used to align the two sources.

For readers interested only in the main conclusions, this is a good place to stop.

The remainder of the document provides technical details about the sample, definitions, occupational-matching measures, and labor-market stress tests.

Technical Appendix

Methods, definitions, robustness checks, and simulation calibration

A. Data and analytic sample

The primary data source is the 2022–2024 ACS one-year PUMS.

The main sample consists of individuals who are:

- ages 23–30;
- not currently enrolled in school;
- members of the civilian population; and
- holders of a bachelor's degree as their highest completed degree.

College major is identified using the ACS first-field-of-degree variable (`FOD1P`). Occupation is identified using `OCCP`.

Dollar values are converted to 2024 dollars. Person weights are adjusted when pooling the three ACS years so that the pooled sample does not mechanically triple the represented population.

B. Measuring major–occupation matches

Let

$$P(o \mid m)$$

denote the weighted share of employed graduates from major m who work in occupation o.

Let

$$q_o$$

denote occupation o's share of the relevant bachelor's-degree labor market.

We define the **revealed match intensity**

$$\mu_{mo} = \frac{P(o \mid m)}{q_o}.$$

Thus,

$$\mu_{mo} > 1$$

means graduates from major m appear in occupation o more often than would be expected based only on the occupation's overall size.

This measure should not be interpreted as a causal employer preference for a particular degree. It combines worker preferences, skills, selection, wages, geography, networks, and other factors that affect observed occupational sorting.

C. Defining a "strong career path"

For the simple counts used in the main report, an occupation is classified as a strong, good-quality pathway for major m when:

$$\mu_{mo} \geq 1,$$

the occupation's median earnings are at least as high as the median occupation in the bachelor's-degree labor market, and the observed major–occupation cell contains at least 10 ACS respondents.

This produces the counts reported in Table 1.

For Economics, the resulting pathways include occupations in finance, quantitative analysis, data and information systems, consulting and business analysis, and related professional fields.

D. Sample-size and breadth robustness

Raw counts of occupations can mechanically favor larger majors: larger samples have more opportunities to reveal uncommon major–occupation combinations.

We therefore also conduct equal-sample rarefaction exercises, drawing equally sized synthetic samples from each major's observed occupation distribution.

The main qualitative result survives this adjustment: Economics continues to rank highly in the number of strong occupational matches even when majors are compared at equal effective sample sizes.

We additionally summarize occupational breadth over a range of match-intensity thresholds rather than relying on a single cutoff. This produces the "structured breadth" measures used in the supporting analysis.

E. BLS career-demand and entry-feasibility data

ACS occupational outcomes are merged with Bureau of Labor Statistics employment projections.

The BLS data provide information on:

- projected annual occupational openings;
- typical education required for entry;
- whether prior work experience is typically required; and
- typical on-the-job training.

The primary stress-test analysis emphasizes a **direct-entry market**: occupations that do not typically require prior work experience beyond the degree itself.

This prevents the analysis from treating every occupation with projected openings as equally accessible to a recent graduate.

F. Reduced-form occupational compatibility

For the demand-shock exercise, observed major–occupation sorting is converted into a regularized compatibility measure.

The empirical-Bayes adjustment used in the preferred specification is

$$R_{mo}^{EB} = \frac{O_{mo} + K}{E_{mo} + K},$$

where O_{mo} is the observed major–occupation pseudo-count, E_{mo} is the count expected from aggregate occupational demand, and the preferred calibration uses

$$K = 5.$$

The corresponding reduced-form compatibility term is

$$\gamma_{mo} = \log R_{mo}^{EB}.$$

Again, γ_{mo} is not a causal employer-preference parameter. It summarizes the observed compatibility of a major and occupation, including both supply- and demand-side forces.

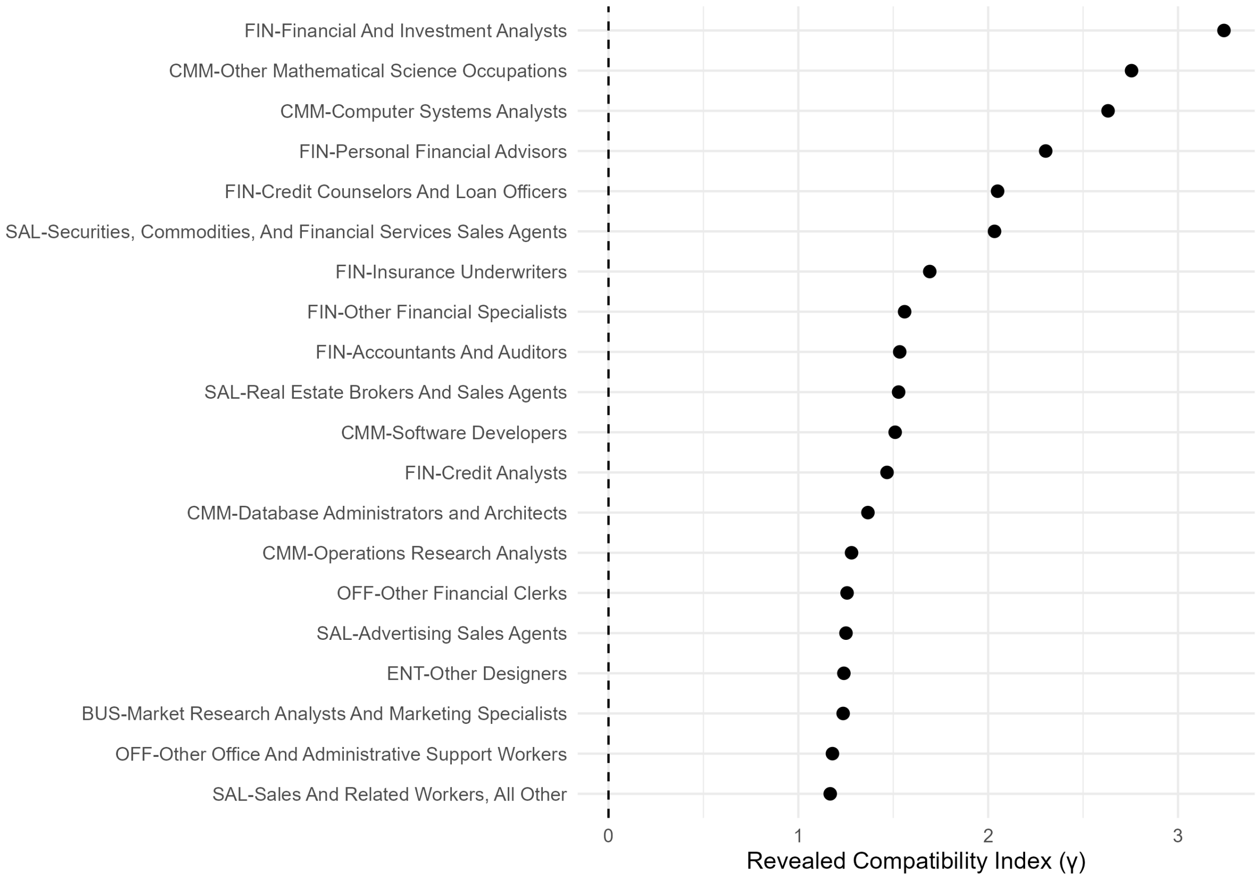

Figure 3: Highest revealed direct-entry occupational compatibilities for Economics graduates. This diagnostic is used to verify that the reduced-form occupational network identifies economically sensible pathways rather than being driven primarily by sparse cells.

G. Occupational-demand stress tests

The stress tests ask what happens when projected occupational demand changes after the major has already been chosen.

For major m and occupation o, baseline occupational choice weights depend on projected occupational demand and the major–occupation compatibility term.

A labor-demand shock changes the occupational demand component while holding the compatibility network fixed.

Our random-shock exercise repeatedly removes the same total amount of aggregate direct-entry labor demand but varies *which* occupations bear the shock.

This makes it possible to compare majors under equal-sized shocks.

A major is described as more resilient when its expected choice-set loss is smaller across these shock realizations.

H. Model interpretation and limitations

The occupational model is a calibrated reduced-form model, not a fully estimated structural model.

In particular:

- the compatibility terms combine worker and employer-side selection;
- the demand elasticity is calibrated rather than separately identified;
- BLS projected openings are not literal probabilities that a particular graduate will receive an offer;
- occupational sorting may differ across regions and demographic groups; and
- the demand shocks are stress tests rather than forecasts of particular future recessions.

The purpose of the exercise is therefore comparative: to ask whether different majors expose graduates to more or less concentrated sets of occupational opportunities.

I. Calibration of the classroom simulation

The classroom simulation uses five majors and five career markets. Its numerical parameters are deliberately stylized.

The calibration is designed so that, when the future labor-market state is known, each major has an environment in which specialization is optimal:

$$\begin{aligned}
\text{Tech \& Data Boom} &\to \text{Computer Science},\\
\text{Finance Boom} &\to \text{Finance},\\
\text{Business \& Consulting Boom} &\to \text{General Business},\\
\text{Government \& Policy Boom} &\to \text{Economics},\\
\text{People \& Human Services Boom} &\to \text{Psychology}.
\end{aligned}$$

When the future state is unknown, however, Economics has the highest expected payoff in the calibrated environment because it provides relatively strong access to several high-value career markets.

The classroom game should therefore be interpreted as an **illustration of the option-value mechanism**, not as an attempt to forecast the literal earnings of a student choosing one of these five majors.

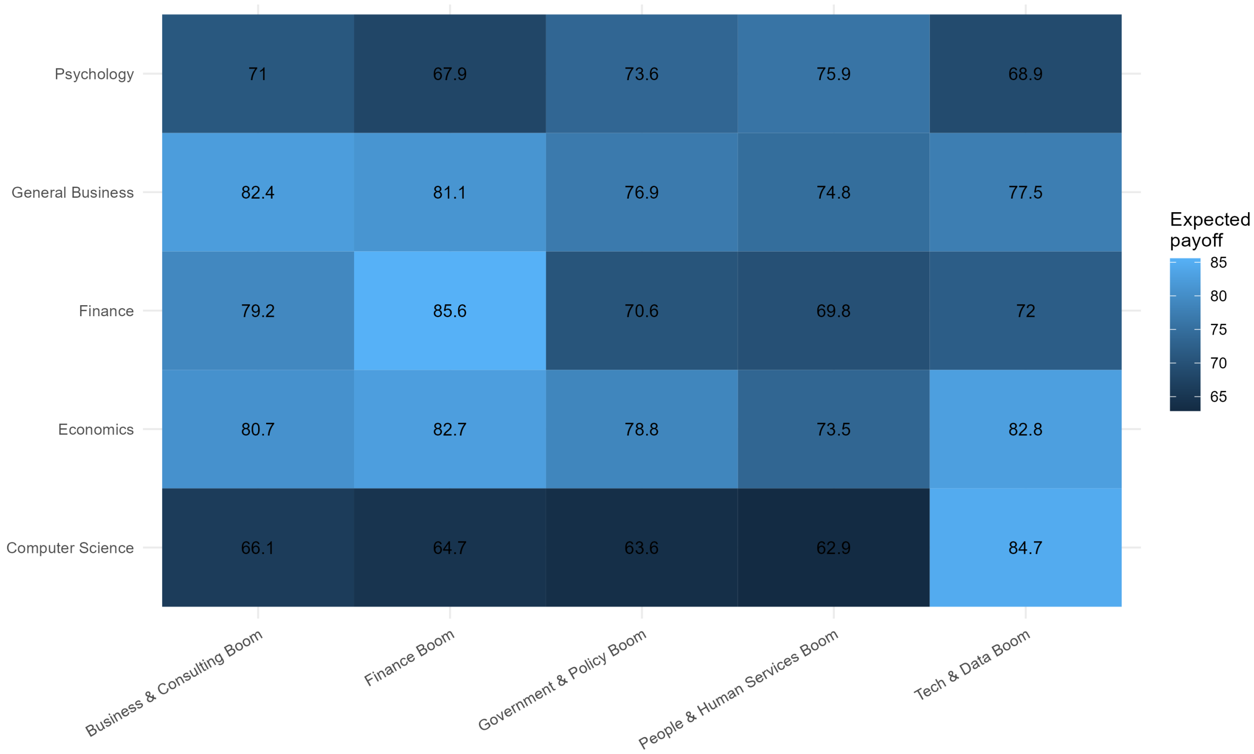

Figure 4: Expected game payoffs when students know the future labor-market state before choosing a major.

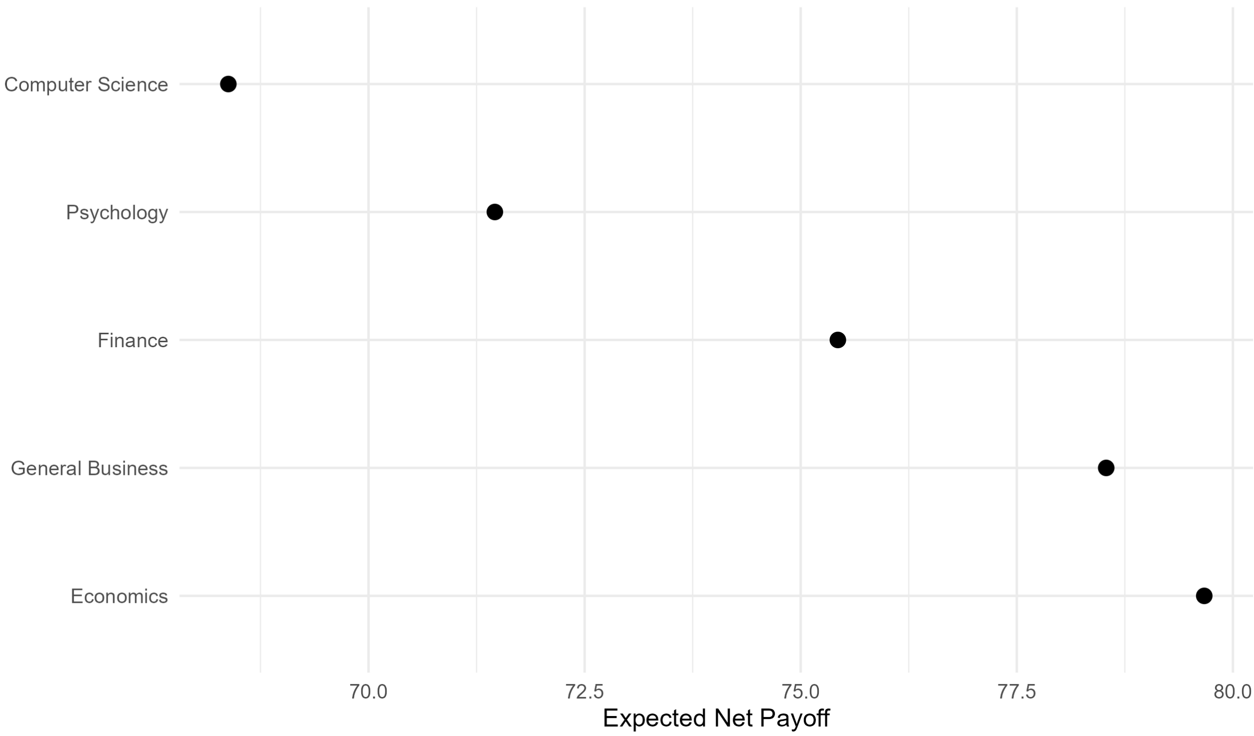

Figure 5: Expected game payoffs when students choose a major before learning which labor-market state will occur.

References

[1] U.S. Census Bureau. *American Community Survey Public Use Microdata Sample (PUMS), 2022–2024*.

[2] U.S. Bureau of Labor Statistics. *Employment Projections and Occupational Characteristics*.

[3] U.S. Bureau of Labor Statistics. *Occupational Classification Crosswalks*.