

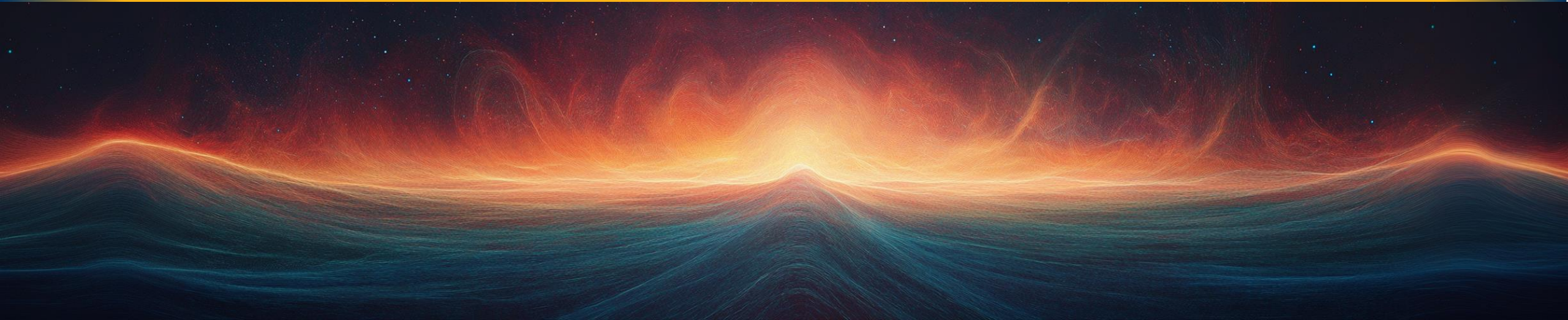
ECON 002:

Principles of Macroeconomics

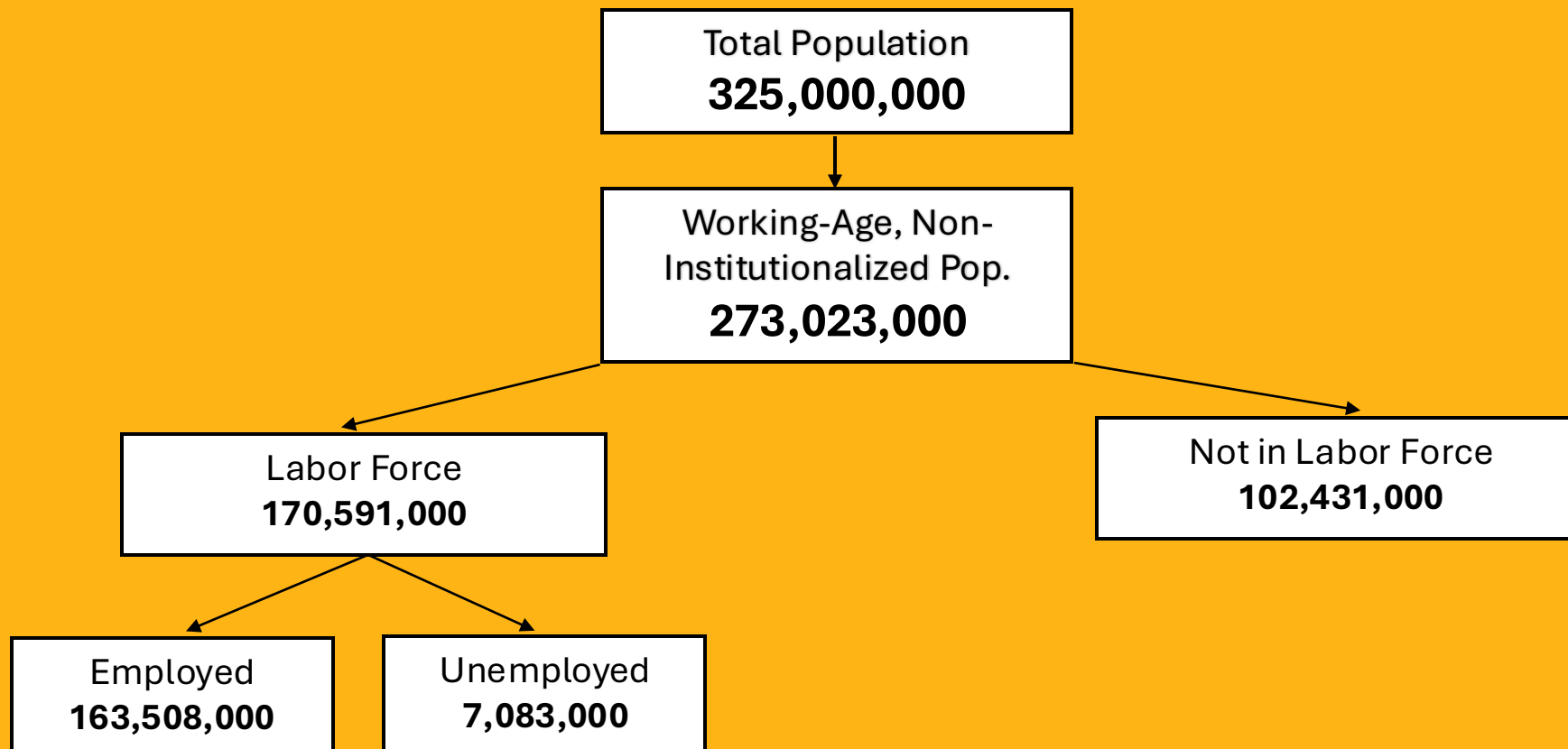
Lecture 7: Full Employment, Midterm Review

Calculating the Unemployment Rate

- Bureau of Labor Statistics (BLS)
- Today there are ~325 million people in the US, 7.35 billion in the world! Do not expect all of them to be employed.
- BLS calls 60,000 households in the 2nd week of the month → households chosen so they represent the population
- In March, 2025:
- Civilian, Working-Age, Non-institutionalized Population = 273,023,000
 - Age and Institutionalization Restrictions
 - Other Restrictions?



A Picture of Employment



Calculating the Unemployment Rate

- Civilian, Working-Age, Non-institutional Population = **273,023,000**

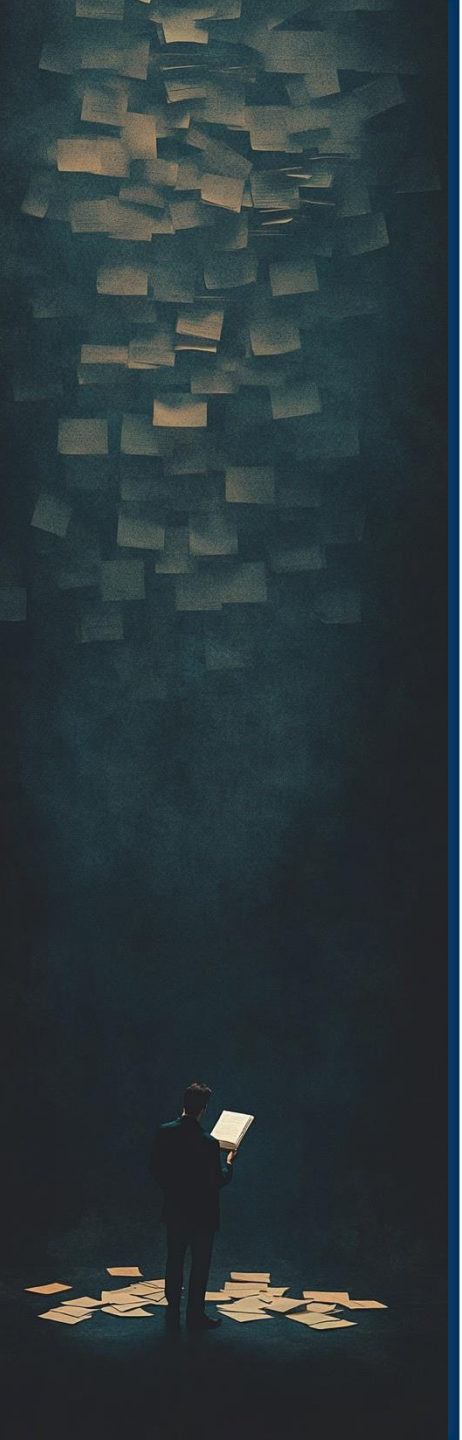
Employed Workers: any work done for pay in the past week

- part-time work
- temporary work
- didn't work last week because of vacation, illness, family, weather, labor dispute
- unpaid family work

- **163,508,000** employed workers in March, 2025

Unemployed Workers:

1. Did not work for at least one hour in the past week for pay.
 2. Actively searched for work in the last 4 weeks.
 - contacting employer, employment agency, submitted resumes, answering job ad
 - does not include passively looking for jobs online
- **7,083,000** unemployed workers in March, 2025



Calculating the Unemployment Rate

- Unemployment Rate: the fraction of workers in the labor force who are unemployed
- $$\text{UE Rate} = \frac{\text{Number of unemployed}}{\text{Labor Force}} \times 100$$
- In March 2025,
$$\text{UE Rate} = \frac{7,083,000}{170,591,000} \times 100 = 4.16 \%$$
- Civilian Labor Force: Individuals who are employed or actively searching for work.
- $$\text{LF} = \text{Employed} + \text{Unemployed} = \mathbf{163,508,000 + 7,083,000 = 170,591,000}$$
- Labor Force Participation Rate = fraction of Working-Age, Non-institutional Population in the labor force.
- $$\text{Labor Force Participation} = \frac{\text{Number in LF}}{\text{Working-Age Pop.}} \times 100 = \frac{\mathbf{170,591,000}}{\mathbf{273,023,000}} \times 100 = 62.5\%$$

Shortcomings of the UE Rate Calculation



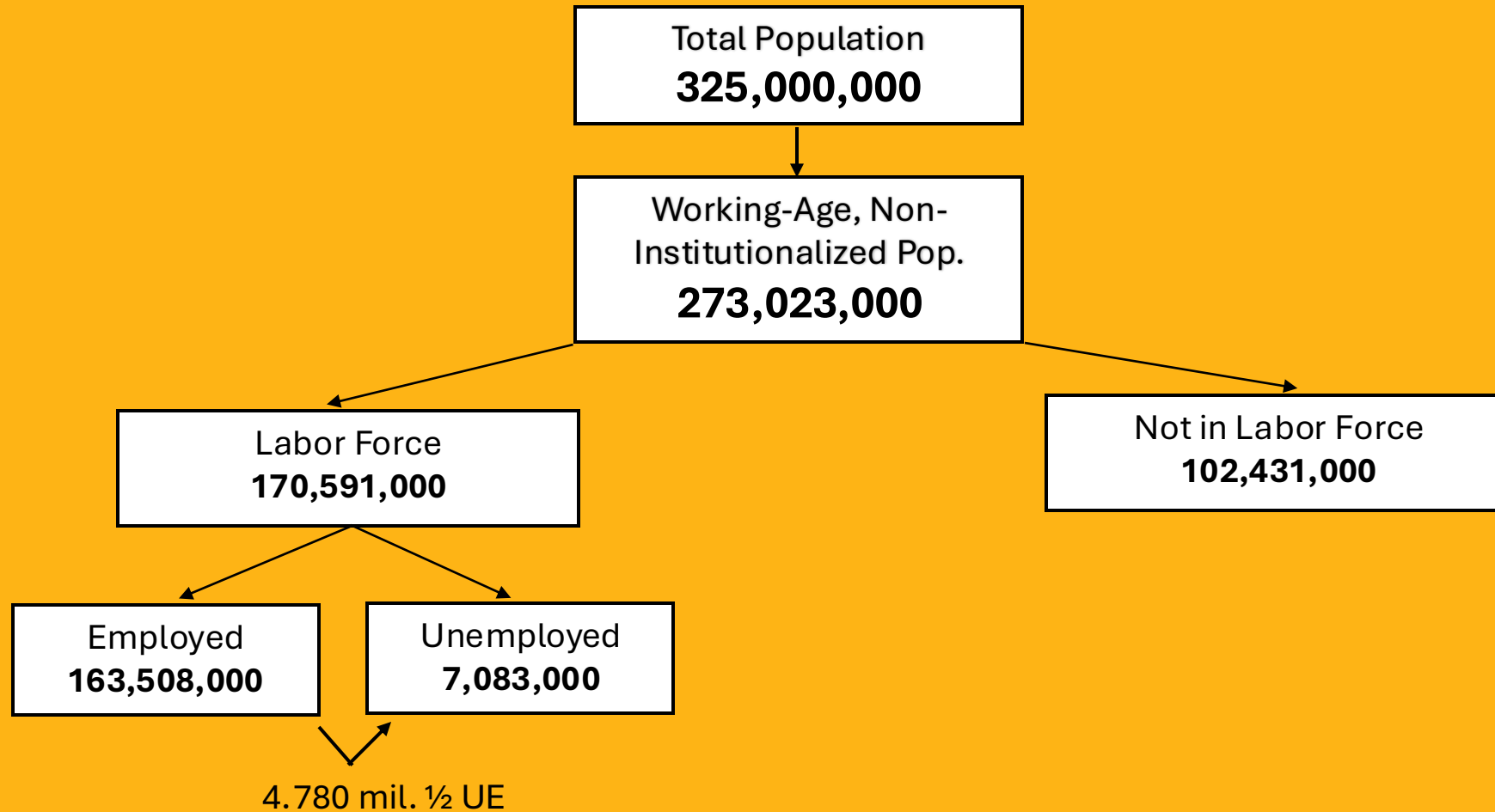
- Two big problems
- 1.
- 2.
- Can we account for these shortcomings?

Involuntary Part-Time Workers

- Many workers want a full-time job, but only have a part-time job.
- Example: Individual wants to work 40 hours a week, but can only find 20 hours of work.
 - This individual is $\frac{1}{2}$ unemployed.
- Involuntary Part-Time Worker:
- Unemployment Rate with IPT Workers=



A Picture of Employment

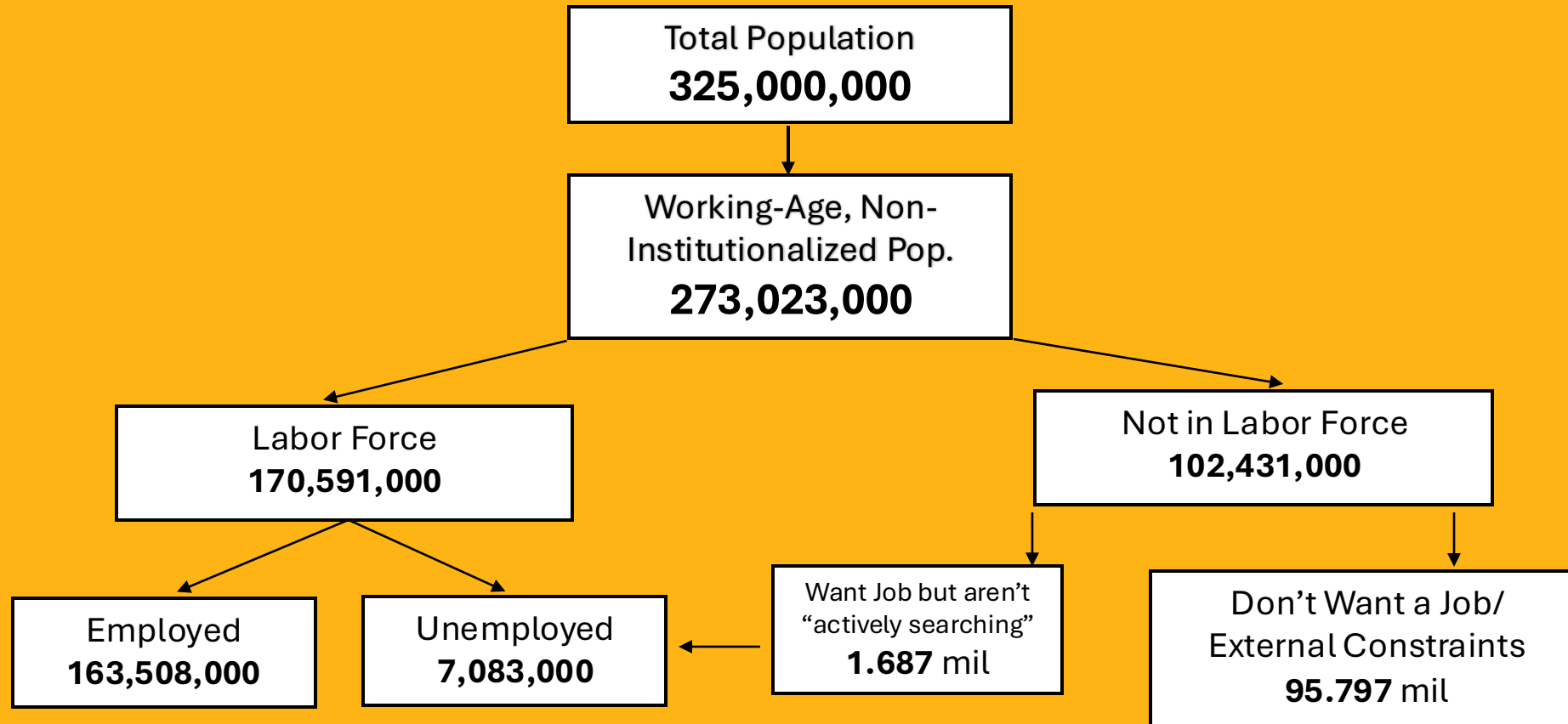


A Picture of “Not in the Labor Force”

- Which workers would take a job if offered one?
- Discouraged Unemployment Rate =



A Picture of Employment



Unemployment Reporting

- **Notes:**

U-1: Long-term unemployment (15 weeks or longer)

U-2: Job losers and persons who completed temporary jobs.

U-3: Official unemployment rate.

U-4: U-3 + discouraged workers.

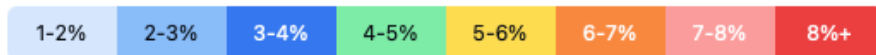
U-5: U-4 + marginally attached workers.

U-6: U-5 + part-time workers for economic reasons.

U1-U6 Unemployment Rates (Mar 2024 - Mar 2025)

| | Mar-24 | Nov-24 | Dec-24 | Jan-25 | Feb-25 | Mar-25 | Average |
|--|--------|--------|--------|--------|--------|--------|---------|
| U-1: Unemployed 15+ weeks | 1.3% | 1.7% | 1.6% | 1.5% | 1.5% | 1.5% | 1.5% |
| U-2: Job losers | 1.8% | 2.0% | 1.9% | 1.9% | 1.9% | 1.9% | 1.9% |
| U-3: Total unemployed (official) | 3.9% | 4.2% | 4.1% | 4.0% | 4.1% | 4.2% | 4.1% |
| U-4: Total + discouraged | 4.1% | 4.5% | 4.4% | 4.3% | 4.4% | 4.4% | 4.4% |
| U-5: Total + marginally attached | 4.8% | 5.1% | 5.0% | 4.9% | 5.1% | 5.1% | 5.0% |
| U-6: Total + part-time for economic reasons | 7.3% | 7.7% | 7.5% | 7.5% | 8.0% | 7.9% | 7.6% |

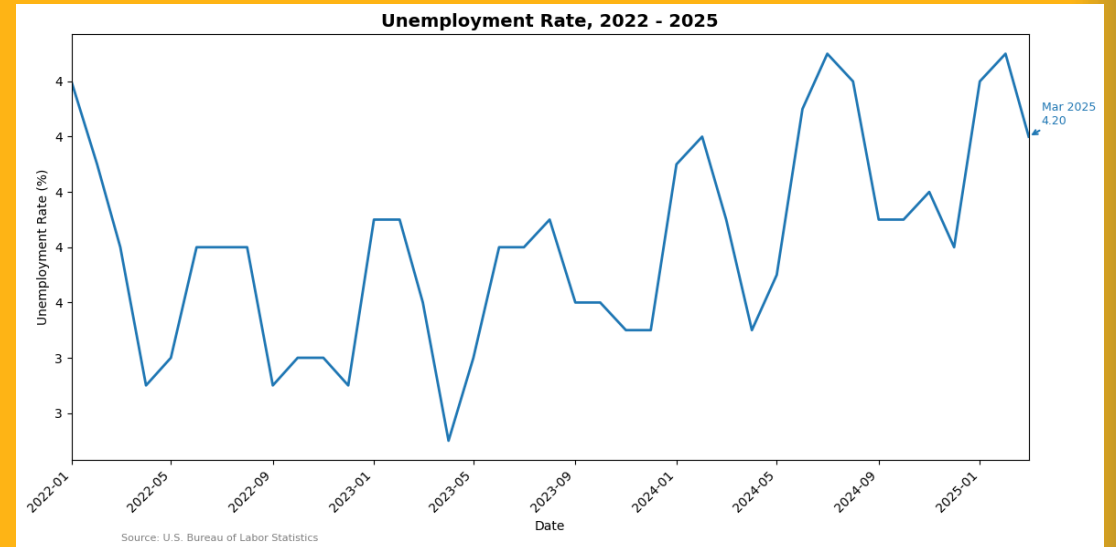
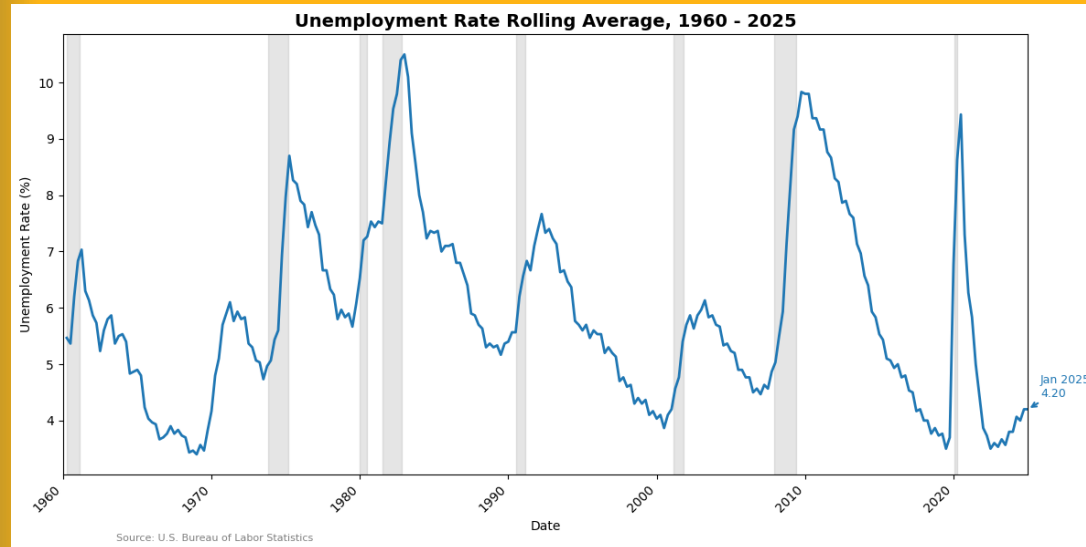
Color Scale (% of Labor Force)



Hover over cells to highlight specific data points.

The U1-U6 rates represent increasingly broader definitions of unemployment, with U3 being the official unemployment rate and U6 being the broadest measure including discouraged and part-time workers.

Unemployment Today



Midterm 1 Notes

- Monday, April 28th: ~12:30 – 1:45pm
 - Assigned Seats released on Canvas
 - Left-Handed writers, reach out to the Head TA Today!
 - Lecture Quiz 4 also due at 12:30pm
- 30 Multiple Choice Questions:
~2.5 minutes/question
- Evenly distributed among topics of
 - Supply/Demand (Chapter 2)
 - GDP (Chapter 3.1)
 - CPI (Chapter 3.2)
 - Unemployment (Chapter 3.3)
- Expect a set of questions that utilize known concepts in a new way
 - Preparation for Economics Major/Econ 10A
 - Smooth transition and increase in difficulty from Econ 1 → Econ 2 → Econ 10A
 - Pre-Major Grading Guidelines: A's = top 20%, B's = next 35%, C+'s = next 10%, C's = next 20%
- Best Study Tools = Generate Own Difficult Question from: Lectures, Quizzes, Sections, Review Sessions, Textbook (Ace-AI Function)

Equations

$$Growth\ Rate_{YrA,YrB} = \frac{Value_{YrB} - Value_{YrA}}{Value_{YrA}} \times 100$$

$$CPI_{Current\ Year} = \frac{Basket\ Cost\ in\ Current\ Year}{Basket\ Cost\ in\ Base\ Year} \times 100$$

$$Weighted\ Basket\ Cost_{Current\ Year} = p_{Current\ Year}^{Goods} \times Q_{Base\ Year}^{Goods}$$

$$GDP\ Deflator_{Current\ Year} = \frac{Nominal\ GDP\ in\ Current\ Year}{Real\ GDP\ in\ Current\ Year} \times 100$$

$$Unemployment\ Rate = \# \text{ Unemployed} / \# \text{ in Labor Force} \times 100$$