### ECON 002: Principles of Macroeconomics

Lecture 6: Stable Prices and Full Employment



GDP Deflator Growth: measure of inflation

Do the prices of ALL goods and services matter to consumers?



- How do we calculate an "average price" for all goods purchased by consumers?
- STEP 1: What do consumers purchase?
- Determine basket of goods:



- How do we calculate an "average price" for all goods purchased by consumers?
- STEP 2: How heavy is each good in the basket?
- Determine the <u>weight of goods and services</u> in the basket:





- How do we calculate an "average price" for all goods purchased by consumers?
- STEP 3: Calculate the weighted cost of a basket
- Similar to GDP, calculate the cost of the average good bought by a household



Calculate Base Year (BY) Basket Cost: BY Prices x BY Q

Calculate Current Year (CY) Basket Cost: CY Prices x BY Q

**CPI = Ratio of Basket Costs** 

Inflation = CPI Growth Rate





Base Year: 1982-1984 Average Weights/Prices, CPI = 100

Today (March, 2025 released last Thursday), CPI =319.62

1950 CPI = 24



### Is the CPI an accurate measure of inflation?

**Some Potential Problems with CPI** 

Substitution, quality, and new products can distort inflation measurements.

Consumers may change buying habits and price hikes may not always correlate with improved quality.

CPI doesn't cover new products or cheap stores/websites.

Economists believe it overestimates inflation by 0.5-1%.



# Full Employment



- Goal 3: Full Employment
- How much unemployment is expected in a healthy economy?
- Today's Natural Rate of Unemployment
- Current Unemployment Rate
- Cyclical Unemployment Rate

# **Types of Unemployment**

- **1. Frictional Unemployment**: Time lag between leaving one job and starting a new one.
- Example: Recent UCSB graduate. Worked at Coral Tree as a student. After graduating, student decides to stop working at Coral Tree and search for work. Months pass before getting a different job.
- Frictions in the labor market come from laws, paperwork, drug/background tests, references, etc.





- **2. Seasonal Unemployment**: Predictable changes in the unemployment rate that happen every year
- Example: Jason is a CPA (tax accountant). Easy to get work from Jan-April (tax season)
  - May-October? River raft guide at Grand Canyon. Nov-December? Odd Jobs or seasonally unemployed.

# **Types of Unemployment**



3. **Structural Unemployment**: mismatch between skills of workers and needs of employers.

- Example: In 1900s, many jobs at AT&T, US West, BellSouth (Baby Bells).
  - Cellular service and internet = fewer operators and jobs at landline companies. New jobs at? Internet service providers, Verizon, T-Mobile, Apple, Google
- Unemployment was generated by progress in the economy.
  Long-term problem for some people, not indicative of a poor economy.



4. **Cyclical Unemployment**: Job loss that results directly from changes in economic production.

- Example: US Car Industry in 2009. High gas prices+gas-guzzling cars+housing market crash=permanent job loss.
- Cyclical unemployment is representative of problem in the entire economy.

#### 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 2<sup>nd</sup> week of the month → households chosen so they represent the population
- In March, 2025:
- Civilian, Working-Age, Non-institutionalize 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.
- 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

• UE Rate = 
$$\frac{\text{Number of unemployed}}{\text{Labor Force}} \times 100$$
  
• In March 2025, 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.
- LF = Employed + Unemployed = 163,508,000 + 7,083,000 = 170,591,000
- Labor Force Participation Rate = fraction of Working-Age, Non-institutional Population in the labor force.

• Labor Force Participation =  $\frac{\text{Number in LF}}{\text{Working-Age Pop.}} \times 100 = \frac{170,591,000}{273,023,000} \times 100 = 62.5\%$ 

### 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 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**

#### 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%			4.9%	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)

	1-2%	2-3%	3-4%	4-5%	5-6%	6-7%	7-8%	8%+
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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.

#### • 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.

# **Unemployment Today**

Mar 2025 4.20

2025:02

