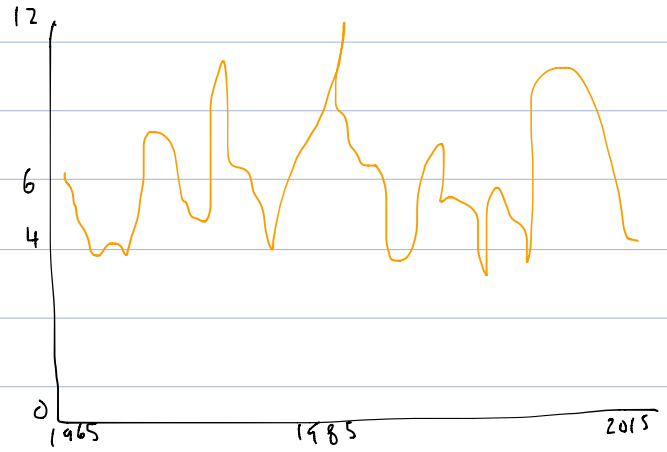
Long-run Average GDP: 3.0%

## Unemployment




## Structural Unemployment

Caused by changes in the industrial makeup (structure) of the economy.

"creative destruction"

In with the new, out with the old

New jobs created .... some jobs "destroyed"

Unemployment is never good news

But... sometimes the by-product of positive changes

Structural Unemployment

- is natural
- Can increase

How to reduce?

- retrain or re-locate workers

## Frictional Unemployment

Caused by delays in matching available jobs and workers

Some jobs available... and some unemployed

* limited information → Search time

This is another part of natural unemployment

Can decrease:

Anything that ↓ search time

- information availability

Can increase:

Anything that ↑ search time

- hiring and firing regulations
- unemployment compensation

↓ cost of continued search

 Incentives affect behavior

## Cyclical Unemployment

caused by economic downturns

## natural rate of unemployment ($u^*$):

The typical rate of unemployment when the economy is growing naturally.

Structural and frictional

No cyclical unemployment

$u^* > 0$

## Full employment output ($Y^*$):

The output level when unemployment is equal to the natural rate.

Ex: GDP @ end of 2010 = $15 trillion

But, u = 9.3%

So, in 2010 Y > $15 trillion

* The output level sustainable for the long run

Unemployment rate (u): The percent of the labor force that is unemployed

Labor force: People who are employed or actively seeking work

Relevant Population: Civilian, Non-Institutional, Aged 16+ 249 million

Labor force: 156 million → Not in labor force 93 million

Employed 147 million | Unemployed 8.688 million

$\frac{8.688}{156} \approx 5.6\%$

Labor force participation rate (LFPR):

The portion of the (relevant) population that is in the labor force.

$LFPR = \frac{\text{Labor Force}}{\text{Relevant Population}} \times 100$